

**RICERCA, INTERNATIONAL JOURNAL OF
MULTIDISCIPLINARY RESEARCH AND INNOVATION**

ISSN: 2583-083X | Peer Reviewed Journal | Impact Factor 7.52

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RICERCA, INTERNATIONAL JOURNAL OF
MULTIDISCIPLINARY RESEARCH AND INNOVATION

Volume 4 Issue 5 (Special Issue May 2024)

**RICERCA,
INTERNATIONAL
JOURNAL OF
MULTIDISCIPLINARY
RESEARCH AND
INNOVATION**

PEER REVIEWED JOURNAL



Dayanand Education Society's
DAYANAND COLLEGE OF COMMERCE, LATUR
(Affiliated to Swami Ramanand Teerth Marathwada University, Nanded)
NAAC Re-accredited B++ (Third Cycle)

One Day International E-Conference on
**BUILDING A SUSTAINABLE WORLD : SDGS IN
COMMERCE, MANAGEMENT, ECONOMICS & IT**

Organized by
Internal Quality Assurance Cell

Chief Editors
Dr. Mandeep Kaur
Dr. Indrajeet Bhagat

Guest Editor
Prof. Rajaram S Pawar

Executive Editor
Dr. Balaji Kalambe



One Day International E-Conference
On
Building a Sustainable World : SDGS In
Commerce, Management, Economics
& IT

Organized By

Dayanand Education Society
Dayanand College of Commerce
Latur, Maharashtra

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Publisher



Taran Publication



JOURNAL DETAILS

Name of Journal	Ricerca, International Journal Of Multidisciplinary Research And Innovation
e-ISSN	2583-083X
Publisher	Taran Publication
Impact Factor	7.52
Issue	Special Issue (May 2024)
Website	www.rijmri.com
Contact Number	8950448770, 9996906285
Country of Publication	India
Editor-in-Chief	Dr. Mandeep Kaur & Dr. Indrajeet Ramdas Bhagat

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Message

I congratulate IQAC, Dayanand College of Commerce, Latur for taking initiative in organizing One Day International E-Conference on ‘Building a Sustainable World: SDGs in Commerce, Management, Economics & IT’.

This E-conference aims to explore how business practices, economical policies, technological advancement and educational initiatives can contribute to a more sustainable future. It will not only help the country to revive economically but also contribute to the wholesome development of the overall society.

Precisely, Information Technology plays a transformative role in advancing sustainable development by enabling access to information, facilitating communication, and driving innovation across various sectors.

I hope in this one-day international e-conference the guests, Resource Persons, Professors, Research Scholars and participants will surely share their broad views on SDGs and come out with suggestions on the conference theme.

Laxmiraman Lahoti

President,

Dayanand Education Society, Latur.

Message

The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. While they are often associated with global development initiatives, their principles and targets can be integrated into various sectors including commerce, management, economy, and information technology (IT).

India has made steady progress towards many SDGs, but much more must be done in the second half to create a perceptible difference. It is against this background that the Dayanand Education Society's Dayanand College of Commerce, Internal Quality Assurance Cell is organizing one day International e-conference to bring together the wisdom and experience of senior researchers and public intellectuals with the energy and inventiveness of emerging scholars and students to think collaboratively, share ideas and questions, and possibly find new ways toward SDGs.

The conference will provide a platform for interdisciplinary exchange and collaboration and offer opportunities for networking and learning. I wish all the best to all the participants.

Ramesh Biyani

Secretary,

Dayanand Education Society, Latur.

Message

I congratulate the IQAC & faculty of college for organizing One Day International E-Conference on ‘Building a Sustainable World: SDGs in Commerce, Management, Economics & IT’.

Organizing this conference is an initiative step taken by our college to understand SDGs in various sectors. Businesses can align their operations with the SDGs by adopting sustainable practices in their supply chains, manufacturing processes, and distribution networks. This includes reducing waste, promoting fair trade, and ensuring ethical labor practices. Effective management practices can contribute to achieving several SDGs, particularly those related to gender equality, and sustainable economic growth.

Governments and policymakers play a crucial role in creating an enabling environment for sustainable economic development by implementing policies that promote inclusive growth, job creation, and poverty reduction.

I am sure this international e-conference will discuss topics pertaining to the conference theme and will reach to the fruitful outcomes.

Dr. R.S. Pawar

I/c Principal,

Dayanand College of Commerce, Latur.

Editor's Note

At the outset, I appreciate and congratulate IQAC team and faculty for their contribution in organizing this One Day International E-Conference on 'Building a Sustainable World: SDGs in Commerce, Management, Economics & IT'. The organizers have taken conscientious efforts to reach the nation-wide research scholars and collected papers on various issues allied with the conference theme.

The essential themes of this International e-conference include Innovation for Sustainable Development, Financial Inclusion and Economic Empowerment, Digital Transformation for Social Impact, Green Finance and Sustainable Banking Practices, Sustainable Supply Chain Management, Green Technologies, and Renewable Energy Solutions, Sustainable Tourism and Hospitality so on and so forth.

Integrating the principles and targets of the SDGs into commerce, management, economy, and IT sectors is essential for driving sustainable development and building a more inclusive and prosperous future for all.

I appreciate all researchers for the time and efforts they have put in writing research papers pertaining to the conference themes.

Dr. Balaji Kalambe

IQAC Coordinator

Dayanand College of Commerce, Latur.

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E-Commerce For Sustainable Development

Dr. Anita Deshmukh

Assistant Professor

Law, Shri Shivaji Law College, Parbhani.

Abstract-

With the increased awareness about use of computers and communication technology E-commerce become everyday affair now. Gone are the days when we were carrying money in the pockets for purchasing the things. The new generation is extensively and smartly using the technology according to their convenience and ease. The e-commerce is the outcome of that smartness which made possible the things which were looking impossible few years ago. As “every rose had its thorn” the e-commerce industry also had its evil impacts on environment. The UN Sustainable Development Summit which adopted 17 sustainable development goals as an agenda to achieve till 2030 for the whole world had minutely studied and developed some guidelines to be implemented by every country of the world. These guidelines are needed to be followed by every entity that may be government organisation or private enterprise. E-commerce industry though working virtually is also not an exception to it. This paper thus analyses role of e-commerce industry towards achieving sustainable development goals.

Keywords- E-commerce, Sustainable development, Environmental impact

I. Introduction-

E-commerce or online shopping is an inevitable part of everybody’s life in present era. It had shown rapid growth after advancement of internet and technology in 20th century. Initially due to limited knowledge and limited access people shown less interest towards online shopping. But in 21st century when internet became affordable to masses everyone started transacting with the help of e-commerce websites online. The use of internet for online shopping achieved its momentum during the period of Covid-19 when people realized various advantages of online purchases over offline shopping. As per the current statistics of India, in 2023 the number of annual online shoppers was estimated to be about 250 million and this number is expected to rise up to 425 million in the year 2027. As per the Forbes statistics, the global e-commerce market is expected to grow to \$6.3 trillion in 2024. According to NASSCOM, India's e-commerce market is forecasted to cross a whopping \$200 billion by 2030.

E-commerce is the exchange of goods and services and the transmission of funds and data over the internet. E-commerce relies on technology and digital platforms, including websites, mobile apps and social media to make buying and selling possible. Electronic commerce or e-commerce refers to a wide range of online business activities for products and services. It also pertains to “any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact.”

Online Vs Offline shopping-

1. Social and Economic impact-

It is human tendency that by nature man is ruled by two masters, pleasure and pain. Man always does the thing which gives him pleasure and avoids the one which pains. Therefore while making decisions and choices as well, man does the things which are more beneficial for him. Being a consumer the financial benefit drives him to making decisions and choices. While making of choice of marketplace also he thinks about many factors. Some of those factors which lead him towards online shopping these days are as follow. In traditional offline shopping there were limitations of accessibility. The commodities originated in other territories were not easily accessible and consumer has to satisfy himself with the local made products having similar specifications.

The online shopping is thus more beneficial as it brings versatile option of products on a single platform. It not only makes available variety of products but also saves the cost of transportation of consumer. If we wanted to purchase a specific unique product of a specific location previously then it was not possible in traditional offline marketplaces without investing on transportation cost and time. But due to online marketplaces it is now easy and affordable to purchase things from anywhere in the world. This eases the consumers to have access to every type of

literature, culture, food etc. available on the tip of finger which help an individual in overall social and economic wellbeing of the society.

2. Psychological impact-

E-commerce is providing consumers a hassle free platform of shopping where consumer can shop while sitting at their homes, offices or from any place of their convenience. This convenience will automatically improve the shopping experiences. When consumer goes to offline marketplaces the crowd surrounding put stressful impact on mind of customer which forces him to make wrong choices. Even at some occasions they purchase the things which does not suits them. The stress of returning the product by going again in the same crowdly market results into gathering of unnecessary stuff which later on thrown as a wastage.

No doubt shopping is a thing of pleasure for some, but majority of the population especially youth and men don't like shopping due to all such reasons. Also in case of old age people shopping in distant marketplaces is stressful. Therefore E-commerce is chosen as a better option by majority of the people.

II. Sustainable development and Sustainable Development Goal's-

Development is an integral part of human existence. The one who become stagnant cannot grow and develop thus development is inevitable for existence of any society. In society starting from its evolution different types of developments took place but after evolution of science and technology the development grown at its peak that it break open all the boundaries. Due to ever increasing greed and aggressive competition man reached at the level of deteriorating the natural resources up to the extent that the risk of scarcity of resources started to arose and there the need of thinking about sustainable development was first thought about by the world community in The United Nations Conference on Environment and Development which was held at Rio de Janeiro, Brazil, from 3-14 June 1992. The idea of using natural resources in limits was promoted and flourished which took shape of 17 Sustainable Development Goals in 2015. Sustainable development is essential for the ecological well-being of the world and requires executing environmental-friendly economic and business strategies. As defined in Brundtland Report "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainable development is thus use of available resources in such a way that it should be available for future generations. It includes use without wastage and reuse as much as possible. The idea of sustainable development can't be completed without talking about environment as the basic source of all the natural resources is the environment. In overall development and growth of a nation, its natural resources plays very important role. The wealth of the nation determines the prosperity of its subjects. And therefore for achieving every Sustainable Development Goal, it is very essential to primarily focus on Environment protection.

III. Role of E-commerce in achieving Sustainable Development Goal's-

1. **Eradication of Poverty-** The first SDG of UNDP is Poverty eradication which is most important goal to be achieved for prosperity of a nation. Poverty eradication is helpful in eradication of many other problems like zero hunger, unemployment, good health and wellbeing, decent work and economic growth etc. The partnering of small and micro level businesses in E-commerce industry will make them available retail platform without investment of infrastructure and huge manpower. A single individual can be able to run his business from his home as well. The traditional networking requirements are now connected by internet and thus whole world is an open market now which is creating huge opportunities to new entrepreneurs to earn and grow economically. The E-commerce industry is thus not only useful for protecting socio-economic wellbeing of consumers but is also helpful in development of a nation. For growth of economy of country, the e-commerce industry is providing low investment options to small scale industries.

2. **Saving Resources-** The online platforms have included various services under its broad area of marketing. Now we not only purchase the household things but we can now order cooked food online, we can book our tickets online, we can take appointment of physicians online, we can avail many such other services online. So the cost of transportation and time is saved by doing all these activities just on a single click. It is saving time of working manpower which can use that saved time for other developmental activities. The resources such as fuel and energy are thus can be saved with the use of e-commerce.

3. Good health and wellbeing-The wellbeing of an individual depends on his physical and mental health. In today's era when parents are residing at remote places and their children are located in other locations, it is not possible for them to take care of parents or fulfill their daily requirements. But due to e-commerce platforms they can now make every facility available at the doorsteps of parents without doing many efforts and without affecting their own working hours. The medicines, doctors and ambulance services are also now available on doorsteps so it is not only saving physical health of parents but is also helping in maintaining stress free mental health of children of old age parents.

4. Responsible consumption and Production- With the help of E-commerce, it can be possible to put limitations on consumption and production. The online food delivery industry is the best example for cultivating the habit of responsible consumption. The cooking and wastage of large quantity of food can be saved with the help of it. For agricultural products as well many farmers developed their own websites to sell their food products. They grow and sell it through their own platforms on demand. The consumers also as getting products direct from farms they trust its credibility and thus try to utilize it with more responsibly. The Online sales facilitating better inventory management based on purchase data and automated system minimizes products, especially food, waste, and associated losses.

5. Ecological balance-The online marketing is not only saving the cost for construction of shops and storages of retailers but is also helping to maintain ecological balance. The Air conditioned shops are now replaced by virtual shops which are run through online applications resulting into reduction of carbon emission in the environment.

IV. Environmental impact of E-commerce-

Though e-commerce industry is beneficial for its consumers in every aspect but when we think of environmental hazards of it, it is having its dark side as well.

1. E-commerce waste- The online shopping products are coming from remote locations sometimes via ships or through air. For safe delivery of the products it becomes important to protect product from any type of damage with the help of extra packaging. Cardboard boxes made from wood pulp or bubble sheets made up of plastic materials are thus more extensively used to cause safe delivery of product. When product is coming from long distances the practice of doing massive packaging is utilised by seller and this huge packaging is causing biggest threat to the environment. Though most of the packaging material is recyclable but due to unavailability of recycling resources most of these materials will end up clogging drains and landfills. Additionally as wood pulp is the main raw material used for making packaging cardboard the cutting of forests for this wood is essential resulting into large scale deforestation.

If we look at various types of packaging materials required for delivery of a single parcel, it contains paper bills, envelopes, cardboard box, plastic bags, woven bags, tape, and buffer materials (bubble wrap). The global e-commerce industry estimated approximately 2.1 billion pounds of plastic packaging in 2019. According to the United Nations, over 8 million metric tons of plastic waste ends up in the oceans every year, which is equivalent to dumping a garbage truck full of plastic into the ocean every minute. According to a report by the Ellen MacArthur Foundation, only 14% of the plastic packaging used globally is collected for recycling, and even less is actually recycled. The rest ends up in landfills or the environment, where it can take hundreds of years to break down and release harmful chemicals.

2. Transportation hazard- Global warming and climate change alarmed the world community towards health hazards of environmental pollution. The energy generated by burning fossil fuels like coal, oil and gas are responsible for emission of greenhouse gases leading to global warming. The increase in online shopping has also led to an increase in transportation, which further contributes to pollution and harm to the environment. For supply of goods e marketplaces use big logistic supply chains. Those logistic companies deliver big shipments via aircrafts or ships. In 2019, the business-to-consumer (B2C) e-commerce shipments per day in India were four million which is likely to increase to about 12 million in 2024. The greenhouse gases emitted by these ships, aircrafts and delivery truck are a big contributing factor causing climate change. The growing demand for same day delivery is also one of the upcoming opportunity for e-commerce and a posing threat for ecosystem.

3. Return policy Hazard- To attract consumer flow towards their products, online marketplaces widely framed easy and free return policy. By taking advantage of this free return policy most of the consumers purposely order

more products and after analysis and proper comparison return unwanted items. Near about 80% online consumers have this tendency of ordering. The product when delivered is properly packed but when we return the product the packaging will remain of no use and it became part of garbage which rarely happens in offline shopping.

V. Suggestions for Sustainable E-commerce-

Sustainable e-commerce means coming up with methods that have nonnegative environmental impact. It is universally accepted fact that traditional markets now unable to replace e-commerce due to its ever increasing benefits and therefore instead of thinking about option to e-commerce it is more beneficial to develop e-commerce into sustainable e-commerce. Following are some of the ways through which more sustainable e-commerce can be developed in existing framework.

1. Choose products with minimum packaging and reuse packaging material- The rapid growth of the fast delivery industry has led to huge waste and pollution concerns caused by overpackaging. Even many enterprises use packaging as part of their marketing strategy. To protect products from damage during the distribution process and avoid negative feedback from consumers, merchants often do overpackaging which resulting in environmental hazard causing large scale garbage which if flown into rivers and sea can endanger ecosystem at large.

2. Prefer Green Packaging- Green packaging means use of the materials and manufacturing techniques so as to diminish energy use and reduce the harmful impacts of packaging on the environment. In Green packing the biodegradable and recyclable materials are preferred over plastic materials for packaging whereas in green manufacturing the step were taken to reduce power outputs so as to decrease emission of greenhouse gases in the environment.

When world had shifted its focus from development to sustainable development and advised to frame policies to implement SDG's, the e-commerce companies are now focusing on sustainability and demonstrating commitment to environmental and social responsibility. By recognizing their responsibility many companies are employing recyclable and environmentally friendly packaging materials to reduce environmental impact. Still due to packaging cost majority of the companies avoiding to use green packaging. But green packaging is need of an hour for environment protection and reducing health hazards.

3. Sustainable Energy Sources and Energy Efficiency- Though e-commerce companies run via online platforms but for storage of products they too need big warehouses having extensive capacities. These warehouses need power supply to maintain goods in proper conditions. Energy is a source of power that is needed to operate logistics activities. The alternate sustainable energy resources, such as solar or wind power thus can be an effective option for power supply to e-commerce industry.

4. The green logistics- The reverse logistics and circular supply chains are mostly evolving concepts in green logistics. Reverse logistics can be utilised to overcome issue of extensive returns. At this stage, the product is returned from the point of sale to the manufacturer or distributor for recovery, repair, recycling, or disposal. Similarly in a circular supply chain the raw materials used are recycled back into the manufacturing operation. Both these methods can be used to reduce environment impact at logistic and supply chain level.

4. Last Mile operation- The greenhouse gases emitted through vehicles particularly CO₂ emission through road transportation is responsible for climate change. Transportation during the last mile is among the most energy consuming operations in the supply chain due to the high number of single-packed parcels carried in commercial vehicles or private cars to respective addresses. This transportation phase contributes approximately 30% carbon dioxide emission in environment. This last mile operation can be reduced by keeping single collection point for multiple parcels in nearby locations where customer or delivery boy can go by walk or on bicycle and can collect it without causing any harm to environment.

5. Promote Environmental Initiatives- Awareness is the key player in implementation strategy. All the stakeholders including companies must involve themselves in environmental initiatives. E platforms being impactful platforms those must be used to create awareness related to environment protection. The initiatives such as green packaging and green logistics must be promoted by government agencies via various benefits to attract enterprises to utilise environment friendly initiatives.

V. Conclusion-

Online marketplace is the key player in the socio-economic growth of the country. E-shopping platforms are very useful new generation technology which is not only helpful in saving time and money but is useful towards achieving sustainable development goals as well if used strategically. The online payment gateways also played its radical part in this evolutionary process of e-commerce development. E-commerce industry if streamlined in an environment friendly way then it will be a great step of mankind towards protection of ecology.

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Economic Growth With Environmental Responsibility

¹Gaikwad Pravin Balaji, ²Dr. Shewale A.T.

¹Research scholar

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M. B. College Latur

ABSTRACT

This article explores the critical concept of sustainable international trade, focusing on the intricate balance between economic growth and environmental responsibility. It begins by examining the environmental impact of traditional trade practices, highlighting the negative consequences such as deforestation, pollution, and loss of biodiversity. The discussion then shifts to the economic benefits and challenges of sustainable trade, particularly for developing countries. The article delves into various policies, regulations, and technological innovations that facilitate environmentally responsible trade. The role of businesses and consumers in promoting sustainable practices is also examined, emphasizing corporate responsibility and consumer influence. Further, it addresses the challenges and barriers to implementing sustainable trade, including economic, political, and ideological issues. Case studies of successful sustainable trade practices provide practical insights. The article concludes with future perspectives and strategies, underscoring the need for continuous innovation and a collective effort towards sustainable international trade.

KEYWORDS

Sustainable International Trade, Economic Growth, Environmental Responsibility, Green Policies, Technological Innovations. Sustainability, circular economy, environmental dimension.

INTRODUCTION:-

It is a common belief among many that economic growth and environmental sustainability are two opposing goals that cannot be achieved simultaneously. However, this notion is a false dilemma that fails to consider the history and potential of green innovation. In reality, economic growth and environmental sustainability can work together harmoniously in the long run, as evidenced by various countries and companies that have successfully decoupled their GDP growth from their environmental impact.

A key argument favouring the compatibility between economic growth and environmental sustainability is that protecting the environment can create new markets and business opportunities. For example, developing and deploying renewable energy sources, such as solar, wind, and hydropower, can help reduce greenhouse gas emissions while simultaneously creating job opportunities and generating income for workers and investors. Adopting circular economy principles, such as reducing waste, reusing materials, and recycling resources, can enhance efficiency and productivity while also saving costs and natural resources. Additionally, providing environmental goods and services, such as clean water, air quality, and biodiversity conservation, can improve human health and well-being while generating revenue and social value.

Finally, economic growth and environmental sustainability are not mutually exclusive but mutually reinforcing objectives that can be achieved through green innovation and transformation. Businesses that adopt sustainable practices can gain competitive advantages while positively contributing to society and the planet. The challenge is to overcome the barriers and inertia that prevent or delay this change, such as lack of awareness, regulation, incentives, finance, skills, and collaboration. By addressing these challenges, businesses can become part of the solution rather than part of the problem.

Economic development and the Environment:

A complex relationship All economic activity involves transforming the natural world, but not all economic activity causes excessive or irreversible environmental degradation. Figure 1 shows how rising economic activity can cause certain forms of environmental degradation, but can also help to address them, with their policies and institutions. The empirical records suggest that the relationship between development and the environment is a complex one. As

shown in the figure, three patterns emerge. Some indicators of environmental quality, such as the availability of adequate water and sanitation services, improve as income levels rise (Figure 1, A). Economic development expands opportunities for investing in the protection of the environment by providing the resources for public services and by all eviating poverty. Though often overlooked, the synergies between poverty alleviation and environmental quality are extensive.

Inadequate sanitation, shortages of clean water, indoor air pollution from biomass burning stoves and many types of land degradation in developing countries have poverty as their root cause. Poor land hungry farmers, for instance, often resort to cultivating environmentally-fragile areas, i.e., steeply sloped, erosion-prone hillsides; semiarid land where soil degradation is rapid; and tropical forests where crop yields on cleared fields drop after just a few years. Given these fragile and limited land resources, poorly defined or non-existent property rights, limited access to credit and insurance markets, and overwhelming concern with day-to-day survival, such farmers are unable to invest in

Economic performance

There are several measures that are commonly used to assess the economic performance of firms. Each of these measures captures a slightly different aspect of economic performance. Some, such as profitability, gauge return; others, like sales growth and market share growth, gauge growth. Some measure profitability (return on investment, return on equity), some liquidity (quick ratio, current ratio), and some solvency (gearing). Some measures are indicators of commercial success (growth, market share) while others are indicators of financial success (profitability). Accounting measures portray past performance, and stock market measures portray expectations of future performance.

Which indicator or indicators should be chosen to measure economic performance depends on the perspective taken in a study and on its purpose. In the present study it is not necessary to select particular operational measurements of economic performance at all, since the concept is not directly measured. Expected changes in economic performance are analysed indirectly, through management perceptions and actions. Based on the profit maximisation assumption, managers voluntarily implement only such actions that they believe to promote the economic performance of the firm.

However, it is very important to note the crucial difference between economic and commercial values.³² In the present study, all costs and benefits are to be understood as economic costs and benefits, present and future, discounted to present time. In other words, the concepts are significantly broader than the ordinary accounting

Environmental performance

The concept of environmental performance pertains to the level of harmful environmental impact caused by the activities of a firm. The more "environmentally friendly" a firm is the better its environmental performance. Conversely, the more environmental damage a firm causes the worse its environmental performance.

Definition: Environmental performance refers to the level of harmful environmental impact caused by a firm so that the smaller the harmful environmental impact the better the environmental performance and As the activities of a firm can have different environmental impacts, the concept of environmental performance is a vector of those impacts. Environmental impacts occur through land use, resource use, and pollutant releases into air, water, and land throughout the life-cycle of a product. Even if consideration is limited only to the direct environmental impacts of production, environmental performance has many dimensions.

A complete measure of environmental performance necessitates the identification of all components, performance measurement with regard to each component, and the combination of the measurements into a vector of indices or one overall indicator.²⁴ Combining the dimensions of environmental performance in a single indicator requires that the relative importance of the different environmental impacts be weighed. Such weighing, in turn, results in a difficult valuation problem.

Environmental profit and margin environmental profit Environmental profit is a new construct formulated for the purposes of the present study. It gauges the isolated net income of a firm relating to its environmental performance level, that is, the total of isolated environmental private benefits and Marginal environmental profit is the corresponding concept relating to a change in environmental performance. Marginal environmental profit is positive when the private benefits from a change in environmental performance exceed the private costs. Similarly,

marginal environmental profit is negative when the private costs required by a change in environmental performance exceed the private benefits, and zero when the two are equal.

Definition Environmental profit refers to the isolated net economic impact on a firm of an environmental performance level: the stream of environment-related costs and benefits discounted to the present. Marginal environmental profit refers to the isolated net economic impact on a firm of a change in environmental performance: the stream of costs and benefits related to an environmental performance change, discounted to the present.

Objectives and scope

The objective of the present study is to improve the understanding of the firm-level relationship between environmental performance and economic performance. The main research question is what determines environmental profit, where environmental profit refers to the isolated net economic impact of environmental performance on a firm.⁷ To answer the main research question, the study addresses the following specific questions:

- How and why have attempts to detect a systematic relationship between firms' environmental and economic performance failed?
- How should previous theoretical treatment of the relationship be extended to account for the possibility that the relationship may not be constant across environmental performance levels and that it may not be uniform across cases and time period
- Does empirical evidence support the non-uniformity of the relationship? Where are the main sources of non-uniformity
- What are the factors producing non-uniformity in the relationship? What circumstances favour and what circumstances hinder the creation of perceived win-win situations.

Findings

The findings in the paper indicate the typical inverted “U” form of EKC is not confirmed with our data set for Italy. According our econometric results, there is a positive relationship between economic growth and CO₂; following the trend, the maximum emission of CO₂ per capita in Italy would be reached when the GDP per capita will be about 26900 US\$ (turning point). Basically, two major forces have determined the increase of CO₂ pollution in Italy over time: eco-efficiency (pollution per monetary unit of output) and volume effect (volume growth of Value Added).

Conclusion

Economic development and environmental preservation are two main challenges of humanity now days. However, environmental protection is emerged at forefront of recent issues for developing and developed countries due to climatic changes and global warming. It is imperative to understand for leaders and policy makers that why environmental targets are achieved by some countries and others fail. So this paper is an effort to investigate the relationship between Carbon Dioxide emissions ant its potential social, political and economic determinants like ethnic diversity, institutional quality, political freedom, energy consumption, financial development and economic growth for a panel of 163 countries covering the period of 1996–2016. A panel ARDL approach is applied to determine the long and short run analysis while LLC, IPS and Fischer Chi square test are applied to test the stationarity of the variables.

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Digital Communication in Disaster Relief: A Social Media Perspective

Dr. Indrajeet Bhagat

Yashwantrao Chavan College Ambajogai, Dist Beed Maharashtra

1) Introduction

Social media platforms have revolutionized disaster management by facilitating efficient communication, information sharing, and collaboration among stakeholders. These technologies enable authorities, disaster management professionals, and at-risk communities to collect information and communicate live-saving messages faster and more effectively. Social media platforms have become an integral part of many people's daily lives. As of January 2024, over 5 billion people worldwide use social media, representing about 62.3% of the global population. Present paper is a interview based research of 100 peoples in the city of Renapur Dist Latur (Situated at the bank of Rena River) which is always face a flood disaster in rainy session. The present paper identified six main Sections about social media and its role in Disaster Management in the city of Renapur city.

Section 1: Demographic Information

Section 2: Social Media Usage

Section 3: Awareness and Information Dissemination

Section 4: Communication and Coordination

Section 5: Challenges and Improvements

Section 6: Personal Experience and Perception

The paper proposes a framework to enhance government use of social media for crisis management that encompasses the need for a mandate, differentiated guidelines and three key capabilities to be developed.

2) Analysis and Interpretation

Section 1: Demographic Information

Age Distribution:

Age Group	Number of Respondents	Percentage
Under 18	5	5%
18-24	20	20%
25-34	35	35%
35-44	25	25%
45-54	10	10%
55-64	4	4%
65 and over	1	1%

A. Under 18: Least represented.

B. 18-24, 25-34, 35-44: Major contributors, reflecting active social media users.

C. 45-54, 55-64, 65 and over: Lesser presence, indicating lower engagement with social media for disaster management.

Interpretation: The majority of respondents are in the 25-34 age group, indicating a significant engagement of young adults in social media usage for disaster management.

Gender Distribution:

Gender	Number of Respondents	Percentage
Male	55	55%
Female	40	40%
Prefer not to say	5	5%

- A. Male/Female: Almost equal representation, ensuring balanced perspectives.
- B. Prefer not to say/Other: Minimal responses, indicating comfort in sharing gender identity.

Interpretation: The sample has a slightly higher representation of males compared to females, with a small percentage preferring not to disclose their gender.

Occupation:

Occupation	Number of Respondents	Percentage
Emergency responder	15	15%
Government official	10	10%
NGO worker	20	20%
General public	50	50%
Other	5	5%

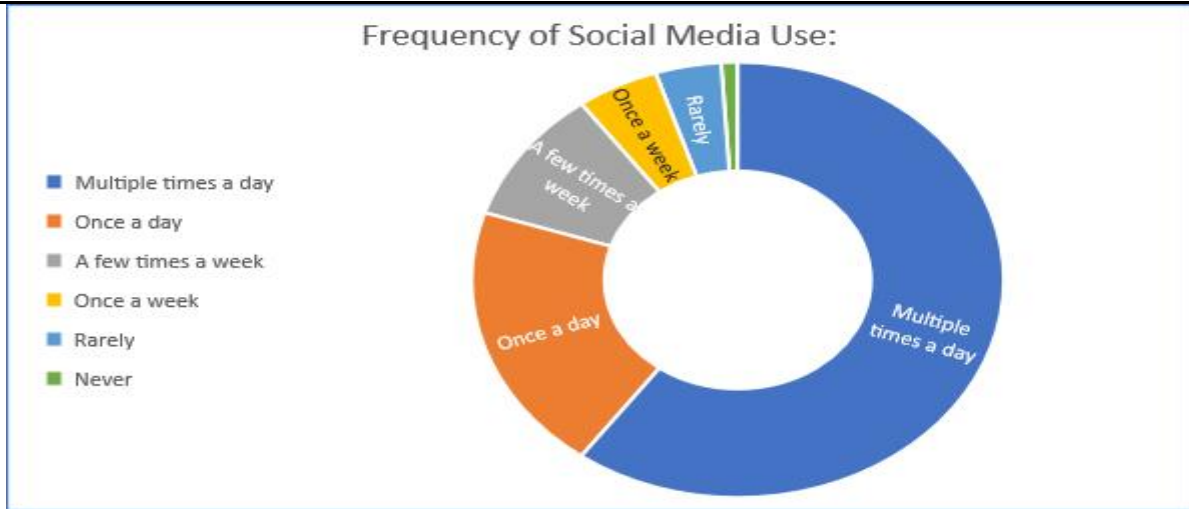
- A. Emergency responder, Government official, NGO worker: Directly involved in disaster management.
- B. General public: Largest group, provides insights into public perception and usage.
- C. Other: Highlights varied occupations interacting with social media during disasters.

Interpretation: The majority of respondents are from the general public, indicating widespread use of social media across various segments of society.

Section 2: Social Media Usage

Frequency of Social Media Use:

Frequency	Number of Respondents	Percentage
Multiple times a day	60	60%
Once a day	20	20%
A few times a week	10	10%
Once a week	5	5%
Rarely	4	4%
Never	1	1%

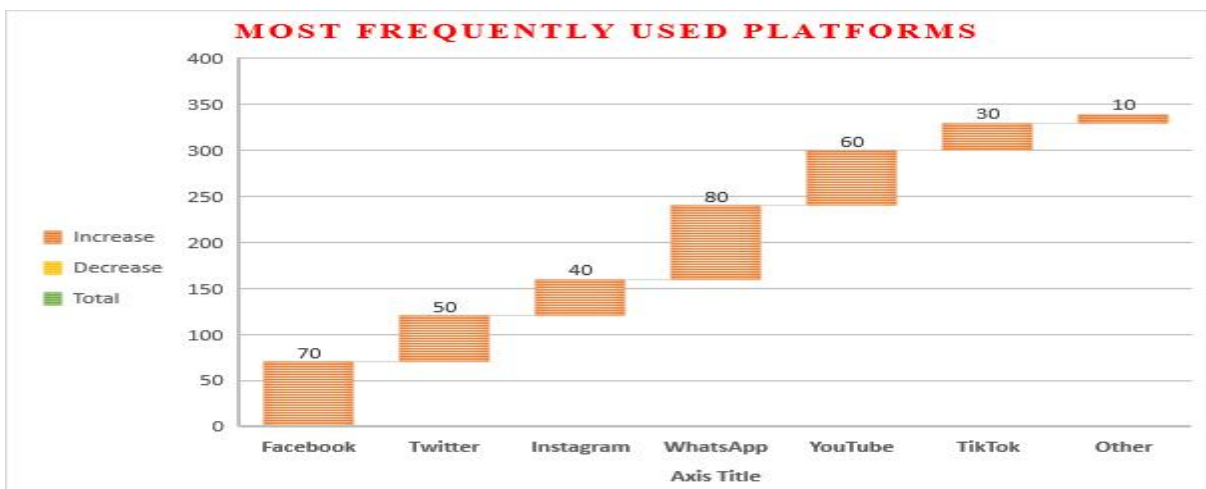


- A. Multiple times a day: Dominant response, crucial for timely updates.
- B. Rarely/Never: Indicates a portion of the population not reliant on social media.

Interpretation: A significant majority use social media multiple times a day, highlighting the potential for real-time information dissemination.

Most Frequently Used Platforms:

Platform	Number of Respondents	Percentage (out of total 100 respondents)
Facebook	70	70%
Twitter	50	50%
Instagram	40	40%
WhatsApp	80	80%
YouTube	60	60%
TikTok	30	30%
Other	10	10%



A. Facebook, Twitter, WhatsApp: Most used, key channels for information dissemination.

B. Instagram, YouTube, TikTok: Significant but lesser role, reflecting varied content preferences.

Interpretation: WhatsApp is the most frequently used platform among respondents, followed by Facebook and YouTube.

Section 3: Awareness and Information Dissemination

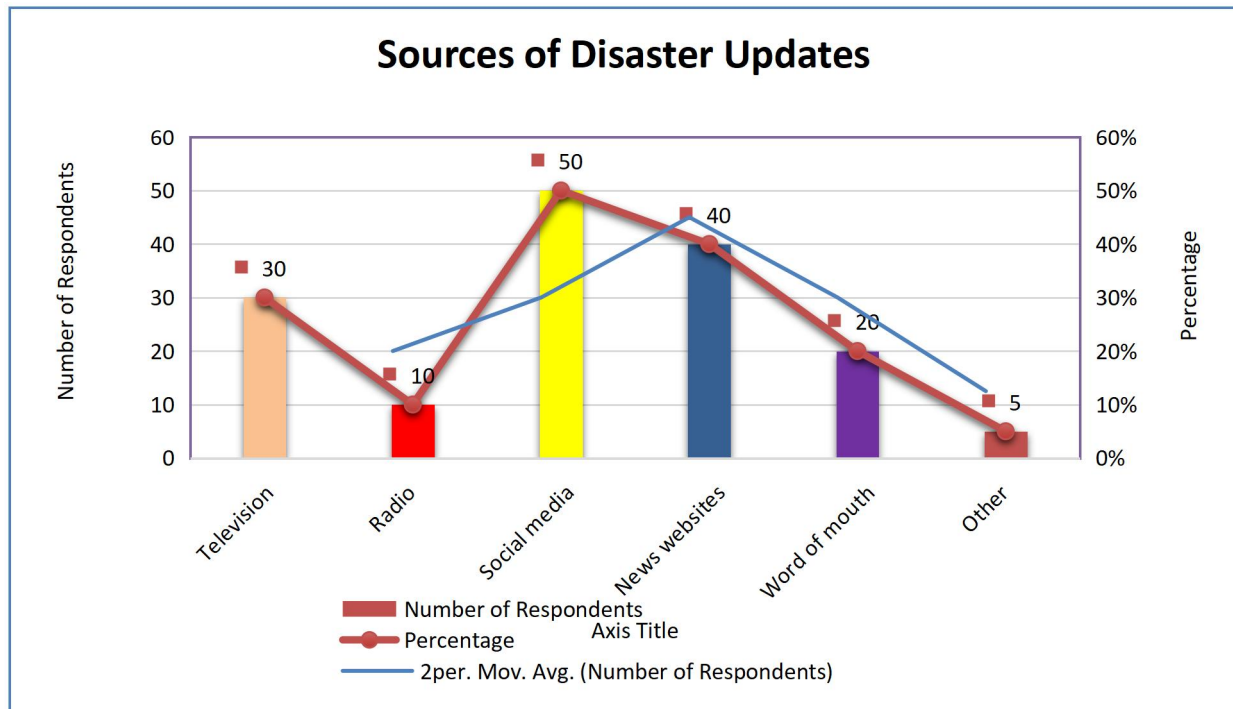
Sources of Disaster Updates:

Source	Number of Respondents	Percentage
Television	30	30%
Radio	10	10%
Social media	50	50%
News websites	40	40%
Word of mouth	20	20%
Other	5	5%

A. Social media and News websites: Primary sources, highlighting digital reliance.

B. Television and Radio: Traditional media still relevant but secondary.

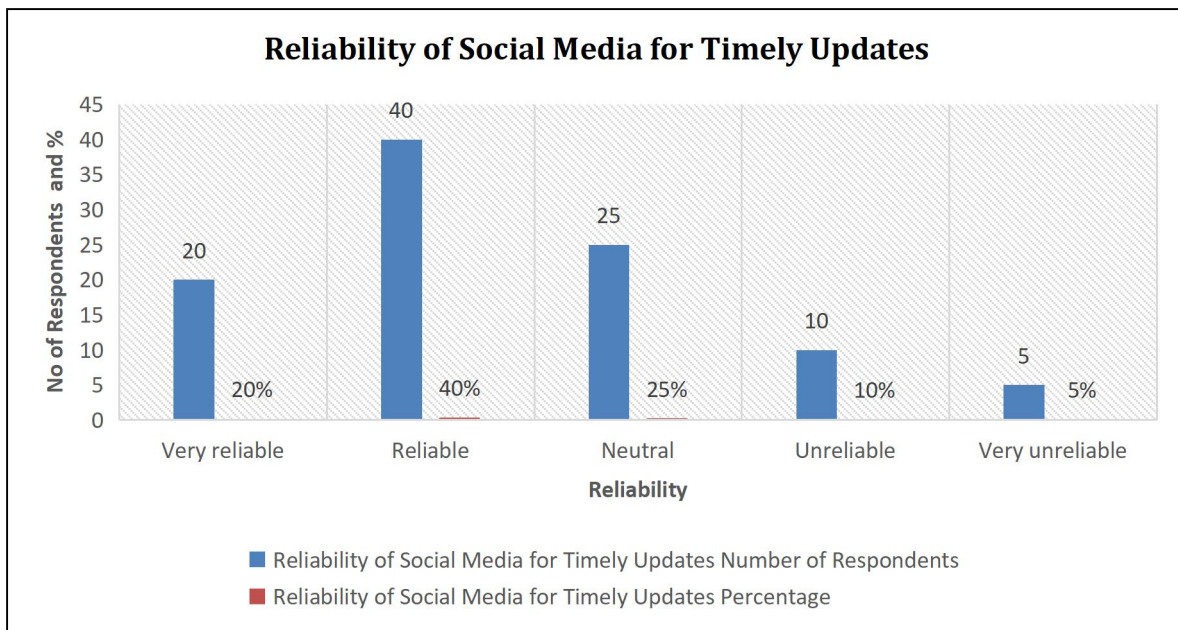
C. Word of mouth: Important in certain demographics.



D. **Interpretation:** Social media is a primary source for disaster updates, but traditional media like television also plays a significant role.

Reliability of Social Media for Timely Updates:

Reliability	Number of Respondents	Percentage
Very reliable	20	20%
Reliable	40	40%
Neutral	25	25%
Unreliable	10	10%
Very unreliable	5	5%



- A. **Reliable/Very reliable:** Majority perception, indicating trust in social media for updates.
- B. **Unreliable/Very unreliable:** Highlights issues needing address (misinformation, connectivity).

Interpretation: A combined 60% find social media reliable or very reliable for disaster updates, though there is still a notable minority who are neutral or find it unreliable.

Section 4: Communication and Coordination

Social Media in Coordinating Relief Efforts:

Opinion	Number of Respondents	Percentage
Strongly agree	25	25%
Agree	45	45%
Neutral	20	20%
Disagree	7	7%
Strongly disagree	3	3%

- A. **Agree/Strongly agree:** General consensus on effectiveness.
- B. **Disagree/Strongly disagree:** Minimal, possible gaps in coordination.

Participation in Relief Efforts via Social Media:

- A. **Yes:** Indicates significant engagement and potential for mobilization.
- B. **No:** Opportunity for increased participation.

Interpretation: A majority of respondents believe social media helps in coordinating relief efforts, indicating its crucial role in disaster management.

Effectiveness in Disaster Preparation:

Effectiveness	Number of Respondents	Percentage
Very effective	20	20%
Effective	40	40%
Neutral	25	25%
Ineffective	10	10%
Very ineffective	5	5%

- A. **Effective/Very effective:** Major perception, supporting community readiness.
- B. **Ineffective/Very ineffective:** Needs attention to improve trust and usage.

Interpretation: The majority find social media effective in disaster preparation, though a notable portion remains neutral or sees it as ineffective.

Section 5: Challenges and Improvements

Challenges Encountered:

Challenge	Number of Respondents	Percentage
Misinformation or rumors	50	50%
Lack of internet connectivity	30	30%
Overload of information	40	40%
Privacy concerns	20	20%
Other	10	10%

- A. **Misinformation/Rumors, Overload of Information:** Primary concerns.
- B. **Lack of Internet Connectivity, Privacy Concerns:** Significant but less frequent issues.

Interpretation: Misinformation is the top challenge, highlighting the need for better information verification and dissemination practices on social media.

Collaboration with Emergency Services:

Opinion	Number of Respondents	Percentage
Strongly agree	30	30%
Agree	40	40%
Neutral	20	20%
Disagree	5	5%
Strongly disagree	5	5%

- A. **Agree/Strongly agree:** Overwhelming support, encouraging formal partnerships.
- B. **Neutral/Disagree:** Minimal, shows general approval.

Interpretation: Most respondents believe social media platforms should collaborate more with emergency services, emphasizing the need for integrated disaster response systems.

Section 6: Personal Experience and Perception

Direct Help via Social Media:

- A. **Yes:** Reflects personal or observed impact.
- B. **No:** Suggests indirect experiences or lack of exposure.

Specific Instances:

- Varied examples showcasing social media's critical role in past events.

Likelihood of Future Use:

- A. **Very likely/Likely:** Indicates readiness to rely on social media in future disasters.
- B. **Unlikely/Very unlikely:** Minimal, implies barriers to address.

Following Disaster-related Accounts:

- A. **Yes:** Highlights engagement with specialized sources.
- B. **No:** Indicates potential for increasing awareness.

3) Recommendations:

A. Enhance Misinformation Management:

- Implement advanced algorithms to detect and counter false information.

B. Strengthen Connectivity and Access:

- Develop offline capabilities for social media platforms during connectivity loss.
- Encourage telecom companies to provide emergency internet services.

C. Promote Public Awareness and Training:

- Conduct workshops on effective use of social media during disasters.
- Provide guidelines for verifying information and participating in relief efforts.

D. Foster Collaborations:

- Encourage partnerships between social media platforms and emergency services.
- Develop official channels for verified information dissemination.

E. Improve Information Management:

- Implement user-friendly interfaces to streamline information overload.

- Use AI to prioritize and highlight critical updates.
- F. Address Privacy Concerns:**
 - Ensure robust data protection measures.
 - Educate users on maintaining privacy while seeking or providing help.
- G. Enhance Collaboration:**
 - Strengthen partnerships between social media platforms and emergency services.
- H. Improve Information Verification:**
 - Develop mechanisms to filter and verify information to combat misinformation.
- I. Expand Connectivity:**
 - Increase access to reliable internet, especially in disaster-prone areas.
- J. Educational Campaigns:**
 - Promote digital literacy to help users discern reliable information during disasters.

By addressing these recommendations, the role of social media in disaster management can be significantly enhanced, ensuring more effective communication, coordination, and community resilience.

4. Conclusion:

The data analysis reveals a strong reliance on social media for disaster management among various demographics, particularly younger adults and the general public. Social media is seen as a valuable tool for timely updates and coordination of relief efforts. However, challenges such as misinformation and connectivity issues need to be addressed to enhance its effectiveness. Collaboration between social media platforms and emergency services is widely supported, which could lead to more efficient and reliable disaster management strategies in the future.

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A Study Of Consumer Behaviour Regarding Investment In Gold With Reference To Latur City

¹Shri. Sharma Shivnarayan Shrirang, ²Dr. R.S. Pawar

¹Research Scholar

Dayanand College of Commerce, Latur.

²Research Supervisor, I/c.Principal

Dayanand College of Commerce, Latur.

Abstract:

Gold has held a significant cultural, social, and economic value in India for centuries. Beyond its ornamental appeal, gold serves as a crucial investment avenue for Indian consumers, offering stability, security, and a hedge against inflation. This abstract explores the intricate dynamics of consumer behavior concerning investment in gold within the Indian context.

The study delves into the multifaceted factors that influence consumer decisions regarding gold investment, including cultural traditions, economic indicators, and market trends. It examines the role of socio-cultural factors, such as weddings, festivals, and religious ceremonies, in driving demand for gold among Indian consumers. Furthermore, the abstract investigates the impact of macroeconomic variables, such as inflation, interest rates, and currency fluctuations, on gold investment choices. It analyzes how economic uncertainties and geopolitical tensions shape consumer perceptions of gold as a safe haven asset.

Key Words: *Consumer Behaviour, Investment*

Introduction:

In recent years with changing global scenario mindset of a general consumer is also changing day by day. Purchasing of any kind of goods is not a mere thing in today's era. In addition to change in various products, their brand, color, shape, design, price, quality, features, consumer behaviour is also changing. consumer behaviour towards any product is depend on geographical location, taste, fashion, preferences, purchasing ability, features of product, need of the product etc. Thus, study of consumer behaviour is quite essential.

The study relating to consumer behaviour depicts how an individual customer, organization or a group of person is select the product, buy the product, use and dispose ideas, goods and services to satisfy their wants and needs. Consumer behaviour is the activity by the consumer towards marketplace and how the consumer deals with the product.

Review of Literature:

Y. V. Reddy (1996) said that from 8.1 percent in 2001–2002 to 9.6 percent in 2010–2011, the percentage of overall imports of gold grew. The import growth rate of gold was 23 percent in 2008–2009, 38 percent in 2009–2010, and 18.3 percent in 2010–2011, respectively. Additionally, there was an average growth rate of 26.8% during this time. The increase in imports demonstrates unequivocally how much Indians value gold and gold jewelry.

Gold Supply and Demand Fourth Quarter (2004) According to the World Gold Council (WGC), jewellery demand and retail investment in India was at an all-time high in Q4. This is the first time jewellery demand has exceeded the year-on-year value of Q4 1998, when demand was boosted by the initial effect of import liberalisation. In rupee terms, jewellery demand increased by 29% compared to Q4 1998.

Objectives of the study:

- 1) To study Consumer Behaviour regarding gold purchase in Latur City.
- 2) To study the various factor affecting buying behavior of gold ornaments.
- 3) To study impact of price on buying behaviour of gold.

Research methodology

- 1) **Data Collection:** The above research work is exploratory in nature. Data for research work is collected from primary and secondary sources.
 - **Primary Data:** For accessing consumer behaviour survey method will be used and structured questionnaire has been prepared. These questionnaire has been collected from families
 - **Secondary Data:** Secondary data has been collected through published sources such as journals, periodicals, books, magazines, newspapers, e-resources, government reports etc.

Limitations of the study:

A proposed study will have following limitations.

- 1) This study has been carried out only between the geographical borders of Latur City.
- 2) There is no comparative study between rural and urban area.

Sources of Investment in India

Bank Fixed Deposit: Bank fixed deposit is another popular investment options in India that ensures the safety of your money and provides stable returns. You can invest a lump sum amount and it will offer a fixed rate of interest for a specific term. After your term is over, you will receive the principal with compound interest added over the term.

Real Estate Investment: Real estate is a good investment option in India. It is, however, usually a big-ticket investment. The investment refers to buying properties such as homes, plots and land. This is one of the best investment options that can help you combat inflation. Investing in this can give you a shot at both regular as well as capital gain income.

Stock Market: All companies need money to run their business. So, companies invite normal people like you and me to put some money into their company so that they can run it efficiently and in return, investors get a share of whatever profit they make. The primary reason most people invest in stocks is the potential return compared to alternatives such as bank certificates of deposit, gold, and Treasury bonds.

Gold: Gold is not used as a currency today, but its role as money makes it superior to any currency. In India, Gold is often seen as a go-to investment option to keep a family's legacy safe. But rising costs and making charges have now made it almost impossible to buy gold as a family heirloom. Instead, investment options like Gold ETFs allow you to build gold purchasing power gradually over time. These are commonly known as 'paper gold'. It contains gold stocks and investments. Unlike expensive gold, these can be brought according to your capacity from the stock market.

Data Analysis:

Table No. 01 :Age wise distribution of respondents (in years)

Sr. No.	Age(in years)	No. of Respondents	Percentage
1	20-30	56	28.0%
2	31-40	48	24.0%
3	41-50	45	22.5%
4	Above 50	51	25.5%
Total		200	100%

Graph No. 01

Table No. 01 indicates Age-wise distribution of respondents. Out of 200 respondents 56 respondents are from age group of 20-30 i.e. 28%, 48 (24%) respondents are from age group of 31-40, 45 (22.5%) respondents are from 41-50 age group and 51 (25.5%) respondents are above 50 years of age. It clearly shows that majority respondents are above the age of 30.

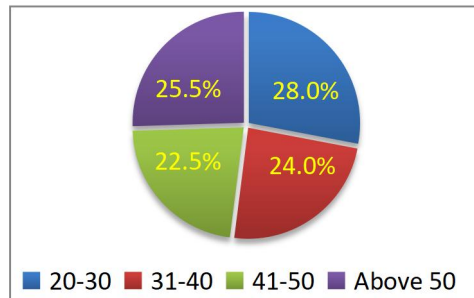


Table No. 02 :Gender-wise distribution of respondents

Sr. No.	Gender	No. of Respondents	Percentage
1	Male	88	44.0%
2	Female	112	56.0%
Total		200	100%

Graph No.2

Data has been collected from Male and Female respondents. Table No.4.01 shows Gender-wise distribution of sample respondents. Total 200 responses were collected among this 88 respondents are Male i.e. 44% and 112 respondents are Female i.e. 56%. It shows that female respondents are more than male respondents.

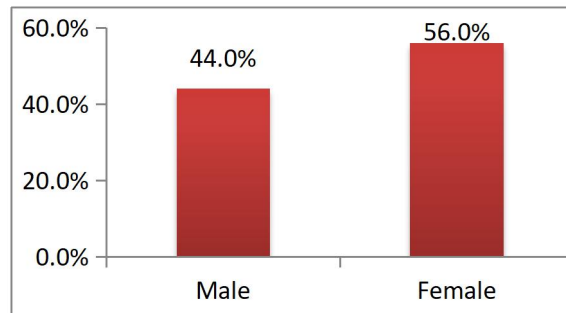


Table No. 03: Classification of Marital Status

Sr. No.	Marital Status	No. of Respondents	Percentage
1	Married	166	83.0%
2	Unmarried	34	17.0%
Total		200	100%

Graph No. 03

Marital Status impact on buying decision of customers towards gold ornaments. Table No. 4.05 shows that out of 200 respondents 166 (83%) respondents are married and 34 (17%) respondents are unmarried.

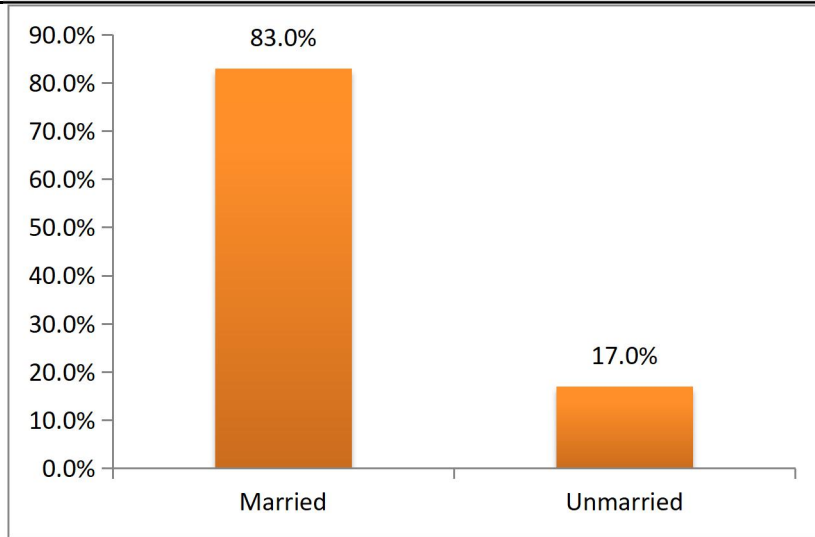


Table No. 4 : Income Level

Sr. No.	Monthly Income	No. of Respondents	Percentage
1	Below 10000	59	29.5%
2	10000-20000	35	17.5%
3	20000-30000	26	13.0%
4	30000-40000	14	7.0%
5	40000-50000	17	8.5%
6	Above 50000	49	24.5%
Total		200	100%

Graph No. 4

Income of people strongly affects on their buying decisions. Above table shows that out of 200 respondents 59 (29.5%) respondents are come from below 10000 income, 35 (17.5%) respondents income group in between 10000-20000, 26 (13%) respondents income in between 20000-30000, 14 (7%) respondents income in between 30000-40000, 17 (8.5%) respondents income in between 40000-50000 and remaining 49 (24.5%) respondents income above 50000 per month. This indicates that many respondents income is very low.

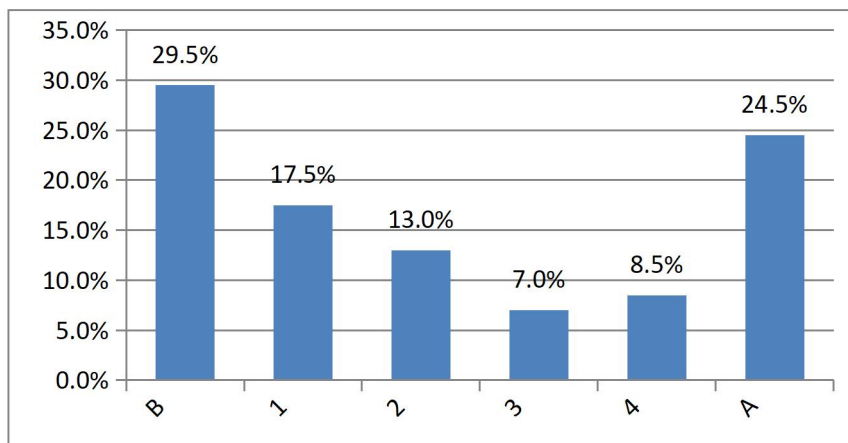
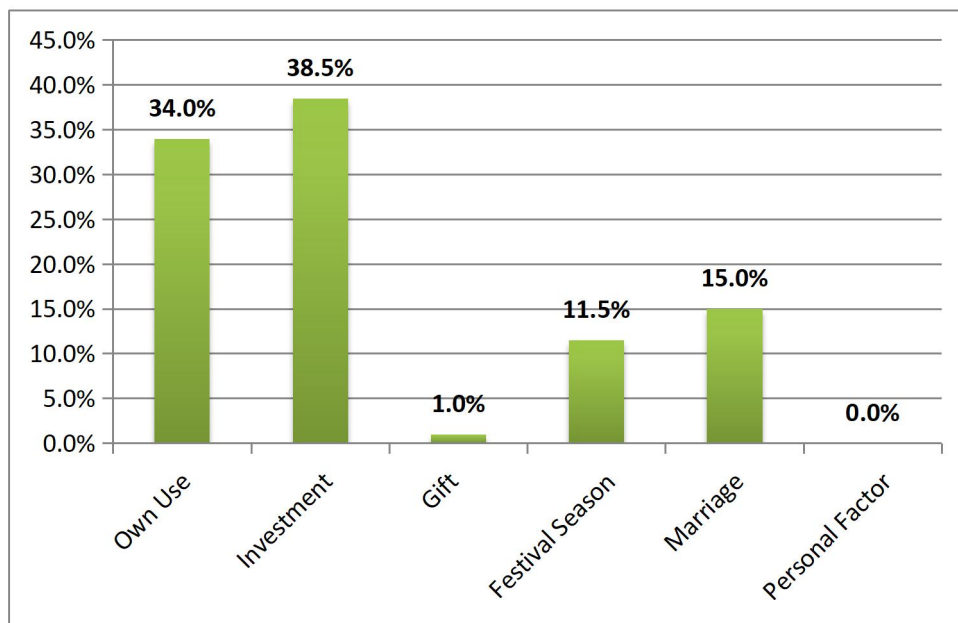


Table No. 5 : Reasons of investment in Gold Ornaments

Sr. No.	Reasons of Investment	No. of Respondents	Percentage
1	Own Use	68	34.0%
2	Investment	77	38.5%
3	Gift	2	1.0%
4	Festival Season	23	11.5%
5	Marriage	30	15.0%
6	Personal Factor	0	0.0%
Total		200	100%

Graph No. 5



Investment of money into Gold ornaments is differs from person to person. Out of 200 respondents 68 (34%) respondents purchase gold ornaments for their personal use, 77 (38.5%) respondents purchase of gold for the purpose of investment, 2 (1%) respondents for the purpose of gift, 23 (11.5%) respondents purchase gold in festive season, 30 (15%) respondents purchase gold for marriage ceremony and no one purchase gold ornaments for personal factor.

Findings:

- 1) The highest satisfaction in buying gold jewellery has been observed between young and old gold jewellery buyers in the age group of 35-50 years.
- 2) A gender wise analysis revealed that female buyers are more satisfied with purchasing gold jewellery than male gold jewellery buyers.
- 3) Marriage is an auspicious event in every person's life. Marriage is the foundation of a healthy family. Marriage-wise analysis shows that married buyers are more satisfied with buying gold jewellery than unmarried gold jewellery buyers.

- 4) The family expenditure depends on the availability of money or the total income of the family. Income wise analysis shows that buyers who spend Rs. 50,000 have earned more than other income earners who are most happy to buy gold jewellery.
- 5) Buying behavior of consumer is varying from person to person. It is depend on the income of consumers. The study found that, near about 40% consumers invest in gold ornaments.

Suggestions:

1. The analysis revealed that the highest level of satisfaction while buying gold jewellery is revealed by buyers in the age group of 35-50 years who are young and old gold jewellery buyers. Therefore, it is suggested that jewellery marketers should recognize the expectations of young and old respondents and special care can be taken in providing high class services to these buyers.
2. The gender wise analysis revealed that female buyers expressed maximum satisfaction while purchasing gold jewellery compared to male buyers. So it is suggested that male consumer survey should be conducted very often and it can review the changes in taste and attributes of male consumers.
3. Among the selected sample respondents, technically qualified buyers expressed the highest level of happiness in buying gold jewellery than other educated buyers. Therefore, it is suggested that the minimum profile should determine the needs of the customers and fulfill them within the stipulated time.
4. A marriage-wise analysis shows that married buyers are more satisfied with purchasing gold jewellery than unmarried gold jewellery buyers. Hence it is suggested that gold jewellery retailers can improve their service to their young unmarried customers by providing adequate information regarding new arrivals, attractive designs and latest gold fashion.
5. Buyers belonging to the nuclear family system have expressed maximum satisfaction with buying gold jewellery. Therefore, traditional gold jewellery shops can also offer offers and discounts to attract more customers. Because joint family customers had strong faith in traditional gold jewellery shops.

Conclusion:

Gold jewellery sellers can excel in the market by prioritizing customer needs and preferences over traditional product and sales strategies. Customers tend to focus on factors such as price, purity, and design when choosing a gold jewellery shop, with additional considerations including diversity, brand reputation, and input from family and friends. While service and display are less influential in the decision-making process, online reviews can provide valuable insights into consumer perceptions. It is important for sellers to understand the impact of social influence on consumer behavior and to leverage recommendations for both pre-purchase and post-purchase validation.

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Big Data Analysis In Cloud Computing

Geetanjali Madhukar Joshi

Dayandand commerce college, Latur

Abstract

Big Data and Cloud Computing are two of the most significant technologies in today's world. With the exponential growth of data, Big Data has become increasingly important in various industries. The constant influx of data emphasizes the need for incorporating Big Data into applications. On the other hand, Cloud Computing allows users to utilize platforms based on their convenience, time, and affordability. It enables users to collaborate and work more efficiently than ever before. When Big Data is integrated into Cloud Computing, it finds applications in various fields such as Finance, Management, supply chain, planning, data storage, and warehouses, among others. This paper discusses the implementation and application of Big Data in Cloud Computing. The 4 V's of Big Data - volume, velocity, variety, and veracity - can be applied in Cloud Computing to enhance performance, provide more detailed inputs, gain better insights, and offer reliable and secure platforms at lower costs. The paper also explores different analytics and technologies involved in the integration of Big Data with Cloud Computing, the challenges associated with this process, emerging trends in the domain, and the importance of security factors.

Keywords :Big data, Cloud Computing

I.Introduction

Big data refers to the methods of analyzing and extracting information from data sets that are too large or complex for traditional data processing software to handle. It involves dealing with a massive amount of data. The characteristics of big data can be explained using the 4V's. On the other hand, cloud computing is the on-demand availability of computer system resources, including data storage and computing power. It allows users to access, use, and modify their work while collaborating with others.

II. BIG DATA ANALYTICS

Big Data in cloud refers to enormous size of the dataset perhaps in few dozens of terabytes and petabytes and thus working with them in a traditional local computer based Database Management System becomes enormously difficult. The ability to scale storage, visualize data, manage and capturing becomes very tedious and highly costly and thus use of cloud is the most apt solution. Many of the world's largest organization are storing all of their data on cloud. Naturally businesses can benefit from large data with almost real time capability, and thus the cloud needs to have different data architecture, analytical methods, and tools.

III.Characteristics of Big data

1. The defining attributes of big data are categorized into four V's: Volume, Variety, Velocity, and Veracity. Volume, the initial V, pertains to the magnitude of the data and its scale.
2. The term Velocity pertains to the speed at which data is being gathered or is changing.
3. Variety, refers to the number of different sources from which the data originates. The data may come from logs, social media, or even click streams.
4. Veracity, describes the quality of the data. Data quality is assessed by examining patterns that indicate the level of inconsistency, missing information, incompleteness, approximation, deception, ambiguity, or latency.

IV. Storage Management and Cloud –

There are numerous software packages available on the cloud that facilitate cloud computing. For enterprise data warehousing, one can utilize NoSQL if there is unstructured data such as large texts. The commonly used software packages include Hadoop, Spark, Map Reduce, and HBase. Hadoop, written in Java, is the most widely available programming framework that supports the processing of large amounts of data. By utilizing clusters of servers, Hadoop enables the analysis of massive data sets. It also provides a flexible and fault-tolerant computing solution, mitigating the risk of system failure even if multiple nodes fail. The Hadoop Distributed File System (HDFS) is an efficient and advanced file system that spans all nodes in a Hadoop cluster for data storage, enhancing reliability. HBase, on the other hand, is a NoSQL software that operates within the Hadoop framework and is modeled after

Google's Bigtable. It is commonly used for storing big data, particularly when dealing with unstructured data. Spark, another open-source tool, offers a unified analytics engine for large-scale data processing. It provides a programming interface for managing entire clusters with implicit data parallelism and fault tolerance. When storing data on the cloud, it is crucial to utilize appropriate tools.

V. Big Data Processing –

There are four essential criteria for data processing.

1. The primary criterion is the ability to swiftly load the data.
2. Rapid query processing.
3. Efficient utilization of storage capacity.
4. Strong adaptability to highly dynamic workloads. To efficiently meet all four criteria, cloud service providers assist us by offering Map Reduce Software. Both Azure HDInsight and Amazon EWS provide a Map Reduce framework, which greatly aids in processing.

VI.Challenges

Despite the numerous benefits of combining cloud computing and big data, it is essential to consider the challenges and risks involved in deploying big data on a cloud platform

A. Data Storage–

As technology continues to advance, we are experiencing a significant increase in data volume. Unfortunately, a large portion of this data is often overlooked or deleted due to insufficient storage capacity.

B. Data Transmission –

One more obstacle lies in the task of transferring enormous quantities of large-scale data (for instance, hundreds of terabytes of data) to a public cloud within a limited timeframe. How can we address the concerns regarding storage, dependability, confidentiality, and security? The process of transferring massive data volumes at various stages of the data life cycle presents challenges in each of these stages. Hence, it is imperative to develop intelligent pre-processing methods and data compression algorithms to efficiently decrease the data size prior to the data transfer.

C.Data Security–

The combination of Big Data and Cloud Computing can lead to security vulnerabilities. The current data security policies and schemes are designed for structured data in traditional DBMS, making them ineffective for managing diverse and unstructured data.

D Computational Complexities

In order to handle substantial amounts of data, dedicated computing resources are necessary. This is typically achieved by enhancing the speed of storage, network, and CPU.

E.Various Conceptual Notions of these Fields –

The fundamental ideas of consolidation and resource pooling form the foundation of Cloud Computing, while big data systems (like Hadoop) are constructed based on the shared nothing principle, with each node being self-reliant and autonomous.

VII.Technologies used

The cloud service categories for Big Data analytics as a service comprise of infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS).

Infrastructure as a Service (IaaS) allows enterprises to access shared server resources, typically virtualized, for managing computational and storage requirements for Big Data analytics. IaaS can be implemented on-premise or through a cloud provider. The cloud provider is responsible for managing high-performance network, servers, and storage resources. This relieves enterprises engaged in Big Data from the burden of maintaining the necessary hardware and software for optimal performance.

Platform as a service(PAAS)

Amazon ElasticMapReduce provides a basic Hadoop framework PaaS environment, while Windows Azure's HDInsight brings Hadoop to the cloud environment along with Power Map, Power View, and other Microsoft BI tools. DynamoDB and Redshift are common PaaS offerings from AWS for NoSQL database services and data warehousing. Google also offers PaaS capabilities with Bigtable and BigQuery.

C. Software as a Service (SaaS) is utilized to deliver applications over the internet. SaaS encompasses a platform that offers cloud-based solutions for businesses and enables real-time analysis of time-sensitive information.

VIII. Security

As many businesses rely on this technology without always considering the security implications. Any security breach in Big Data can lead to significant consequences. Companies typically utilize Big Data to store vast amounts of data, which underscores the importance of safeguarding this information. To ensure data security, encryption, logging, and honeypot techniques are commonly employed.

The security challenges in cloud computing environments can be classified into network level, user authentication level, data level, and overall concerns.

IX. Advantages

Cloud computing enhances big data by providing a convenient and shared computing platform that requires minimal management effort and overhead. It also improves the overall robustness and automation of the environment, while enabling multi-tenancy. Big data, on the other hand, empowers end users to visualize data and enables companies to explore new market opportunities. Additionally, data analytics plays a crucial role in personalizing information, accessing real-time websites, and facilitating communication. The convergence of cloud computing and big data makes the management of resources more streamlined, monitorable, and reportable. This integration ultimately reduces complexity and increases efficiency. Given all these advantages, cloud-based approaches are considered the optimal models for deploying big data.

VII. APPLICATIONS

Big data applications are characterized by their ability to handle large-scale distributed tasks that involve extensive datasets. In the realm of big data, the exploration and analysis of data pose significant challenges across various industries. Traditional data processing applications struggle to effectively handle the complexities of large and intricate datasets, thus necessitating the development of big data applications. Notable examples of such applications include Google's map reduce framework and Apache Hadoop, both of which generate substantial amounts of intermediate data. Manufacturing and bio-informatics are the primary domains where big data systems find extensive usage. In the manufacturing sector, big data provides a transparent infrastructure that enables addressing uncertainties related to inconsistencies, component performance, and availability.

VIII. CONCLUSION

The current digital world heavily relies on big data and cloud computing. The potential of applying big data in cloud computing is immense and is expected to grow in the coming years. In the context of Software as a Service, big data plays a crucial role in providing valuable insights for cloud computing applications. The application of big data in cloud computing has numerous benefits across various fields. These include enhanced analysis capabilities due to the vast amount of data, the establishment of an efficient infrastructure that reduces long-term costs, and improved integrity, availability, and security of the cloud platform. Furthermore, big data enables businesses and platforms to expand and thrive.

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To Examine The Role Of Infrastructure In Growth Of Horticultural Development In Himachal Pradesh

¹Hakam Chand, ²Dr. Mudasir Ahmad Dar

¹Ph.d Research Scholar (Economics),

Mittal School of Business Lovely Professional University, Jalandhar, Punjab, India.

²Assistant Professor (Economics),

Mittal School of Business Lovely Professional University, Jalandhar, Punjab, India.

Introduction

The horticulture term is derived from two Latin words, hortus, meaning a garden and culture means cultivation. It may be defined as the practice of growing manipulating plants in a relatively intensive manner. In ancient times, the gardens of large estates were surrounded by high walls or similar structures, and crops usually cultivated with these areas were trees like apple, pear, peach, date, pomegranate, fig, many vegetables, flowers and ornamental plants. As a result, the horticulture in the original sense referred to the cultivation of crops within a protected area. Horticulture is an important sector in the agricultural economy of Himachal Pradesh, contributing to both economic growth and food security (Martin &Stabler, 2004).

The significance of infrastructure in the development of agriculture and horticulture is widely acknowledged. Rural infrastructure is a fundamental requirement for enhancing the overall quality of life and expediting agricultural progress. It possesses the potential to transition traditional or subsistence farming into a more advanced, commercial, and dynamic agricultural system in India. This chapter delves into the existing infrastructure and the various policies implemented by the state government to promote horticulture in Himachal Pradesh. Furthermore, it evaluates the role played by infrastructure and policies in the growth of the horticulture sector in the state.

Theoretical Framework

One of the technical background documents prepared for the World Food Summit highlights the limited availability of essential infrastructure services such as roads, electricity, and telecommunications in rural areas, despite their critical importance in stimulating agricultural investment and growth. The document goes on to emphasize the vital role of improved communication networks, as they lead to reduced transportation costs, increased competition, decreased marketing margins, and, as a result, a direct enhancement of farm incomes and private investment opportunities. These findings find support among various scholars in developing countries, as demonstrated by studies conducted by Antle (1984), Binswanger, Khandker, and Rosenzweig (1993), Fan, Hazell, and Thorat (2000), Mundlak, Larson, and Butzer (2002), Fan, Zhang, and Zhang (2002), and Fan and Zhang (2004).

Aims and Objective of the study

To examine the role of infrastructure in growth of horticulture in Himachal Pradesh.

Role of Infrastructure in the growth of horticultural development

Agricultural and horticultural infrastructures encompass a diverse range of public services that support various aspects of the production, procurement, processing, preservation, and trade of agricultural and horticultural products.

This infrastructure can be broadly categorized into the following groups: •

- 1. Pre-Harvest Infrastructure:** (i) Seeds and Saplings (ii) Fertilizers and Pesticides (iii) Irrigation •
- 2. Post-Harvest Infrastructure:** (i) Basic Infrastructure - Power and Road (ii) Packaging and Processing (iii) Storage (iv) Market
- 3. Soft Infrastructure:** (i) Research and Development (ii) Support Infrastructure

4. Government Policies.

1. Pre-Harvest Infrastructure:

In this section, we will discuss on Pre-Harvest Infrastructure, which plays a pivotal role in enhancing agricultural and horticultural productivity. This category includes components such as seeds, saplings, fertilizers, pesticides, farm equipment, and irrigation. The availability and quality of these inputs are of great importance, particularly in hilly states like Himachal Pradesh, where a significant percentage of farmers are small and marginal. These inputs are essential for increasing productivity and farm income.

1.1 Seeds and Saplings: Seeds and saplings are critical inputs for achieving higher productivity in horticultural crops. In the context of horticulture, seeds are vital for vegetable crops, while saplings are crucial for fruit crops. The cost of these inputs typically accounts for only 5-10 percent of the total cultivation cost.

One of the major challenges in increasing crop production and productivity is the insufficient availability of quality seeds of improved varieties. Ensuring an adequate and timely supply of quality inputs, with a specific focus on seeds, is of utmost importance. In Himachal Pradesh, the horticulture sector, which encompasses fruits and vegetables, is managed by two departments: fruits fall under the purview of the Department of Horticulture, while vegetables come under the Department of Agriculture. The Department of Agriculture has established 13 seed multiplication farms, where foundation seeds for kharif and rabi crops are produced. Annually, these farms produce around 3,500 to 4,000 quintals of seeds for cereals, pulses, and vegetables. Off-seasonal vegetable cultivation has become an integral part of the horticulture sector in the state, offering farmers the opportunity to earn significant profits. The Department of Agriculture in Himachal Pradesh owns three vegetable farms that produce high-quality seeds, along with 18 potato development stations responsible for producing foundation seeds of potatoes.

To provide orchardists with quality fruit plant material, 727 nurseries have been registered under the Himachal Pradesh Fruit Nurseries Registration Act of 1973. Out of these, 662 nurseries operate in the private sector, while 65 nurseries are in the public sector.

Annually, these nurseries propagate around two million fruit plants. When it comes to their distribution across different districts, Kullu district has the highest concentration with 133 nurseries, while Lahaul&Spiti districts have the lowest with just 2 nurseries in the state. Apple and mango are the most commonly cultivated fruits in these nurseries, but their distribution is not uniform throughout the state. More than seventy percent of all registered nurseries are concentrated in just five districts: Kullu, Shimla, Mandi, Chamba, and Kangra. In Kangra district, the ratio aligns with the state average, whereas in Shimla district, it is notably lower at 275/1 compared to the state average. Shimla district is a significant fruit producer, but the number of nurseries in relation to its fruit area is insufficient. Therefore, there is a need to establish more nurseries in Shimla district

1.2 Fertilizers and Pesticides

Fertilizers and pesticides are vital inputs necessary to sustain and enhance agricultural production. Fertilizers play a particularly crucial role in boosting crop yields. In India, prior to the Green Revolution, fertilizer usage in agriculture was minimal. However, the Green Revolution introduced high-yielding variety (HYV) seeds, which required fertilizers and irrigation for improved output. Consequently, the government established various fertilizer plants in the country.

Currently, India produces 20,040.348 metric tons of fertilizer, and the Department of Fertilizers reports that fertilizer consumption in India averages 133.22 kilograms per hectare. Punjab ranks as the largest consumer of fertilizers among all states, with a consumption rate of 221.63 kilograms per hectare.

Himachal Pradesh: Consumption of Pesticides

Year	Consumption of Pesticides in M.T
2018-19	322
2019-20	881
2020-21	56

2021-22	279
2022-23	470

1.3 Irrigation:

Irrigation plays a crucial role in agriculture and ensures a secure harvest, acting as insurance against inconsistent monsoons. Despite India's large area under irrigation, a significant portion of the country's gross cropped area is still rain-fed. In Himachal Pradesh, a hilly state, irrigation facilities are lacking, and approximately 81.6% of the cultivated area still relies on rain fed agriculture. Despite ample water resources from glaciers and snow-capped peaks, only 93.5 thousand hectares out of nearly 6 lakh hectares of cultivated land are irrigated. Then the irrigated area in the state was 16.8% of the net area sown in 1971 and marginally increased to 18.4% in 2007.

2. Post-Harvest Infrastructure

Post-harvest infrastructure has a significant impact on food quality, market competitiveness, and returns for producers. However, many developing countries, including India, face inadequate post-harvest management of fruits and vegetables. In Himachal Pradesh, due to challenging terrain, harvest and post-harvest infrastructure development is uneven across different areas, leading to losses during harvesting and post-harvest phases. The infrastructure is categorized into basic infrastructure (roads and power), packaging and processing, storage, and markets.

3. Soft Infrastructure

Soft infrastructure encompasses various institutions engaged in research, offering extension services, and providing financial support to horticultural growers in the state. In the age of technology, understanding the role of such infrastructure in the horticultural development of the state is crucial.

3.1 Research and Development (R&D):

The enhancement of horticultural crop productivity necessitates robust research and development (R&D). In India, horticulture research began around five decades ago, initiated in 1954 with the establishment of a separate horticulture section at the Indian Agricultural Research Institute.

4. Government Policies:

Government policies play a crucial role in boosting any sector of the economy, including horticulture. In Himachal Pradesh, the state government has implemented various policies to harness the vast untapped potential of the horticulture sector during the plan era.

The era of development planning in this hilly state started with the initiation of the First Five-Year Plan in 1951, and since then, 19 planning periods, including 12 Five-Year Plans and 7 Annual Plans, have been carried out.

Conclusion

Efforts have been undertaken to investigate the distribution, variations, and the impact of infrastructure on horticultural development in the designated area. An examination of government policies across different Five-Year Plans has also been presented. Following this analysis, it is evident that the uneven distribution of horticultural infrastructure in Himachal Pradesh is influenced by physiographic constraints and political factors.

Kangra and Mandi district exhibitionist level of pre-harvest infrastructure development, and along with Kullu and Sirmour, also demonstrate elevated post-harvest infrastructure development.

The relatively event topography and fertile valley in these districts provide a conducive environment for infrastructure development, while other districts, characterized by highly undulating topography, less fertile soil, and remote locations, have achieved moderate to low levels of infrastructure development in the state.

Regarding the role of infrastructure in horticulture development, it is observed that horticultural infrastructure shows a positive correlation with horticulture productivity.

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Financial Inclusion And Socio Economic Empowerment Of India

¹*Dr.I.K.Mathad, ²Dr. Jagannath V.Chavan*

¹Assistant Professor

Basaveshwar Commerce College, Bagalkot

²Principal

Basaveshwar Commerce College, Bagalkot

Abstract:

Financial Inclusion, as a major catalyst in the realm of inclusive growth, has garnered significant attention. This study aims to analyze the role of financial services and government schemes in ensuring financial inclusion, thereby enhancing socio-economic empowerment in rural areas of Karnataka, India. Financial inclusion serves as a vital tool to booster the livelihoods of consumers from excluded and underserved groups, fostering their economic empowerment. Access to finance, encompassing credit, savings, and insurance, enables public to procure capital for entrepreneurial endeavors. Quality insurance products aid farmers in safeguarding savings and smoothing consumption amidst adversity. Enhanced financial access facilitates meeting consumption needs, hedging against adverse events, and investing in health and education for families. Similarly, for MSMEs to prosper, timely and affordable credit is indispensable for investment, expansion, and scalability. Financial inclusion reduces poverty and inequality. Financial inclusion provides opportunities for marginalized and low-income individuals to access formal financial services, such as savings, credit, and insurance. By empowering them with the tools to manage their finances and invest in income-generating activities, financial inclusion can help lift people out of poverty and reduce economic disparities. Consequently, financial inclusion plays a pivotal role in mitigating socio-economic disparities and fostering human development at all levels. Economies exhibiting high levels of financial inclusion tend to experience stronger growth, greater stability, and reduced inequality.

Keywords: *Financial Inclusion, Socio-Economic Empowerment, Government Schemes, Rural Community.*

Introduction:

In many rural areas, cash remains the primary mode of transaction, with savings often held in physical assets like gold or land. However, the emergence of digital financial services and government initiatives for financial inclusion have spurred a gradual shift towards formal financial practices. A significant challenge in rural financial management is the lack of financial literacy and awareness, leading to distrust in formal institutions and a reliance on high-interest informal lenders.

Rural income, often tied to seasonal occupations like agriculture, poses difficulties in financial planning due to its fluctuating nature. This inconsistency makes it challenging for households to save for emergencies or future expenses. Financial inclusion has gained global recognition for fostering sustainable growth. The World Bank, in a McKinsey report, highlighted its potential to contribute positively to a country's GDP, with regulators in 143 jurisdictions targeting efforts towards inclusion. Rural communities in developing nations face significant social inequality compared to urban counterparts, with financial literacy playing a crucial role in bridging this gap. While wealthier rural populations possess better health, education, and entrepreneurial skills, those with limited resources struggle to plan and manage finances effectively. This underscores the importance of financial literacy in enabling better decision-making and fostering savings and insurance habits.

Despite widespread financial literacy initiatives, underprivileged populations in emerging nations still lack adequate knowledge. This study aims to explore the role of financial literacy in socio-economic empowerment through financial inclusion, considering the mediating effects of financial decision-making and behavior.

Financial management and behavior in rural India are influenced by various factors, including income, education, and cultural norms. Efforts to improve financial inclusion and education in rural areas are underway, promising long-term benefits for individuals and the economy.

Objectives of the study:

1. To elucidate how socio-economic empowerment can be achieved through financial inclusion.

2. To study the role of government schemes in financial inclusion
3. To study the impact factor of financial inclusion on the Indian economy

Below are the refined hypotheses:

Based on the objectives of the study following hypothesis were formulated

H0: Financial inclusion has positive impact on the socio economic development of rural india

H1: Financial inclusion has negative impact on the socio economic development of rural india

Social Empowerment:

Social empowerment initiatives aim to enhance the well-being and opportunities of rural populations across various domains, including education, health, employment, gender equality, and community engagement. For instance, India's Sarva Shiksha Abhiyan (SSA) strives to deliver free and compulsory education to all rural children, with a particular emphasis on girls and marginalized groups. Similarly, the Village Health Worker program, endorsed by the World Health Organization, trains rural community members to provide essential healthcare services and raise health awareness.

Efforts promoting income-generating activities, vocational training, and entrepreneurship, such as the microcredit services offered by Bangladesh's Grameen Bank, are pivotal in enhancing the economic status of rural individuals. Empowering rural women through education, skills enhancement, and resource access is crucial for fostering gender equality and social empowerment, as evidenced by organizations like India's Self Employed Women's Association (SEWA).

Furthermore, initiatives encouraging community involvement in decision-making and local governance, such as Participatory Rural Appraisal (PRA), foster a sense of ownership and empowerment among rural populations. These holistic approaches collectively contribute to uplifting rural communities and narrowing social disparities.

Economic Empowerment:

Economic empowerment in rural communities entails granting individuals greater control over their economic resources and opportunities, leading to enhanced livelihoods and economic well-being. This is achieved through various initiatives, including the provision of financial services, promotion of entrepreneurship, and skills development for income generation.

For example, institutions like Grameen Bank in Bangladesh have been instrumental in providing microcredit and financial services to rural populations, particularly women, enabling them to establish businesses and improve their economic status (Yunus, 2007). Similarly, the Indian government's National Rural Livelihood Mission (NRLM) focuses on vocational training and fostering rural entrepreneurship, effectively empowering individuals by equipping them with the skills and opportunities needed for income generation (Ministry of Rural Development, 2020).

By addressing financial barriers and promoting entrepreneurship, these initiatives contribute to poverty alleviation and sustainable development in rural areas.

Financial Inclusion and Socio-Economic Empowerment

Financial inclusion directly enhances socio-economic empowerment.

These factors were further validated through a measurement model and confirmatory factor analysis, ensuring validity and reliability. Structural equation modeling was employed to analyze the structural relationships among financial literacy, financial decision-making, financial management behavior, financial inclusion, and socio-economic empowerment.

Research Methodology: The current study employs both descriptive and inferential analysis to address its research questions, blending descriptive and explanatory approaches. Secondary data were utilized to fulfill the study's

objectives. Secondary data were gathered from a variety of sources, including books, journals, articles, organizational reports, government publications, RBI reports, periodicals, and the internet.

This research aims to assess the impact of financial inclusion and its subsequent influence on the socio-economic empowerment of rural banking customers. While previous studies have explored similar themes, this study uniquely examines the role of financial inclusion in fostering financial decision-making and better financial management behavior, ultimately contributing to financial inclusion and socio-economic empowerment. The results demonstrate a strong positive correlation between financial literacy, financial decision-making, financial management behavior, financial inclusion, and socio-economic empowerment.

Practical Implications:

Several practical solutions can enhance the socio-economic empowerment of rural communities through financial inclusion. Embracing digital financial services such as mobile banking and digital payment systems can greatly expand financial access in rural areas, facilitating transactions and commerce even in remote locations. Microfinance initiatives offer another avenue for financial empowerment, providing small loans to underserved populations for various purposes, including entrepreneurship and agricultural investments. Additionally, financial education programs can equip rural communities with the knowledge and skills needed for informed financial decision-making and better financial management. Government interventions, such as subsidies for rural banks and regulatory measures to promote digital financial services, can further bolster financial inclusion efforts in rural areas.

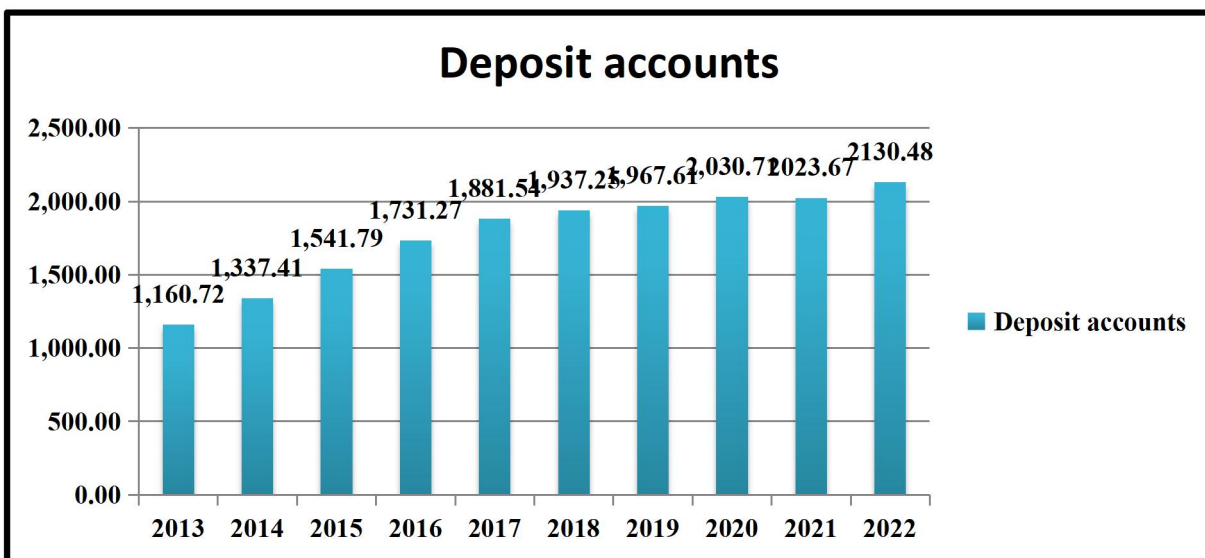
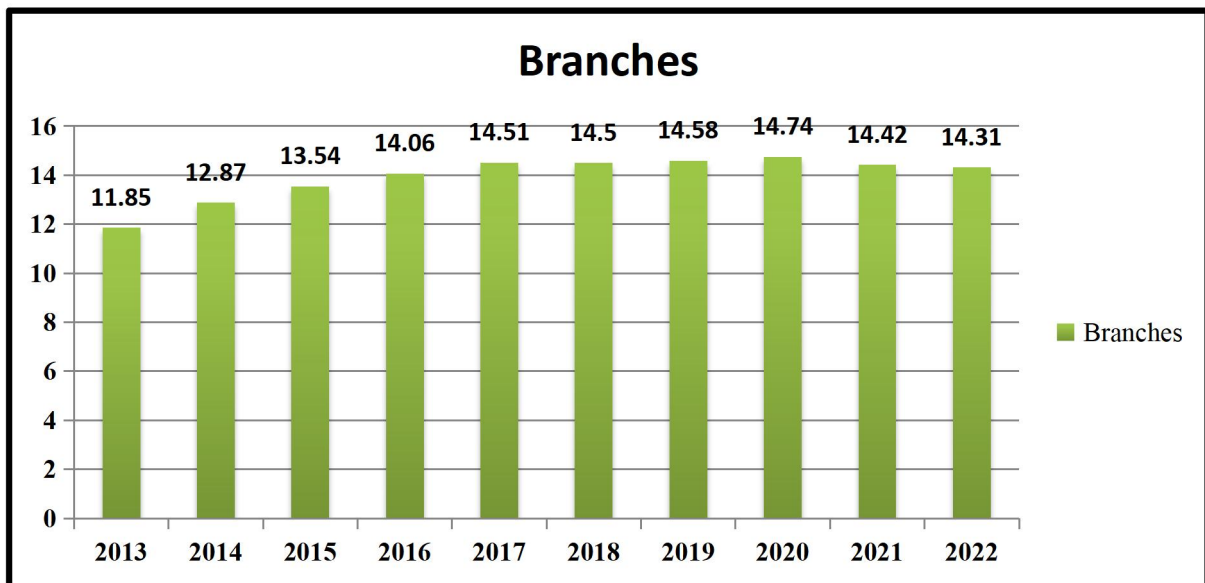
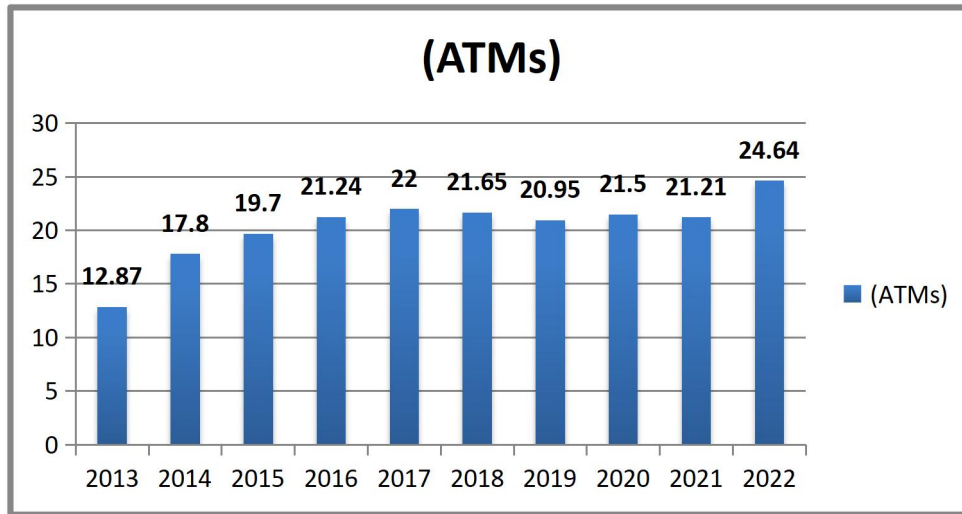
Financial Inclusion:

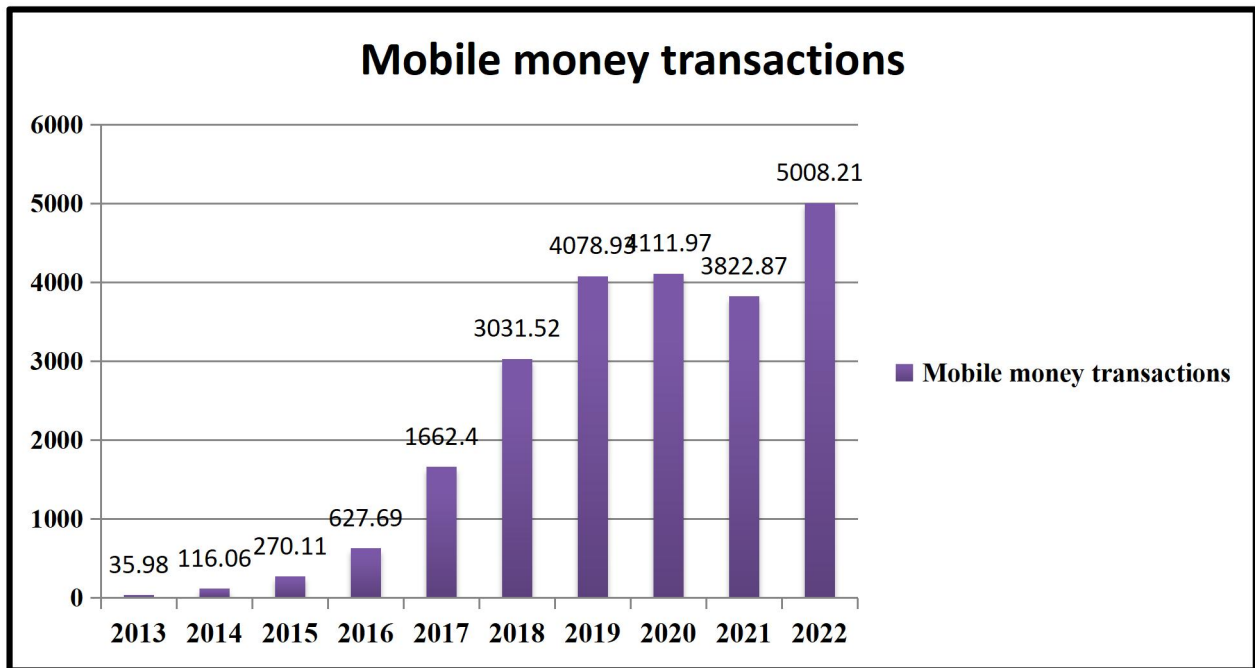
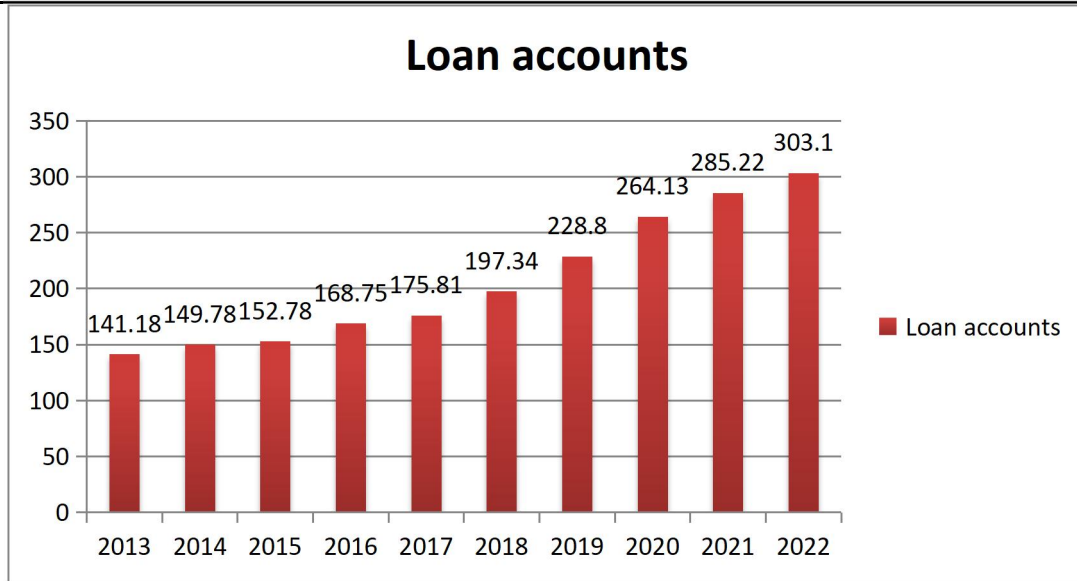
The concept strives to empower every individual to participate in financial management effectively. In India, many impoverished households lack access to formal financial services and are unfamiliar with banking systems and procedures. Moreover, they often fail to meet the eligibility criteria set by banks, such as minimum income, credit score, or work experience. Additionally, the economically disadvantaged may lack the necessary documentation for identity verification or income verification required by banks. Financial Inclusion seeks to address these barriers by offering affordable financial services to marginalized communities, fostering financial independence and reducing reliance on unsustainable forms of assistance. Furthermore, it aims to raise awareness about financial services and management practices among all segments of society, including those with limited education or resources. By developing formal and structured credit channels for the underprivileged, Financial Inclusion aims to replace reliance on informal and exploitative credit systems with fair and transparent financial solutions.

Access and use of Financial Services

Indicator	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Automated Teller Machines (ATMs) per 100,000 adults	12.87	17.80	19.70	21.24	22	21.65	20.95	21.50	21.21	24.64
Branches of commercial banks per 100,000 adults	11.85	12.87	13.54	14.06	14.51	14.50	14.58	14.74	14.42	14.31
Deposit accounts with commercial banks per 1,000 adults	1,160.72	1,337.41	1,541.79	1,731.27	1,881.54	1,937.25	1,967.61	2,030.71	2023.67	2130.48
Loan accounts with commercial banks per 1,000 adults	141.18	149.78	152.78	168.75	175.81	197.34	228.80	264.13	285.22	303.1
Mobile money transactions: number per 1,000 adults	35.98	116.06	270.11	627.69	1662.40	3031.52	4078.93	4111.97	3822.87	5008.21

Graphical Representation





Financial Inclusion Schemes in India:

The Government of India has implemented various schemes aimed at fostering financial inclusion and providing social security to marginalized communities. These initiatives, developed after extensive planning and research by financial experts and policymakers, have been launched over the years to address the diverse needs of the population. Here is a list of key financial inclusion schemes in the country:

- 1) Pradhan Mantri Jan Dhan Yojana (PMJDY)
- 2) Atal Pension Yojana (APY)
- 3) Pradhan Mantri Vaya Vandana Yojana (PMVVY)
- 4) Stand Up India Scheme
- 5) Pradhan Mantri Mudra Yojana (PMMY)

- 6) Pradhan Mantri Suraksha Bima Yojana (PMSBY)
- 7) Sukanya Samridhi Yojana
- 8) Jeevan Suraksha Bandhan Yojana
- 9) Credit Enhancement Guarantee Scheme (CEGS) for Scheduled Castes (SCs)
- 10) Venture Capital Fund for Scheduled Castes under the Social Sector Initiatives
- 11) Varishtha Pension Bima Yojana (VPBY)

These schemes aim to promote financial inclusion, enhance access to financial services, and improve the socio-economic status of disadvantaged communities across the country.

Objectives of Financial Inclusion:

- 1) **Facilitate Access:** Financial inclusion aims to provide affordable access to a range of financial services and products, including deposits, fund transfers, loans, insurance, and payment services.
- 2) **Institutional Development:** It seeks to establish robust financial institutions with clear regulations and high standards to cater to the needs of underserved populations.
- 3) **Financial Sustainability:** Financial inclusion strives to ensure financial sustainability, providing certainty of funds to those struggling with financial insecurity.
- 4) **Increase Competition:** By promoting the emergence of numerous institutions offering affordable financial assistance, financial inclusion fosters healthy competition and provides clients with a wider range of options.
- 5) **Raise Awareness:** It endeavors to increase awareness among economically disadvantaged communities about the benefits of financial services.
- 6) **Tailored Products:** Financial inclusion aims to develop financial products tailored to the specific needs, preferences, and income levels of underserved populations.
- 7) **Enhance Literacy:** It works towards improving financial literacy and awareness nationwide, empowering individuals to make informed financial decisions.
- 8) **Digital Solutions:** Financial inclusion seeks to introduce digital financial solutions to reach economically disadvantaged populations, including mobile banking services.
- 9) **Reach Remote Areas:** By bringing mobile banking and financial services to remote and underserved areas, financial inclusion aims to ensure access for the poorest segments of society.
- 10) **Document Access:** Governmental agencies and non-governmental organizations are dedicated to improving access to government-approved documents, such as PAN, Aadhaar, Driver's License, or Electoral ID, enabling individuals to open bank accounts, apply for loans, and access entitled subsidies.

Financial Inclusion with the Help of Financial Technology (Fintech):

Financial technology, or fintech, revolutionizes the financial sector by leveraging advanced technology to enhance financial inclusion worldwide. In India, numerous fintech companies are dedicated to simplifying the provision of financial services while keeping costs minimal, benefitting customers by reducing expenses and enabling better allocation of savings.

Fintech innovations empower individuals in rural areas to access financial services using mobile phones, leveraging mobile internet connectivity. This accessibility facilitates loan applications and bank account openings for rural residents, bridging the gap in financial access.

Recent fintech advancements, including crowdfunding, digital payment systems, peer-to-peer (P2P) lending, and electronic wallets, are gaining popularity among both urban and rural populations. However, many individuals, particularly those in underserved communities, still lack experience with traditional banking services.

For these individuals, financial transactions involving cheques or cash can expose them to financial scams and high fees at bank branches or non-banking financial institutions (NBFCs). To address this, banks, NBFCs, and fintech companies are collaborating to streamline banking processes, eliminate unnecessary fees, and simplify financial services, ultimately aiming to include underbanked and unbanked individuals in society.

Financial Inclusion through Digital Payment Systems:

Residents can conveniently make payments for products and services within their communities using electronic payment wallet systems. The Government of India has introduced various electronic wallet systems through smartphone apps such as Bharat Interface for Money (BHIM), Aadhaar Pay, and more.

Electronic wallets, or e-wallets, enable cashless transactions through electronic means, replacing physical wallets. Users can download the e-wallet app on their mobile phones and utilize it for both online and offline transactions, including mobile recharges, utility bill payments, grocery purchases, and online shopping.

Moreover, many digital financial tools offer attractive offers, discounts, cashback options, and rewards, particularly benefiting economically underprivileged individuals. These incentives enable users to save money while enjoying the convenience and efficiency of digital payment systems, further promoting financial inclusion among all segments of society.

Impact of Demonetization on Financial Inclusion:

In pursuit of a cashless India, the government has introduced affordable e-wallet options, ensuring accessibility for all segments of society, including the less fortunate. These e-wallets feature regional language options, catering to users' linguistic preferences and enhancing convenience. Additionally, some e-wallets facilitate fund transfers between bank accounts, further expanding their utility.

The implementation of demonetization in India in 2016 spurred the demand for digital financial services, as the ban on high-denomination currency notes necessitated alternative payment methods. Consequently, the country witnessed a significant increase in the adoption of digital wallets, aligning with the government's vision of a cashless economy. Furthermore, raising the transaction limit for e-wallets to Rs. 20,000 benefited both users and e-wallet companies alike.

Despite initial challenges faced by low-income groups during demonetization, many individuals, including the unemployed and illiterate, in both rural and urban areas embraced electronic wallet options. This shift catalyzed financial literacy and empowered individuals to navigate banking processes, access credit, and leverage technology for financial transactions, thereby fostering financial inclusion across all economic strata of society.

Financial Inclusion in India through Digitalization of Monetary Transactions:

The government of India is spearheading a massive shift towards digital financial transactions, leveraging technologies such as Unified Payment Interface (UPI), USSD banking, IMPS, NEFT, Aadhaar Pay, debit cards, BHIM, and credit cards. Additionally, it aims to mandate various institutions, including fertiliser depots, block offices, petrol pumps, and hospitals, to adopt digital payment systems, streamlining high-value transactions and enhancing convenience for customers.

Furthermore, the government is prioritizing the digitization of government receipts, aiming to ensure that all transactions are conducted through digital modes. Efforts are underway to minimize service charges on electronic transactions, incentivizing the adoption of cashless payment methods and fostering financial inclusion.

To extend financial services to underserved areas, some banks have introduced mobile banking vans to reach remote regions lacking access to transportation, communication, and financial services. Alongside government-owned payment apps, numerous private e-wallet systems offered by banks and private companies enable users to conduct digital transactions conveniently, reducing reliance on cash and enhancing financial accessibility.

Leading e-wallets such as Paytm, Freecharge, MobiKwik, and others offer users a range of digital payment options, including fund transfers and merchant transactions, across various smartphone platforms. These initiatives not only combat corruption but also promote financial inclusion by providing users and merchants with attractive bonuses and rewards for adopting cashless payment methods.

Programs Initiated by the Reserve Bank of India (RBI):

The RBI has implemented various initiatives aimed at achieving widespread financial inclusion across the nation. Employing a bank-led approach, the central bank provides comprehensive guidance and support to banks in fulfilling their financial inclusion objectives.

Key RBI programs include:

- 1) Introduction of Basic Saving Bank Deposits (BSBD) accounts tailored for economically weaker sections, offering no-frills accounts with no minimum balance requirements and facilitating easy access to cash withdrawals and electronic payment channels.
- 2) Simplification of Know Your Client (KYC) norms to enable easier account opening for low-income individuals, with relaxed requirements for accounts below specified thresholds, along with the acceptance of Aadhaar Card as a valid proof of identity and address.
- 3) Mandate for banks to expand their presence in rural areas by opening more branches, ensuring improved access to banking services for residents of remote villages with limited transportation options.

Through these initiatives, the RBI aims to bridge the gap between urban and rural banking services, promoting financial inclusivity and empowering underserved communities across the country.

These initiatives collectively aim to promote financial inclusion, empower individuals with access to financial resources, and foster economic growth and stability across all segments of society, ultimately contributing to overall socio-economic development.

Importance of Financial Inclusion:

In recent years, financial inclusion has gained prominence as a critical aspect of public policy, fostering sustainable economic development. It not only ensures the stability of financial institutions but also bridges the gap between them and customers, fostering stronger relationships. With financial inclusion, every economic actor gains access to formal financial services, driving overall economic progress and prosperity.

Limitations of the Study:

- 1) **Narrow Focus:** The study's limitation lies in its narrow focus solely on financial inclusion and literacy as determinants of rural socio-economic empowerment.
- 2) **Incomplete Perspective:** While financial inclusion and literacy are crucial, they do not address the full spectrum of challenges faced by rural communities in India.
- 3) **Overlooking Important Factors:** The study may overlook significant contributors to rural empowerment, such as infrastructure development, access to healthcare and education, gender equality, agricultural productivity, and government policies.
- 4) **Failure to Capture Complexity:** By focusing narrowly, the study fails to capture the complexity of rural socio-economic empowerment, potentially missing key dimensions essential for understanding the overall well-being of rural populations in India.

Conclusion:

By arming individuals with the tools to navigate financial complexities, financial inclusion becomes the catalyst for informed decision-making and equitable access to financial services. It becomes the beacon guiding individuals through the labyrinth of financial landscapes, empowering them to secure their economic well-being and transcend socio-economic barriers.

Furthermore, the study underscores the emancipator force of financial inclusion, bridging the gap between aspiration and opportunity. As access to financial services becomes the conduit for economic resilience and social mobility, it unlocks doors to empowerment and self-determination.

In conclusion, the wisdom encapsulated in Benjamin Franklin's words resonates deeply: "An investment in knowledge pays the best interest." Indeed, by investing in financial literacy, we sow the seeds of prosperity and forge pathways to inclusive growth, ensuring that every individual has the tools and opportunities to thrive in an ever-evolving economic landscape.

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Impact Of Financial Inclusion In Achieving Sustainable Development Goals (SDGs) In India

Dr. J. Pavithra

Assistant Professor

Faculty of Management, SRMIST Chennai

Abstract:

Financial inclusion, the accessibility and affordability of financial services to all segments of society, is recognized as a crucial enabler for achieving the Sustainable Development Goals (SDGs). In India, where a significant portion of the population remains unbanked or underbanked, enhancing financial inclusion can play a transformative role in addressing various socio-economic challenges. This article examines the impact of financial inclusion on SDGs in India, highlighting its potential to drive inclusive growth, reduce poverty, promote gender equality, and foster sustainable development.

Article:

Introduction:

Financial inclusion, characterized by universal access to affordable financial services, is increasingly recognized as a cornerstone for achieving the Sustainable Development Goals (SDGs). In India, despite significant strides in economic development, a large segment of the population still lacks access to formal banking services. This article explores how improving financial inclusion can contribute to the realization of SDGs in India.

Poverty Alleviation:

Financial inclusion facilitates access to credit, savings, insurance, and other financial services, empowering individuals and communities to generate income, build assets, and lift themselves out of poverty.

In India, initiatives such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) have expanded banking services to previously unbanked populations, providing them with a platform to access financial resources and participate in economic activities.

Inclusive Economic Growth:

Access to finance enables micro, small, and medium enterprises (MSMEs) to grow, create employment opportunities, and contribute to economic development. By extending financial services to underserved entrepreneurs, financial inclusion promotes inclusive economic growth.

Digital payment systems and mobile banking have emerged as powerful tools for promoting financial inclusion in India, facilitating convenient and affordable access to financial services, particularly in remote and rural areas.

Gender Equality:

Financial inclusion is closely linked to gender equality, as women often face greater barriers to accessing and utilizing financial services. By providing women with access to savings accounts, credit, and insurance, financial inclusion can empower them economically and enhance their social status.

Initiatives such as the Self-Help Group (SHG) movement and women-centric financial products have helped advance gender equality by increasing women's participation in financial decision-making and entrepreneurship.

Sustainable Development:

Financial inclusion supports the achievement of various SDGs related to education, healthcare, and environmental sustainability. By facilitating access to finance for education and healthcare expenses, financial inclusion enhances human capital development and well-being.



Moreover, by promoting investments in renewable energy, agriculture, and other sustainable sectors, financial inclusion contributes to environmental conservation and sustainable development.

Conclusion:

Financial inclusion serves as a catalyst for achieving multiple SDGs in India, ranging from poverty alleviation and inclusive economic growth to gender equality and sustainable development. By expanding access to affordable and inclusive financial services, India can unlock the potential of millions of individuals and communities, fostering inclusive and sustainable development across the country. Policymakers, financial institutions, and other stakeholders must continue to prioritize and invest in initiatives that promote financial inclusion as a key driver of progress towards the SDGs in India.

Economic Growth With Environmental Responsibility

K. Venu Gopal

Lecturer in Commerce,
Government Degree College,
CHEBROLE, -522212, Guntur Dt. Andhra Pradesh

Abstract

In search of basic needs to live the individuals of any country do their best to earn. If this individual effort converts into institutional then such movement is called 'growth' and combines efforts of the institution's growth of a particular country for a particular period by comparing with the past to present situations is known as 'development'. Every country in the world works with some specific policies which lead to economic growth in its specific sectors. The Indian Economic growth has been measured in three basic sectors as, Primary, Secondary and Tertiary sectors. The Indian Primary Sector includes all sorts of Agricultural activities in which the growth is measured in terms of the earnings of the 'farmers. The Secondary Sector is identified with Industrial activities in which the growth has been considered based on the manufacture of goods and services which improve the standard of living of the people. The last is the tertiary sector which is identified with all sorts of service activities and the growth in this sector is generally noticed based on facilities provided to the general people, and also to the Primary and Secondary Sectors from which the activities of these sectors continue without any interruption.

Humans in search of bread and butter, have been working hard and improving their lifestyles by cultivating land, manufacturing goods, and providing various services by living themselves in some specific environment with pure air, water, cold, and greenery all around. As long as this environment is healthy, humans can make any sort of improvement in the name of growth and development. However, it has been observed that for the sake of growth and development, the environment has been destroyed to dangerous levels by humans. This research paper focuses on the growth of the Indian Economy in all its important sectors from the Independency, by observing environment balancing measures it has taken.

Keywords: *Individuals, Institutions, Cultivating Land, Manufacturing Goods, Standard Of Living*

INTRODUCTION

Consistent growth in the Gross Domestic Product of a country from the past period to present is generally recognized as Economic Growth. A Simple increase in the production of all important sectors will increase the National Income of the respective country. Production includes goods and services also. With the economic growth the real income of the general public will also increase which leads to increases in the 'standard of living' of the country. In India the 'economic growth' in general observed in its three primary sectors of Agriculture, Industrial and services. The quest for the improvement from the individual in their respective field and thrust for the development by Governments with various policies to help the individuals and institutions will definitely bring growth and development of a country. In Indian perspective there is a substantial growth witnessed in all most all-important sectors. The yields from agriculture sector have been improved by using sophisticated machinery on it. The Industrial sectors with Large, Medium, Small and Tiny sectors have been producing all sorts of goods and services as per the demand from the general public. The services sector growth is also satisfying in terms of increased revenues.

As everything exists on the 'Earth' and surrounding Environment', in thrust of earning it has been observed that the growth and developmental activities of various countries drastically and adversely affecting their 'Environment'. Even after establishing various Control measures to protect the weather conditions of the 'earth' locally and globally, the destruction of the environment in the name of improvement has been continuing.

REVIEW OF LITERATURE

- Rahul Singh Gautam, Shailesh Rastogi, and Amon Push of of Symbiosis Institute of Business Management (Deemed University) of Pune in their research paper titled as "Corporate Social Responsibility Funding and Its Impact on India's Sustainable Development: Using the Poverty Score as Moderator, identified that Corporate

Social Responsibility funds have the greater potentiality to India to gain sustainable growth with duly safeguarding the environment. This paper majorly focussed on how effectively the CSR funds are helpful to educate environment protection for India’s sustainable development.

- Sri Rishi Pratap Singh, Asst. Professor, Dr. Brajesh Srivastava, Asst. Professor and Dr. Dheerendra Singh of Government Degree College, Manikpur of Chitrakoot in their research paper name with ‘India’s Economic Growth and Environment Sustainability’ noticed that the process of globalization has improved the working of industrial sector by increasing the production range of goods, and same has been causing problems to the Environment, which can be overcome by appropriate policies.
- Saleem H Ali, and Jose A Puppim de Oliveria of University of Delaware and Brazilian School of Public Business Administration of Brazil on their Environmental Research Letters titles with ‘Pollution and Economic Development: an empirical research review’ concluded that the value of pollution control will need to be constantly examined as new technological improvements has been emerging continuously to affect the environment adversely.

RESEARCH OBJECTIVE

The primary objective of this research paper is to identify and analyse the economic growth of India from the last 10 years in its major sectors, and assess the environmental protection taken with specific policy measures taken.

RESEARCH METHODOLOGY

The methodology adopted to construct this present research paper titled ‘Economic Growth with Environmental Responsibility’ is based completely on secondary data. The scholars’ views, and ideologies which are published in various books, journals, and online sources are used as a guide, to construct this research paper.

DISCUSSION

In India, the ‘Economic Growth’ from the Independence is quite planned oriented with appropriate policy making. In order to move from a ‘developing nation’ to a fully ‘developed one’ all sorts of growth and developmental activities are taken with appropriate policies and reviewed in specific periods. This review will help to identify the actual situation and help to modify the policies in order to match with the realities. With the help of the ‘Planning Commission’ now re-named ‘Niti Ayog’ some systematic plans are made with an anticipated overall ‘growth rate, and ‘progress’ has been experienced in all three major sectors of Agriculture, Industrial and Services.

Initially, all the plans are made and implemented to reduce poverty and attain self-sufficiency. The below Table-No. 1 shows the various plans and their objectives with growth rate.

Table No.1 Statement Of Various Indian 5-Year Plans With Objective And Growth Rate

Sl.No.	Name of the Plan	Year of the Plan	Objective of the Plan	Growth Rate
1	I Five-Year Plan	1951-56	Agricultural Development	3.6%
2	II Five-Year Plan	1956-61	Industrial Development	4.27%
3	III Five-Year Plan	1961-66	Economic Independent	5.6%
	Plan Holiday	1966-69	-	
4	IV Five-Year Plan	1969-74	Growth with Stability, and Progressive achievement	5.7%
5	V Five-Year Plan	1974-79	Garibi Hatao, Employment, Justice	4.4%
6	VI Five-Year Plan	1980-85	Economic Liberalization, Technological Self-reliance	5.2%
7	VII Five-Year Plan	1985-90	Self-Sufficient Economy	5.0%
	Annual Plans	1990-91 1991-92	-	
8	VIII Five-Year Plan	1992-97	Development of Human	5.6%

			Resources	
9	IX Five-Year Plan	1997-02	Growth with Social Justice and Equality	5.6%
10	X Five-Year Plan	2002-07	Double the Per Capital Income	7.6%
11	XI Five-Year Plan	2007-12	Rapid and more Inclusive Growth	9%
12	XII Five-Year Plan	2012-17	Faster more inclusive and sustainable Growth	8%

(Source: Author composition)

From the above Table No. 1, It is clear that Indian Economic Growth is much planned and disciplined. Up to 2017, The Planning Commission of India has planned 12 Five-year plans, with a specific objective to achieve and a clearly defined Growth Rate to achieve in its Gross Domestic Product. The Planning Commission given 65 years of service by providing planned guidance to the Indian economy was replaced by 'Nithi Ayog' was established on 1st January 2015 with the primary objective of including the various states' priorities in the 'plans and make the plans more effective and appropriate. The Niti Ayog (is also known as the 'National Institution for Transforming India) discontinued the Five-Year Plan system and has been following a long-term development strategy in which some - specific action plans like Atal Innovations Mission, Medical Education Reform, (ATAL) Atal Mission for Rejuvenation and Urban Transformation likewise are formed with limited duration. With these specific action plans the results are obtained within less time, and performances can be reviewed. Whoever is the guiding body for the economic growth, there must be improvement in the Indian Economy the same as shown in Table No. 2

Table No. 2 Statement Of Growth Of The Major Sector On Gross Domestic Product In India

Sl.No	Name of the year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	Agriculture	17.15	16.79	16.17	16.36	16.56	16.03	16.76	18.64	17.33	16.73
2	Industry	28.40	27.66	273.35	26.62	26.50	26.41	24.59	25.02	26.07	25.66
3	Services	46.30	46.70	47.82	47.78	47.75	17.67	48.43	50.08	48.07	48.44

(Source:<https://www.statista.com/statistics/271329/distribution-of-gross-domestic-product-gdp-across-economic-sectors-in-india/>)

From the above Table No.2, Either with the Planning Commission or under the Niti Aayog all three sectors as Agriculture, Industry and Services show clear growth in terms of their contribution to the Gross Domestic Product.

The economic activity is not performed in the forests, deserts and hill areas but, these are initiated, installed and continued in the society which consists of 'nature' along with the people. All sorts of economic activities agriculture or industrial activities are taken according to people's desires, will and wishes to earn a profit. In doing these developmental activities, accidentally or wilfully lots of wastecomes along with 'goods and services' received by 'nature' causing polluted water, and air, and increased 'global warming'. It is estimated that over 60% of India's fertile land has been suffering from environmental degradation. The State of Delhi having 'Gur-gav' the most developed Industrial area is the prime victim of air pollution from this it has banned vehicles to control air pollution during the winter season of every year. India, with rapid industrialization and human-induced activities, has been causing high levels of water pollution, and land degradation with poor quality of air has been increasing deadly diseases like cancer, heart, and chest damage from which millions of deaths are caused in every year.

The following are the particular areas of environmental care to be observed in the name of growth and development

AIR POLLUTION

In 2022 India has been recognized as the most air-polluted country with an average of 2.5 PM (Particulate matter) known as particles or droplets in the air which less than 2.5 microns in the air, causing various lung diseases. This parameter recognized as 10 times higher than the World Health Organization's recommended limit. The emissions

from Vehicles, wastage of crop burnings, and usage of Coal as energy in various industries have been affecting 96% of the Indian population to air pollution.

WATER AND LAND POLLUTION

Apart from the Air pollution issues which gave considerable urgency to environmental care, the other natural resources like water and land were also examined to see the damage made in the name of 'growth'. In 2022 it is observed that almost 500 Districts of India had been consuming iron-contaminated water for drinking. The increased activities like mining, construction, deforestation, urbanization of agricultural land, and excessive usage of fertilizers and pesticides for growing crops, have been deteriorating land for human living.

To control all sorts of pollution in India, A separate Ministry named as 'The Ministry of Environment' with the 'Environment Control Board' under the supervision of the Central Government of India has been monitoring its activities at District levels. The primary objective of this 'Board' is to grant permission to establish new Industries and other economic activities only when they are assured to take responsibility for taking care of the environment. This ministry has the power to stop all sorts of activities if any of the industry or economic activity if it affect the environment. The following steps to be taken to control environmental pollution in India, apart from the Central Government supervision are

- **Population Control:**

Increased population growing needs and changing habits of the people, encourage various industries to produce goods and services on a large scale without taking care of the environment. Hence, care should be taken in controlling the population as a controlled population also reduces the burden on natural resources and establishes the greenery on the earth.

- **Discouraging the usage of Plastic**

It takes decades for the 'Plastic bags' to dilute in the earth in the meantime they capture lots of dust and affect the groundwater levels, for this, the Government put a complete ban on the usage of plastic bags.

- **Usage of Environmental Fuel**

Environment-friendly fuels like CNG, LPG and Solar energy must be replaced on Petrol and diesel emitting machinery and vehicles to reduce Air Pollution.

- **Imposing Taxes and fines on the Violation of Environment Protecting Rule**

The Government both at the State and Central Levels has to impose fines, on the individuals and taxes on the Institutions which violate the 'Environmental Protecting Laws.

- **Encouraging the usage of alternative methods of energy:**

Usage of Wind power., Solar energy will help to reduce the air pollution to the maximum and lowest levels

CONCLUSION

Development and growth activities are unstoppable activities of every country to compete with world countries and become most successful in all sectors. At the same time care should be taken duly to protect the environment by formulating appropriate policies and implementing them. It is not possible to control the adverse effects on the environment in the process of development completely, but the corporate business organizations must take responsibility besides earning profits to protect the environment in which it exists, by formulating their own rules and regulations and implementing the Environment Control Board Laws.

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Sustainable Philosophical, Metallurgy And Water Management In India

Dr. Kavita S. Biyani

Assistant Professor,
Dayanand College of commerce, Latur Maharashtra

Abstract

A short term program on the subject Indian Knowledge System conducted by University Grant Commission (UGC), Ministry of Education, New Delhi and IKS Division in collaboration with Rashtrasant Tukadoji Maharaj University, Nagpur launched on 31st July, 2023 to 5th August, 2023. The researcher had completed it.

University Grant Commission (UGC) has arranged a special exam of subject Indian Knowledge System on 14th January, 2024 in which 1000 teachers were participated. The researcher has also participated in it.

On 31st January, 2024 Dr. Mantha Srinivasu, UGC Joint Secretary, New Delhi, has congratulated for passing out the exam and selected the researcher for one year Master training programme to train fellow faculty members of the area relating to subject of IKS.

The first training programme was also arranged by University Grant Commission (UGC) and Indian Knowledge System (IKS) division, New Delhi in National Sanskrit University, Tirupati from 18th March, 2024 to 23rd March, 2024. This article is based on the information and knowledge provided in National Sanskrit University, Tirupati.

In Master's training program, IKS division has taught on various topics which includes thirteen (13) sessions. Out of which only three (03) sessions descriptions are provided in this article i.e. philosophical foundation, metallurgy and water management

At last, the researcher is also interested to arrange the workshops, observe the things from the point of IKS and to learn about the subject of Indian Knowledge System.

Introduction

Under New Education Policy 2020, faculty training and education play a vital role in creating a pool of competent teachers who will shape the next generation. The Government of Maharashtra establishes MSFDA to focus on continuous professional holistic learning and overall development of teachers in higher education institutions (HEIs) on different subject.

UGC provides training on Indian Knowledge System (IKS), one of the new subjects introduced by NEP-2020. Indian Knowledge System is an innovative cell under Ministry of Education (MoE). The main aim of IKS is i) to promote interdisciplinary research on all aspects of IKS ii) to preserve rich heritage of our country in the field of arts and literature, agriculture, basic sciences, engineering and technology, architecture, management, economics etc. iii) to disseminate the knowledge of IKS for further research and societal applications.

Objectives of the Study

The main objective of writing this article is to disseminate the knowledge given in Master Training Programme (MTP) to all faculty members. Secondly, only on three topics analysis will be mentioned in this article–

- 1) Philosophical Foundation of Indian knowledge System (IKS).
- 2) Indian contribution in chemistry, metallurgy and material science.
- 3) Water management in ancient India.

Analysis of the Study

I.Philosophical Foundation of Indian knowledge System (IKS)

The topic was taught by Venkat Raghavan, IIT, Bhubaneshwar. He has taken recap of some points – Darshana, Tattva shastra, Anviksiki, moka shastra, mode of inquiry, naya, pramana shastra. He has also shown details

pramana shastra- Pratyaksa (perception), Anumana (Inference), Shabda (Testimony), upamana (comparison), arthapatti (IBE), anupalabdi (non-perception).

Traditions that are accepted by us related to Praman Shastra are also explained by him. He has given details about Nayaya, vaisesika, samkhya, yoga, mimansa, Vedanta, Baudha, Jaina.

1. **Pratyaksha (Perception):** There is a contact of senses with the corresponding object- Atmana, Manas, Indriya and Visaya. Some people only have phenomenological account rather than physical. There are two types of pratyaksha (Perception): Internal and external perception; ordinary and extraordinary perception.
2. **Sabda (Testimony):** The person who says sabda is called 'apta'. He must possess the direct and right knowledge of things. He must be able to speak the words.

Sabda- Definitions of authority- The person who is free from rajas and tamas and endowed the strength of penance and knowledge and whose knowledge is flawless and always uncontradicted and true universally in past, present and future are known as apta.

3. **Anumana (Inference):** Anu means after and mana means cognition. Definition- Inferring the presence/absence of an entity with which the former is invariably related.

There are four logic elements of Anumana- a) Hetu- The sign: what is known?

b) Sadhya- The Unknown: the property we want to prove.

c) Vyapti- The invariable rule relating the hetu and the sadhya.

d) Paksha- Location- The place where one wants to prove the sadhya.

He has explained the above four elements with the help of example- force has been imparted on the ball.

There are three types of Anumana- There are three types of Anumana- Purvavat, Sesavat and Samanyato (drstam)

II. Indian Contributions in Chemistry, Metallurgy and Material Science

Vedic Period (1500 BCE- 600 BCE), In Krishna Yajur Veda's Taittiriya Samhita 4.5 and 4.7, we have six metals- Gold, Silver, Lead, Tin, Copper and Iron.

Metals in Kuran: Harsh words and punishment for exceeding the crime. Are files that wear down the ruler's conquering might?

Meaning- A ruler should not use harsh words nor give punishments that far exceed the crime. These are like metal files that wear down toughened steels. Citizens anger will similarly wear down the all conquering strength of the ruler.

Gold in Tamil Literature- Many tamil poets (100 BCE- 350 BCE) has given conversation of gold in their poems.

Four types of Gold- 1. Adagam- Superior gold variety. It is green in tint.

2. Sampon- Superior gold. It is also known as Pullan. It has colour of grass.

3. Kilichirai- Gold resembling wing of a parrot in colour. 108 Marra gold.

4. Navalam- It is gold of highest quality. It is also called Sambunatham. 1008 Marru gold.

Gold in Arthashastra- Gold has given various names and these names are based on mountains i.e. Satakumba, Vainava, sringastiki. Another name of gold is Jambinada. It is given in extracted product from the river Jambur.

Iron Technology- Ancient times pillars were built of Iron. They were painted. He has shown various pictures of iron in ancient period.

Zinc Technology- There are various names of zinc. Yasada, Tuttha (Sanskrit), Kharpara (Turkey), Jasada (Latin), Tutiya (persian), Tootiya (Arabic) and Tutiyan (Turkish). He has shown various words in English, Italian, Spanish, Portugese, French and Chinese. These words are derived from Tamil.

He has also shown steps for zinc recovery in ancient India.

Copper Technology- Copper plus zinc is equal to brass. Copper plus lead is equal to gold.

Brass Technology- In hindi and tamil, it is called Pitala. It is given in Atharveda and Agnihotra rituals.

Bronze Technology- He has shown the casting of Idols in wax. He has also shown scientific heritage of India-Rasarnava, Rasaratna Samuccaya (RRS) and Rasarnava.

III. Water Management in Ancient India

- Water has importance from Rigveda. In Rigveda 10.52, Rigveda 15.6, Rigveda 49.1 and Rigveda, there is written mentioned about water in it.
- In Chandogya Upanishad 7.10.1, it is water which pervade everything, big or small, the earth, the atmosphere, the heaven, the mountain gods, men, animals, birds, grass, plants, dogs, worms, insects, ants. All these are water indeed.
- He has shown water management of Gabarbands of Balochistan, water management of Harappans i.e. Dholavira, Gujarat, continuity in dams, Khadir Island.
- The descriptions of water in Arthasastra is mentioned in 300 BCE. Kautilya has mentioned water dinning, water lifting devices and various irrigations techniques, higher tanks were built earlier.
- He has shown Iron Age burials and water reservoirs of Tamil Nadu inscriptional evidence for reservoirs.
- He has also shown importance of rivers. Rivers are sacred places of Ganga, Yamuna and Saraswati. He has also shown a large rivers damming process of Cauvery.
- He has also shown the following points:
 1. Modified system of dam i.e. modern version of dam.
 2. A Hoysala water channel network.
 3. Buddhist monasteries in water management.
 4. Water management in rock cut caves.
 5. Water management in Kanheri caves.
 6. Stepwells, tanks, reservoirs and dams, cannals
 7. Water management in Medieval period.
 8. Water system of Aurangabad.
 9. Khadin system of Rajasthan.
 10. Water systems in Jodhapur, 1740.
 11. Water systems – Rehaut water lifting.
 12. Water lifting system- fatehpur sikri.

Conclusion

At present, Indian Knowledge System (IKS) is scientifically integrated. It will be purely based on indigenous learning. It is a Bhartiya way to sustain and strive for the welfare of all.

Today, there are many foreign universities entering into India. If we want to become a knowledge leader of twentieth century and to be a 'visvaguru', it is imperative that we regain a comprehensive and demonstrate the 'Indian Way' of doing things to the world. Therefore, there is a need of an hour to improve and rejuvenate Indian Knowledge System in the coming future.



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3. Resource Person, V N Prabhakar, IIT Gandhinagar delivered speech at National Sanskrit University, Tirupati on the topic Water Management in Ancient Indian.

The Role Of Digital Transformation In Economic Development

¹Ankush Budha Patil, ²Vishal Deshmukh

¹Research Student, ²Asst.Professor
M J College, Jalgaon

Abstract

Digital Transformation play a vital role in society as well as Indian economic development. The Business organisations are backbone of economic development. Prior to the COVID-19 pandemic, digital transformation largely focused on customer experience. Then, everything changed—and accelerated. Now, digital transformation is the centrepiece of operational efficiency and innovation across the organization. Digital transformation is the process by which companies embed technologies across their businesses to drive fundamental change. The benefits? Increased efficiency, greater business agility and, ultimately, the unlocking of new value for employees, customers and shareholders. Leaders harness key cloud technologies, including AI, to outpace their peers. They adopt innovative technology sooner and reinvest more frequently. And they direct their IT budgets toward innovation. The benefits are more revenue and more growth—and the ability to stay ahead of the curve. Now days we can say digital transformation in business processes and every corner of Indian economy is a paradigm shift towards the journey for being a economic leader of world.

Keyword : Economy, Digital Transformation, Economic Development, AI, Cloud

Introductions

Digital transformation is the incorporation of computer-based technologies into an organization's products, processes and strategies. It is a process of using digital technologies to transform existing traditional and non digital business processes and services, or creating new one to meet with the evolving market and customer expectations thus completely altering the way of business are managed and operated and how value is delivered to customer. Digital transformation is the process of adoption and implementation of digital technology by an organization in order to create new or modify existing products, services and operations by the means of translating business processes into a digital format. Organizations undertake digital transformation to better engage and serve their workforce and customers, and thus, improve their ability to compete. In challenging economic times, operational efficiency and cost optimization can also become important transformation objectives. Digital technologies and processes enable organizations to adeptly respond to customer demands in the present and as demands evolve. Digital transformation also builds the infrastructure and skills required for taking advantage of fast-evolving technologies that could confer a competitive advantage. Therefore in the context of economy it is a need of time to deeply study and innovate the new area of digital transformation.

Key areas of Digital Transformation in Enterprise

1. **Customer Experience** — working to understand customers in more detail, using technology to fuel customer growth, and creating more customer touchpoints
2. **Operational Processes** — improving internal processes by leveraging digitization and automation, enabling employees with digital tools, and collecting data to monitor performance and make more strategic business decisions
3. **Business Models** — transforming the business by augmenting physical offerings with digital tools and services, introducing digital products, and using technology to provide global shared services.

Present Trends of Digital Transformation

1. AI for Cutting Down OPEX

One of the leading surveys shows the media and entertainment industry is witnessing enormous spending and ending up with fewer profits. The industry's Operational Expenditure (OPEX) is exceeding profit margins. The spending goes beyond control in running for early profits or gaining a competitive edge. Precisely at this juncture, the industry should rethink its strategy. It's time to recheck the way they handle content and spending abilities. And

AI and Machine Learning (ML) are right in front to show the way! AI and ML techniques help you smartly use content and spending. Now, the focus should ideally be on how effectively the content should be utilized rather than creating it for content's sake. AI can eventually help you cut down OPEX.

2 Privacy and Trust

Privacy and trust are the two important aspects that are set to decide organizational progress in the digital transformation services journey. One of the global surveys involving more than 4000 brands and consumers found that 61% of brands admitted to losing their consumer trust by failing to protect their data and information. This is an increasing gap between consumers and brands that the brands need to focus more on to progress. Traditional media was reportedly among the top three distrusted industries besides social media and government. Given this fact, the future will be more of maintaining visibility on consumer data and delivering the best user experience with the collected data. Data regulations have already begun voicing for such measures, and more such are expected in the future.

3. Enterprise Resource Planning

Technology is the first thing that strikes one's thought in general discussions about successful digital transformation services. But that might not always be the case. Digital Transformation service providers are more about implementing a new culture within an organization. It's a combination of people, processes, and technology. So, instead of building effective media arms or channels to promote services, the organizations should equally focus on building intelligent Enterprise Resource Planning (ERP). ERP can help reduce spending, improve resource efficiency, and enhance productivity. While you might have already invested in technology and tools, it is time to focus on your back-office operations for continuous refinement to see measurable results and high profitability.

4. Personalization

Personalization of services will be a vital factor in deciding an organization's digital transformation services companies' success in 2024 and beyond. No content for free or content for all! The more innovative the approach, the brighter the results will be. So, organizations must personalize their approach to draw the best from their consumers instead of just pushing some content for traction. Termed 'smarter personalization', this approach is not just for content. That should reflect everywhere, whenever the brand meets the customer! And this is going to be crucial for successful digital transformation and customer relationship management. Given these four trends, one can estimate the transition the digital transformation ideas consulting services trend will likely bring to the functioning of the industry.

5. Data-driven Business

Data is undoubtedly the heart of the future of Digital Transformation services companies today. Unlocking and analyzing data potential has become crucial to driving business, streamlining operations, and launching new products and services. Adequate movement of resources and easy flow of operations across organizations are largely attributed to effective data utilization.

6. Multi-cloud Utilization

Most enterprises today operate on multi-cloud environments. However, managing multi-clouds, especially when moving workloads between clouds, is one of the prime challenges. API-led development and containers offer solutions to this problem. APIs help unlock the unique functionalities of applications residing in multi-cloud environments. Containerization has also been a proven solution to address concerns with multi-cloud environments. Get multi-cloud to achieve better results in your digital transformation ideas managed services journey.

7. IoT and 5G

The fifth generation of mobile network technology is known as 5G. Multi-peak data speeds, minimal latency, a better user experience, better connectivity and availability, and increased network bandwidth are some of 5G's essential traits. Edge computing and 5G can result in some fascinating advances. For instance, IBM will provide Verizon and Telefonica with cloud services to power 5G networks. In turn, automation of routine jobs will prevent

network problems using technologies like artificial intelligence (AI), drone-initiated inspections, and video inspections.

8. Remote Healthcare:

Continuous remote patient monitoring will also be possible with 5G connectivity. Health professionals can also help at any time, from any place, regardless of where they are.

Challenges of Digital Transformation

1. Absence of a clear strategy

Digital transformation is more than just a trendy term. However, it's frequently used without a precise meaning. This causes businesses to navigate uncertain terrains, aware of the need to progress but unclear about the direction. Lacking a strategy, your transformation might stall.

2. Change-resistant corporate culture

A corporate culture opposing change hinders evolution and progress. Yet, this change-resistant mindset is observable in numerous enterprises regarding digital transformation. From top-tier executives to ground-level staff, there's a degree of reluctance towards embracing new tech. Some leaders might not see the merit in altering established practices, especially if they're yielding positive outcomes. Workers might be apprehensive about the evolving roles and duties accompanying digital transformation. Neglecting these concerns means potentially missing out on pivotal growth chances.

3. Shifting customer expectations

Today's consumers are more selective and have higher demands (not only in B2C!). Features like contactless access control have transitioned from being luxury high-security choices to standard expectations for doors. Instead of presuming you're aware of the tech solutions your clients desire, it's advisable to invest time in market analysis, understand their actual preferences and observe the strategies competitors employ to captivate them.

4. Emerging digital skill shortage

At the core of every triumphant digital transformation lies a committed, proficient IT squad. Yet, assembling such a squad is becoming more challenging. Even roles not inherently tech-focused will require basic technological understanding (learn more about digital transformation tools here). This results in a lack of the broad spectrum of digital skills essential for a successful transformation.

5. Deficit of tech resources

Beyond the talent crunch, today's businesses also grapple with a lack of other vital resources for digital initiative adoption. Issues like global microchip shortages continue to obstruct various sectors. Additionally, challenges persist in the supply chain for IT equipment and hardware. This scarcity delays the prompt allocation of necessary resources to pertinent projects.

6. Escalating security threats

In their rush to cater to rapidly changing consumer needs, several firms hastily introduced digital solutions, exposing them to heightened cybersecurity threats. This has made other companies cautious about potential vulnerabilities when launching their initiatives. Such apprehensions are not baseless. Collaborating with multiple SaaS providers is a complex endeavour. Ensuring the security standards of each third-party tool and platform is a formidable task, even for firms with a robust tech development team.

Analysis of How Digital Transformation Play a Role in Economic Development

India today is the world's largest digitally connected democracy, with 830 million Internet users. Digital transactions have grown manifold in recent years, making India the undisputed leader in real time digital payments. The widespread adoption of smartphones and affordable mobile data plans has also contributed to the

growth of India's digital economy. E-commerce, mobile payments, digital banking, healthcare, tourism, and business are some of the sectors that have seen significant growth in recent years.

Accelerated Digital Transformation in India

India's digital transformation has been remarkable, with improved connectivity and technological capabilities leading to increased digital access and inclusivity for its citizens. Initiatives such as the Digital India program, Pradhan Mantri Grameen Digital Saksharta Abhiyan (PMGDSA), and Unified Payments Interface (UPI), etc. have played a significant role in transforming India into a digitally empowered society and a major player in the digital economy. Some of the initiatives like the Telecom development plan, aspirational district scheme, and initiatives in areas affected by left-wing extremism have improved accessibility, connectivity, affordability, and inclusivity pan India. Initiatives like the Common Service Centers (CSCs) have provided services such as e-governance, education, healthcare, and banking to underserved communities in rural areas.

Digital India Programme

The Digital India program, launched in 2015, aims to transform India into a digitally empowered society and a knowledge-based economy. Its key objectives include strengthening digital infrastructure, delivering services digitally, and promoting digital financial inclusion. As a result of dedicated digital drives across the country, internet subscriptions have increased by 150% in both rural and urban areas. As per the data, 95.76 million internet subscribers were added in rural areas, while 92.81 million were added in urban areas between 2019-2021. Digilocker which was launched under this programme has witnessed over 16 crore registrations. Users can share and access any documents and certificates digitally since its launch.

Pradhan Mantri Grameen Digital Sakshata Abhiyan

PMGDSB was launched in 2017 and is promoting digital literacy in rural India. The PMGDSA has resulted in improved accessibility, connectivity, affordability, and inclusivity pan-India. It has trained 5.96 crore candidates and certified 4.44 crore students in digital literacy. It's the world's largest digital literacy programme under which so far 6.92 crore candidates have been registered.

How is Digital Technology Impacting Different Sectors in India

Healthcare:

Digital technology helped run the world's largest and most efficient Covid-19 vaccination program initiatives in the country. The National Digital Health Mission and National Digital Health Blueprint have been instrumental in strengthening healthcare delivery. Whether it is Telemedicine, AI-enabled medical devices, or electronic medical records, digital technology is quickly making inroads in the Indian health systems. Initiatives like the Ayushman Bharat Digital Mission have further accelerated the pace of digitisation of Health systems in India. The Indian healthcare system is becoming more citizen-centric, holistic, and proactive with the use of technology.

Tourism:

Another sector that has seen a profound transformation as a result of the digital revolution is tourism and travel. The internet has played a pivotal role in revolutionising how people explore, plan and experience travel. From online bookings to virtual tours and travel content creation the internet has become an indispensable tool for travelers.

Businesses:

Digital payments have transformed businesses by simplifying the payment process, reducing operational work, and increasing productivity. The rapidly expanding digital payments landscape has transformed businesses, particularly small and medium-sized enterprises, by simplifying the payment process. Nowadays, businesses are able to save both time and money, while also concentrating on their core competencies. This is made possible by offering digital payment options, which enable them to tap into a larger market and attract new customers.

Rapid Enhancement indias Digital Payment Revolution

The rapid expansion of digital infrastructure has resulted in a remarkable transformation in India's payment landscape. A financial transaction model has witnessed a dramatic shift towards digital payments paving the way for a modern digital and cashless economy by placing utmost importance on promoting digital payments. Over the past few years, India has witnessed an unprecedented surge in digital payment transactions. User-friendly and convenient digital payment methods such as:

Bharat Interface for Money - Unified Payments Interface (BHIM-UPI), IMPS (Immediate Payment Service), Prepaid Payment Instruments (PPIs), Aadhaar-enabled Payment System (AePS) and National Electronic Toll Collection (NETC) have experienced substantial growth revolutionising the digital payment landscape by facilitating both person to person and person-to-merchant payments.

Key Finding and Contribution

1. The paper highlights the role of digital transformation in promoting competencies and excellence in worldwide economic development and emphasizing its importance in operated sectors and present challenges faces by digital means user.

2. Most businesses are collecting mountains of customer data, but the real benefit is optimizing this data for analysis that can drive the business forward. Digital transformation creates a system for gathering the right data and incorporating it fully for business intelligence at a higher level. Consumers are increasingly aware of, and concerned about, how their data is collected and used. Thus the data efficiency accelerates towards the acceleration to foster economy development.

3. The paper identifies the the way and means of digital transformation whereby how it consolidates information and resources into a suite of tools for business. Rather than dispersed software and databases, it consolidates company resources and reduces vendor overlap. It encompasses every area of a business and can lead to process innovation and efficiency across units. The paper also highlights how the resources in the economy will optimisely used by using digitalization.

4. Providing team members with the right tools, tailored to their environment, digital transformation encourages a digital culture. While these tools provide a more seamless way to collaborate, they also help to move the entire organization ahead digitally. This digital culture shift is crucial for businesses to remain sustainable. It will encourage digital culture in economy and seamless flow of transaction contribute to GDP.

5. Companies that undergo digital transformation improve efficiency and profitability. Consider these results reported by the SAP Center for Business Insights and Oxford Economics in their report that:

80% of organizations that have completed digital transformation report increased profits.

85% say they have increased their market share.

On average, leaders expect 23% higher revenue growth than competitors.

6. Overall the paper underscore the potential of digital transformation potential to contribute towards increased productivity and indiasGDP. Having the right tech tools that work together can streamline workflow and improve productivity. By automating many manual tasks and integrating data throughout the organization, it empowers team members to work more efficiently.

Conclusion

Today, we are operating in the new normal where the global economy is still recovering from the setback due to pandemic, and geo-political conflicts persist. India could effectively steer with the help of digital transformation the situation owing to its dedicated support to infrastructure creation through increased capex and strong macroeconomic fundamentals. The targeted increase in investment is seen across all infrastructure sectors by using digital means from abroad i.e. FDI etc. Digital transformation could be game changer in future to help in sustain the investment drive, NIP provided a forward-looking roadmap of investible projects. The domestic investor also a increased graph of investment in mutual funds which will beneficial to economic development. Besides, the

reforms being undertaken in energy and power sector will help fast-track India's progress in the next 25 years. With the advent of new technologies, we are witnessing new regulatory challenges. The use cases present the positive aspects of technology and innovation. The government is committed to keeping pace with the digital landscape developments including those related to legislations and frameworks. While the digital journey started with Aadhaar as a medium for service delivery at the doorstep, UPI strengthened the digital payment infrastructure. With other initiatives like CoWIN, e-RUPI, TReDS, Account Aggregators, ONDC, etc. at different stages of implementation, India has developed a unique and cogent digital story to tell. The journey is ongoing and there is much untapped potential in India's digital public infrastructure space. In short by accepting and promoting of digital transformation we can build a brighter and more equitable future for all.

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Digital Transformation In Commerce: Trends And Challenges

Mr. Santosh Ashokrao Kharat

Research scholar,
Shivaji Mahavidyalay Udgir Dis. Latur

Abstract

Digital transformation in commerce is about evolving your business by experimenting with new tech and rethinking your current approach to common issues. Because it's an evolution, a transformation doesn't necessarily have a clear end point. Today is advice due to LPG in a commerce digital transformation increased efficiency greater business flexibility and ultimately the unlocking of new value for employees customer, business man and shareholders. Many different parts lead to digital transformation and each organizations journey will be unique. Increase flexibility as enterprises can easily update and modify modernized applications, greater attention to customer experience.

Keywords: Digital transformation, LPG, Commerce, Employees, customer, business, shareholder

1. Introduction

The reform in the India digital transformation in commerce has been introduced to increase the efficiency, stability, and effectiveness in commerce current changing in commerce Banking. Technology integration digital transformation involves integrating cutting -edge digital technology like artificial intelligence (AI), machine learning, the internet of things (IoT), cloud computing and data analytics in to various aspects.

Digital transformation in commerce is the integration of digital technology into all areas of a business, fundamentally changing how you operate and deliver value to customers. It's also a cultural change that requires organizations to continually challenge the status quo, experiment, and get comfortable with failure.

This paper purpose is to know the digital transformation in commerce what trend and challenges to know the all information of digital transformation to customer as well as business man. To Greater attention to customer experience. reducing manual labor and unnecessary expenses customer service automation marketing automation sales automation it operations automation data integration and automation processes that rely on data from multiple sources can be challenging if an organization has various disconnected data silos. automation requires specialized skills and knowledge. Hence, they either need to hire skilled staff or get external help.

2. Objectives

- 1) To know the concept of Digital Transformation
- 2) To analyze Trend of Digital Transformation in commerce
- 3) To evaluate the Common Challenges in Digital Transformation

3. Research Methodology

The research study is Descriptive type in order to accomplish the above objectives, secondary sources, available literature, report book have been used. The data have been used obtained from various journal, reports and websites.

4. Trend of digital transformation in commerce

1. **Increased adoption of artificial intelligence (AI) and machine learning (ML) technologies:** Customers no longer view speed, efficiency, and personalization as a desired bonus. Instead, they expect each business to deliver on these fronts. However, providing such experiences is beyond the capability of a human team alone and requires enterprises to incorporate AI and machine learning into their digital strategy. Even the stats indicate the rise of AI and machine learning. AI and machine learning can aid mid-sized enterprises in their digital transformation journey by: Artificial intelligence (AI) and machine learning (ML) technologies can help to save time and reduce labor costs. Helping decision-makers make data-driven decisions by identifying patterns, predicting market trends, and providing actionable insights. Customer services Chatbot's are one of the

prime examples of mid-sized enterprises using AI to enhance customer support. They save time and resources by efficiently handling common customer queries, directing customers to appropriate resources, and engaging human agents only when necessary.

2. **The rise of low-code, no-code:** The low-code no-code platforms will account for over 65% of software development by 2024. Here's why low-code no-code is so popular: Low-code no-code requires little to no knowledge of programming. It means anyone with limited training can use these platforms. Low-code, no-code platforms are easily accessible, allow for quick development, and significantly reduce costs. Here's what it means for mid-sized enterprises looking for digital transformation: Reduced time-to-market, Lower development costs, Empowerment of citizen developers. Here are a few examples of how mid-sized enterprises can use low-code and no-code platforms for digital transformation in mid-sized enterprises: Creating customer-facing applications to improve the customer experience, increase sales, and reduce costs.
3. **More focus on app modernization:** Over the years, businesses have understood that traditional legacy applications are a significant obstacle to agility and innovation as they're slow, inefficient, and challenging to maintain. Hence, they're turning to app modernization.

Here's how app modernization helps mid-sized enterprises:

- Improve performance as modernized apps are faster than legacy applications.
- Increase agility as enterprises can easily update and modify modernized applications.

4. **Greater attention to customer experience:** As the competition for customers in the digital marketplace increases, organizations have also started paying greater attention to customer experience. Now, they don't just focus on offering a convenient experience to customers but also personalize it based on their preferences.

Here are a few strategies that a mid-sized enterprise can implement:

- Regularly gather customer feedback through surveys, feedback forms, and social media to improve customer experience.
- Offer a seamless experience across all customer touchpoints, whether in-store, online, mobile, or social media.
- Use loyalty programs (discounts, promotions, and special offers) to incentivize loyal customers.

5. **Increased focus on cybersecurity:** With more and more companies moving their data onto the cloud, data privacy and security have become significant concerns. Hence, they have started focusing on cybersecurity and taking adequate data privacy and security measures.

- Here's how mid-sized enterprises can improve their cybersecurity:
- Keep software up to date to reduce the risk of being attacked.
- Monitor your networks for suspicious activity, such as unauthorized access attempts or unusual traffic patterns.
- Educate employees about cybersecurity and best practices.

6. **More enterprises embrace the Cloud:** Cloud computing has become one of the fastest-rising digital transformation trends over the past few years.

Here's why mid-sized enterprises are adopting Cloud Computing:

- Cost savings as moving to the cloud can save money on hardware, software, and maintenance costs.
- Increased agility as the cloud offers a scalable, elastic infrastructure that allows enterprises to respond to changes quickly.

7. **Automation takes center stage:** Automation is another popular digital transformation trend propelled into popularity this year. According to Salesforce, 95% of IT and engineering leaders prioritize it to break silos, improve customer experience, and enhance productivity. Automation also increases employee satisfaction, as 89% of workers are more satisfied with automation.

Here's how automation helps them:

- Streamlining business processes
- Reducing manual labor and unnecessary expenses
- Customer Service Automation, Marketing Automation, Sales Automation:
- IT Operations Automation, Data Integration and ETL Automation:

4. Common Challenges in Digital Transformation

1. **Security Concerns:** Security has always presented unique challenges with cybercrime continuing to grow as technology advancements are made. Cyber attacks, data breaches, and phishing scams are becoming increasingly sophisticated with businesses and enterprise organizations being attacked more frequently. For enterprise organizations, which often handle vast amounts of sensitive data and information, the stakes are even higher with compliance and legal requirements needing to be met. Ensuring robust cyber security measures is paramount to the success of any modern day business. This involves not just investing in advanced security tools but also fostering a culture of security awareness among employees.

Examples: An online shopping platform suffers a significant loss of customer trust after a major data breach exposes user payment details.

2. **Heavy Reliance on Outdated Legacy Systems:** Legacy systems, often deeply embedded in an organization's operations, can be a significant roadblock to digital transformation with many of these systems often lacking in modern capability and becoming increasingly hard to integrate with new technologies. These systems, while reliable, lack the agility and scalability offered by modern solutions which presents further issues in the upkeep of these systems the longer they are in place. Transitioning away from these systems is not just about technology replacement but also about migrating years, sometimes decades, of critical data and information. A phased approach is often most successful and combined with meticulous planning, can ease this transition, ensuring minimal disruption to an organization's operations.

Examples: A hotel chain's old reservation system causes overbookings as it can't sync in real-time with online travel agencies.

3. **Financial Constraint:** Digital transformation, especially for large enterprise organizations, can be a process which requires significant investment to achieve the businesses desired goals. From procuring state-of-the-art technologies to hiring top-tier talent, the costs can quickly escalate depending on the requirements and desired outcomes. However, it's essential to view these expenses in the context of long-term gains and consider this as an investment which will ultimately drive growth and ROI for the organization. Digital transformation, when executed correctly and with an effective strategy, can lead to increased operational efficiencies, higher customer satisfaction, and new revenue streams open to the organization, offering a substantial return on investment.

Examples: A hospital aims to digitize all patient records but is constrained by budget limitations and the high costs of modern storage solutions.

4. **Ever-Changing Customer Needs and Expectations:** -Today's customers are digitally savvy, well-informed, and have high expectations of technology platforms and experiences. Meeting these expectations requires organizations to be agile and responsive in everything they do to ensure a smooth customer experience. Gaining insight around what customers expect is the first step in understanding how organizations can shape their digital platforms and business to align to these needs. Data analytics tools offer invaluable insights into

customer behavior, preferences, and pain points, and understanding these behaviors can shed light on various areas needing to be improved. By leveraging these insights, organizations can then begin to tailor their offerings, platforms and online stores, ensuring they resonate with their target audience and align to their needs, resulting in higher levels of customer engagement, encouraging them to take desired action through an improved user experience.

Examples: A travel agency struggles to retain customers as it doesn't offer personalized travel recommendations based on past bookings.

5. Business Model Evolution:—The modern business landscape presents a challenge of needing to rethink traditional business models to align to modern day advancements and behaviors. Organizations must be willing to innovate and experiment with different business model evolutions to ensure continuity of their business operations and to future proof their offering. Data-driven decision-making, combined with a user-centered approach to digital platforms and design, can help to guide this evolution, ensuring that new business models are both viable and competitive in the modern marketplace. Failing to face the facts and adapt existing business models to align with new customer needs can leave organizations fighting to gain market share and can widen the gap between them and their competitors.

Examples: A traditional taxi company faces declining revenues as it fails to adapt to the app-based ride-hailing trend.

6. Regulatory Frameworks:—The digital business landscape is often governed by an array of regulations, ranging from data protection to online transactional security to name a few. Navigating these complex regulatory frameworks and regulations, while ensuring full compliance, can be challenging for many organizations. Staying ahead of regulatory changes, conducting regular compliance audits, and fostering a culture of compliance can mitigate potential risks and help to reduce the overall risk to the organization and its operations.

Examples: An online health platform struggles with compliance as different regions have distinct data protection laws for medical records.

7. Strategic Financial & Resource Planning:—Digital transformation, while offering long-term and short-term benefits, often requires significant upfront investment to take shape. Organizations need to approach their digital transformation efforts with strategic financial and resource planning, ensuring that resources are allocated efficiently and that the return on investment is maximized throughout the business.

Examples: A non-profit organization uses crowd funding to finance its digital transformation projects.

8. Industry-Specific Strategies:—Different industries face unique challenges and opportunities in their digital transformation journeys. What might work in one industry could fail in another, which is why it's important to strategically plan your transformation. Tailoring strategies to meet the specific needs and nuances of each industry can enhance the effectiveness of digital initiatives. By leveraging specific industry insights, best practices, and case studies, organizations can develop strategies that resonate with their target audience and address industry-specific.

Examples: A restaurant chain uses AI to predict food trends and adjust its menu accordingly.

9. Comprehensive Impact Analysis:—Prior to rolling out any significant new technology across a business, it's crucial to understand its potential impact on the daily operations and the organization as a whole. This involves assessing both the positive outcomes, such as increased efficiencies.

Examples: Before launching a new app, a tech company conducts a thorough analysis to understand its impact on existing products.

10. Effective Change Management:—Change, especially at the enterprise level, can be overwhelming and a daunting task. Resistance to change can stem from fear of new technology, uncertainty, or simply the comfort of familiar processes throughout the organization. Effective change management strategies are crucial to guide employees through digital transitions, addressing their concerns and ensuring they are aligned with the organization's vision is vital to the success of the project.

Examples: A traditional newspaper transitioning to digital establishes a change management team to guide its staff through the process.

5. Conclusion

This research paper a study of Digital transformation in commerce. Digital transformation is an ongoing journey which is not just a onetime initiative. The journey of digital transformation is one that is reshaping the landscape across all industries globally, from the healthcare sector, which is leveraging AI-driven diagnostics and VR for training purposes, to the retail industry, where e-commerce and virtual shopping experiences are becoming increasingly popular amongst consumers. The impact of digital transformation is profound and will continue to drive innovation with time. Furthermore, as organizations embark on this journey, it's crucial to remember that digital transformation is not just about technology. It's about people, processes, and culture. It's about reimagining business models, fostering a culture of continuous and iterative learning, and placing the customer at the heart of all digital initiatives.

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An Analysis On The Perception And Awareness Towards Upi (Unified Payments Interface) Among College Students

¹Mr. Kiran Kailas Patil, ²Dr. Shyam Jivan Salunkhe

¹Assistant Professor (CHB) and Research Scholar

Affiliation: A.R.B. Garud College, Shendurni

²Acting Principal & Professor

Affiliation: A.R.B. Garud College, Shendurni

Abstract

The Unified Payments Interface (UPI) is one of the major electronic payment innovations launched by the National Payments Corporation of India (NPCI). UPI is an advanced and remarkable payment system in terms of cost, ease of use for consumers and security. This payment system has helped move a large part of the population into the digital economy.

It is a type of payment system through which any customer with a bank account can send and receive money through a UPI-based application. This service enables the user to link more than one bank account in the smartphone UPI application seamlessly initiate remittances and send direct debit requests 24/7 and 365 days a year. The objective of this paper is to study the awareness, preference and satisfaction towards UPI among the college students of Jalgaon district.

The results of the survey show that the respondents are aware of the system because of its usability, user-friendliness, security and reward scheme.

It is suggested that for the 'Digital India' program to be successful and for India to become a digital economy, more promotional campaigns are needed to energize the users.

Keywords:UPI, Digital India, E-payment, Cashless Economy,

1. INTRODUCTION

The Unified Payments Interface (UPI) is one of the most important electronic payment innovations launched by the National Payment Corporation of India (NPCI). To increase the digital capability of the country, the Government of India has introduced a program called 'Digital India'. The main vision of this program is to implement faceless, paperless and cashless banking in the country. After demonetisation, the importance of digital payment system has increased.

The government introduced UPI (United Payment Interface), which is an application-based transaction between several banks. UPI was first launched in India by RBI Governor Dr. Raghuram G Rajan at Mumbai on April 11, 2016. The digital payment system is an electronic payment transaction made at the point of sale of services and products or through online banking, a mobile bank or card payment. UPI is a type of payment system through which any customer with a bank account can send and receive money through a UPI-based application. To use UPI services, you must have a valid bank account and a registered mobile number linked to the same bank account. This service allows the user to link more than one bank account to the UPI application on their smartphone and instantly initiate money transfer, receive funds and balance inquiries online 24/7 and 365 days in the year. There are no transaction fees when using UPI. This interface is also regulated by apex financial institution of India 'RBI'.

2. LITERATURE REVIEW

Sunny Gupta and Dinesh Chand (2021) conducted a study on consumers' perceptions of the Unified Payments Interface. The study indicated that the majority of UPI users use it for fund transfers, mobile recharges, or cash back offers. However, women were more hesitant to use technology, and cash back alone was not enough to encourage everyday UPI usage. The study found that mobile phones were the most often utilized devices for sending and accepting payments, and respondents had a positive view regarding UPI transactions.

Venkata Siva Kumar and Ch. Kavya (2020) in their study 'Role of Unified Payment Interface in Digital Banking Services – An Empirical Study on User Perceptions' examines the awareness and perceptions of various age groups

and professions about UPI services. The study found that UPI users have varying perspectives of the benefits of utilizing UPI payment system, with some claiming that they are superior than traditional banking options.

Suma Vally and Hemadivya (2018) investigated consumer adoption of digital payments in India. The results show that implementing digital payment technology has improved the banking sector’s performance and prepared it to achieve the goal of becoming a cashless country. The study highlights the importance of raising awareness about the optimal use of technology. Banks should raise awareness about proper technology and security practices.

3. OBJECTIVE OF STUDY

- 1) To study about the awareness of UPI payment system among college students in Jalgaon district
- 2) To know the preference and level of satisfaction towards the UPI payment system.

4. RESEARCH DESIGN

The present study utilizes a convergent mixed-methods strategy, merging qualitative and quantitative information to provide a thorough analysis of UPI payment system.

The justification for this research framework lies in its potential for triangulation, enhancing the credibility and dependability of the study. Collecting data from various sources such as surveys and literature analyses serves to limit biases and facilitate the verification of results, consequently yielding more dependable conclusions.

5. RESEARCH METHODOLOGY

The collection of research data will encompass a combination of primary and secondary sources. The primary data is collected through online questionnaire from college students of Jalgaon district. The online survey was carried out in the month of April, using the Google Forms.

The sample size for the study is 120 and the analysis is done with the help of percentage analysis.

The secondary data are collected from various websites, articles, journals, magazines as well as relevant industry reports

6. DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic Profile of the Respondents

Particulars	No. of Respondents	Percentage
Gender		
Male	66	55
Female	54	45
Total	120	100
Age		
18-21	106	88.33
21-25	14	11.67
Above 25	-	
Total	120	100
Educational Qualification		
Under Graduate	102	85
Post Graduate	10	8.33
Others	8	6.67
Total	120	100

Table 1 shows that 55% of responders are male and 45% are female. The majority of responses (88.33%) are between the ages of 18 and 21, with 11.67% falling between 21 and 25. 102 responders are studying in under graduation, 10 are postgraduation, and 8 are from other disciplines.

Table 2: Prefer to use UPI Payment System

Particulars	No. of Respondents	Percentage
Yes	112	93.33
No	8	6.67
Total	120	100

Table 2 reveals that 93.33% of respondents prefer to use UPI payment systems, while 6.67% do not. Most responders prefer digital payment systems.

Table 3: Frequency of using UPI Payment System

Particulars	No. of Respondents	Percentage
Once in a week	75	62.5
Once in a month	20	16.67
Twice or more in a month	6	5
Rarely	19	15.83
Total	120	100

According to Table 3, 62.5% of respondents use the UPI payment system once a week, 16.67% once a month, 15.83% rarely, and 5% twice or more in a month. Respondents have extensive experience using UPI apps for financial transactions.

Table 4: Purpose to use UPI

Particulars	No. of Respondents	Percentage
Money Transfer	82	68.33
Utility Bill Payment (Electricity, Water, Telephone Bills)	9	7.5
Payment of college fee	5	4.17
Movie, bus, train booking and Payment at shops	24	20
Total	120	100

According to Table 4, 68.33% of respondents use UPI for money transfers, 20% for movie, bus, and train bookings and payments at stores, 7.5% for utility bills, and 4.17% for paying college fees. The study found that more respondents utilized the UPI app for fund transfers.

Table 5: Factors influence to use UPI digital payment system

Particulars	No. of Respondents	Percentage
Convenient transaction	15	12.5
Ease to use	47	39.17
Speed of transaction	11	9.17
Secured transactions	35	29.16
Reward programs	9	7.5
24*7 Availability	3	2.5
Total	120	100

According to Table 5, 39.17% of respondents prefer the UPI digital payment system for its simplicity of use, 29.16% for transaction security, and 12.5% for convenience. It demonstrates that the UPI digital payment method is incredibly simple to use.

Table 6: UPI payment system is user-friendly

Particulars	No. of Respondents	Percentage
Yes	110	91.67
No	10	8.33
Total	120	100

According to Table 6, 91.67% of respondents believe the UPI payment method is user-friendly, while 8.33% disagree.

Table 7: UPI payment system is fully secured

Particulars	No. of Respondents	Percentage
Yes	99	82.5
No	21	17.5
Total	120	100

According to Table 7, 82.5% of respondents believe the UPI payment system is secure, while 17.5% disagree. This demonstrates the complete security of UPI payments and transactions.

Table 8: Satisfied with the UPI payment system

Particulars	No. of Respondents	Percentage
Yes	110	91.67
No	10	8.33
Total	120	100

Table-8 demonstrates that 91.67% of respondents are satisfied with the UPI payment method, while 8.33% are dissatisfied. The survey found that the UPI digital payment system significantly increased respondents' satisfaction.

7. FINDINGS

- 93.33% of respondents preferred to use a UPI payment system. This demonstrates their understanding of the UPI payment system and its benefits.
- 39.17% of respondents utilize UPI payment system due of their ease of use and security of transactions.
- Most respondents utilize UPI apps for fund transfers.
- According to the survey, 62.5% of respondents use UPI payment systems once every week, indicating an increase in their usage.
- 82.5% of the respondents opined that UPI payment system is fully secured.
- The UPI payment system is rated as satisfactory by 91.67% of respondents.
- UPI payment system is helping to push for a cashless economy.

8. UPI HAS BENEFITS FOR BANKS, CUSTOMERS AND MERCHANTS

- Benefits for Banks:
 - i) Universal app for all kinds of transactions.
 - ii) Safer, inventive, and secure payment system.
 - iii) Leverages current infrastructure.
 - iv) Payment based on a single and unique identity.
 - v) The procedure of two-factor authentication can be accomplished by hitting one button.
- Benefits for Customers:
 - i) A single app provides access to many bank accounts.
 - ii) 24/7 availability.

- iii) Authentication with one click.
 - iv) There is no obligation to share credentials, which aids security.
 - v) Easy grievance management with a mobile application.
- Benefits for Merchants:
 - i) Smooth processing of payments from customers.
 - ii) Individuals using debit/credit cards are now able to use the digital payment system, resulting in a larger pool of clients.
 - iii) There is no chance of losing critical consumer data to hacking.
 - iv) Suitable for online transactions.
 - v) There are no complications with cash-on-delivery collecting.
 - vi) Easier In-App Payment (IAP).

9. SUGGESTIONS

- To achieve paperless and cashless economy, it's important to raise awareness among Indian citizens about using the UPI payment system through campaigns.
- The UPI payment mechanism is mostly utilized for fund transfers. To utilize for other financial or banking transactions, additional steps are required.
- Users are unable to make payments using UPI owing to technical issues.
- Sometimes the amount is debited from the customer's account but not credited to the payee's account. The government should boost network connectivity.
- The biggest difficulty for users is security concerns. To prevent cybercrime and fraud, users should enable multi-factor authentication for increased protection.

10. CONCLUSION

UPI is a cost-effective and user-friendly payment mechanism that offers faster settlement and enhanced security. UPI is a smartphone application that enables money transfers between bank accounts. It is a real-time payment system that is easy to use. UPI enables customers to pay directly from their bank accounts to various merchants.

The study found that individuals prefer using UPI apps because of their ease of use and security. Most individuals utilize UPI for fund transfers. Respondents are satisfied with the digital payment method and encourage using it with relatives and friends. Increased user numbers of UPI system contributes to achieving the Government's 'Digital India' agenda.

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Green Finance And Sustainable Banking Practices In India: A Comprehensive

M R Ramesh

Indira Gandhi Centre for Atomic Research, Kalpakkam-603102, Tamilnadu, India

Abstract:

As the global community faces unprecedented environmental challenges, the imperative for sustainable development has become increasingly urgent. In this context, green finance and sustainable banking practices have emerged as crucial mechanisms for aligning financial activities with environmental objectives. This paper provides a comprehensive review of green finance and sustainable banking practices in the context of India, one of the world's fastest-growing economies with significant environmental concerns.

The paper begins by defining the concepts of green finance and sustainable banking and highlighting their importance in addressing environmental degradation and promoting sustainable development. It then delves into the specific initiatives and regulatory frameworks that have been implemented in India to promote green finance and sustainable banking practices. Key initiatives include the introduction of green bonds, establishment of dedicated green finance institutions, and integration of environmental and social risk assessments into banking operations.

Furthermore, the paper examines the drivers and barriers influencing the adoption of green finance and sustainable banking practices in India. While government policies and regulatory interventions have played a significant role in fostering green finance, challenges such as limited awareness, lack of standardized metrics, and capacity constraints hinder widespread adoption. The paper discusses strategies to overcome these barriers, including capacity building, stakeholder engagement, and international collaboration.

Moreover, the paper evaluates the impact of green finance and sustainable banking practices on India's environmental sustainability and economic development. Evidence suggests that investments in renewable energy, energy efficiency, and sustainable infrastructure have not only contributed to environmental conservation but also spurred economic growth and job creation. However, the paper also acknowledges the need for rigorous monitoring and evaluation to ensure the effectiveness and integrity of green finance initiatives.

Additionally, the paper explores the role of financial institutions, including banks, non-banking financial companies (NBFCs), and development finance institutions (DFIs), in advancing green finance agendas. It highlights best practices and case studies of financial institutions that have successfully integrated environmental considerations into their lending and investment decisions. These include offering green finance products, implementing environmental and social risk management frameworks, and engaging in sustainable finance advocacy.

Furthermore, the paper discusses the importance of building capacity and enhancing expertise among financial professionals to support the mainstreaming of green finance and sustainable banking practices. It emphasizes the role of education and training programs in equipping banking professionals with the knowledge and skills required to navigate the complexities of sustainable finance.

In conclusion, the paper underscores the critical role of green finance and sustainable banking practices in India's transition to a low-carbon, resilient, and inclusive economy. It calls for continued efforts from policymakers, regulators, financial institutions, and other stakeholders to accelerate the adoption of green finance principles and drive meaningful change towards environmental sustainability and economic prosperity.

Keywords: Green Finance, Sustainable Banking, India, Environmental Sustainability, Financial Institutions, Regulatory Framework, Renewable Energy, Sustainable Development.

1. Introduction

In recent years, the discourse on sustainability has gained considerable momentum globally, owing to the pressing need to address environmental challenges while fostering economic development. Central to this discourse is the concept of green technology, which encompasses innovative solutions aimed at reducing environmental impact and promoting sustainability across various sectors. In the context of banking, the integration of green technology holds significant promise for advancing sustainable practices and mitigating the environmental footprint of financial operations.

1.1 Introduction to Green Technology and its Importance in Sustainable Development

Green technology, also known as clean technology or environmental technology, refers to the application of scientific and technological innovations to address environmental challenges and promote sustainable development. It encompasses a wide array of practices and technologies, including renewable energy systems, energy-efficient infrastructure, waste management solutions, and sustainable transportation, among others. The primary goal of green technology is to minimize resource consumption, reduce pollution, and foster sustainable economic growth.

In the face of escalating environmental degradation and climate change, the adoption of green technology has emerged as a critical imperative for achieving long-term sustainability objectives. By harnessing the power of innovation and technology, green solutions offer pathways to decouple economic growth from environmental degradation, thereby promoting ecological resilience and social well-being.

1.2 The Role of Banking in Promoting Sustainability

As key drivers of economic activity, banks play a pivotal role in shaping the trajectory of sustainable development. Beyond their traditional functions of financial intermediation, banks wield considerable influence through their investment decisions, lending practices, and risk management strategies. Recognizing their role as catalysts for change, many banks have begun to embrace sustainability principles and integrate environmental considerations into their core business operations.

1.3 Significance of Incorporating Green Technology in Banking Practices

The incorporation of green technology in banking practices holds immense significance for advancing sustainability objectives and fostering a transition to a low-carbon economy. By adopting green technologies within their operations, banks can reduce their carbon footprint, minimize environmental risks, and enhance operational efficiency. Moreover, green banking initiatives can facilitate the mobilization of capital towards environmentally sustainable projects, thereby accelerating the transition towards a more sustainable future.

In the Indian context, where rapid industrialization and urbanization have placed unprecedented pressure on natural resources and ecosystems, the adoption of green technology in banking assumes heightened importance. As one of the fastest-growing economies in the world, India stands at a critical juncture where sustainable development imperatives must be integrated into its growth trajectory. By leveraging green technology, Indian banks can not only mitigate environmental risks but also unlock new opportunities for green investments, renewable energy financing, and sustainable infrastructure development.

2. Green Technology Initiatives in Indian Banking

Green technology has emerged as a critical tool in fostering sustainable development across various sectors, including banking. In India, where environmental concerns are gaining prominence, the banking industry has begun to adopt green technology initiatives to mitigate its ecological footprint. This paper aims to provide an overview of green banking initiatives in India, examine the introduction of environmental policies and regulations in the banking sector, and analyze case studies of leading Indian banks implementing green technology.

2.1 Overview of Green Banking Initiatives in India

Green banking involves incorporating environmental considerations into banking operations and lending practices. In India, the concept gained traction in the early 2000s with the introduction of initiatives such as sustainable banking by the Reserve Bank of India (RBI). The RBI has issued guidelines encouraging banks to integrate environmental and social considerations into their lending decisions, thereby promoting sustainable development.

Furthermore, Indian banks have introduced various green banking products and services to incentivize environmentally responsible behavior among customers. These include green loans for eco-friendly projects, green credit cards offering rewards for sustainable purchases, and energy-efficient financing schemes.

2.2 Introduction of Environmental Policies and Regulations

The Indian government has implemented several policies and regulations to promote environmental sustainability in the banking sector. The Environment Impact Assessment (EIA) Notification mandates banks to assess the

environmental impact of projects before providing financial assistance. Additionally, the Sustainable Development Goals (SDGs) adopted by India emphasize the role of the banking sector in achieving environmental objectives.

Moreover, regulatory bodies like the RBI and Securities and Exchange Board of India (SEBI) have introduced disclosure requirements for banks regarding their environmental performance. This encourages transparency and accountability in banking operations concerning environmental concerns.

2.3 Case Studies of Leading Indian Banks

Several Indian banks have taken proactive steps to integrate green technology into their operations. For instance, State Bank of India (SBI), the country's largest public sector bank, has implemented energy-efficient measures in its branches and adopted renewable energy sources to power its operations. SBI also offers green financing options for renewable energy projects and sustainable infrastructure development.

Another notable example is ICICI Bank, which has launched initiatives to reduce its carbon footprint and promote sustainable practices among its customers. The bank has invested in energy-efficient technologies and implemented paperless banking processes to minimize environmental impact.

Furthermore, Yes Bank has emerged as a pioneer in green banking with its focus on financing renewable energy projects and promoting sustainable agriculture practices. The bank has partnered with various stakeholders to facilitate the transition to a low-carbon economy.

3. Benefits of Green Technology Adoption in Banking

As the world grapples with environmental challenges, the banking sector in India has recognized the importance of integrating green technology into its operations to promote sustainable development. Green technology encompasses various practices aimed at reducing environmental impact, such as energy efficiency, resource conservation, and waste management. This paper examines the benefits of green technology adoption in banking, with a focus on its implications for environmental conservation, economic efficiency, and social responsibility.

3.1 Environmental Benefits

One of the primary advantages of green technology adoption in banking is its contribution to environmental sustainability. By implementing energy-efficient systems, banks can significantly reduce their carbon footprint and energy consumption. For instance, the use of renewable energy sources, such as solar panels and wind turbines, can help banks minimize reliance on fossil fuels and decrease greenhouse gas emissions. Additionally, initiatives like paperless banking and electronic document management contribute to waste reduction and conservation of natural resources.

3.2 Economic Benefits

The adoption of green technology in banking also yields significant economic advantages. Firstly, by reducing energy consumption and operational costs, banks can achieve substantial cost savings in the long term. Investments in energy-efficient infrastructure and technologies may initially require capital expenditure but result in considerable operational efficiencies and lower utility expenses over time. Moreover, green initiatives can create new revenue streams through innovative products and services tailored to environmentally conscious consumers. Furthermore, adopting sustainable practices can help banks mitigate risks associated with climate change, regulatory compliance, and reputation management, thus safeguarding their financial stability.

3.3 Social Benefits

Green technology adoption in banking enhances the social reputation and engagement of financial institutions. By demonstrating a commitment to environmental stewardship, banks can improve their corporate image and attract socially responsible customers and investors. Moreover, offering green banking products and services, such as eco-friendly loans and investment portfolios, enhances customer satisfaction and loyalty. Additionally, banks can engage with local communities through initiatives such as environmental education programs, tree plantation drives, and sustainable development projects, thereby fostering positive social impact and community resilience.

4. Challenges and Barriers

In recent years, the banking sector in India has shown a growing interest in adopting sustainable practices, particularly through the integration of green technology. Green technology in banking not only fosters environmental sustainability but also promotes long-term profitability and resilience. However, despite the potential benefits, the implementation of green technology in banking faces several challenges and barriers. This paper aims to provide a comprehensive review of the key challenges and barriers hindering the adoption of green technology for sustainable banking practices in India.

4.1 Lack of Awareness and Understanding Among Banking Professionals:

One of the primary challenges to implementing green technology in Indian banking institutions is the lack of awareness and understanding among banking professionals. Many professionals in the sector may not fully comprehend the importance of green technology or its potential impact on banking operations and profitability. Without adequate awareness and understanding, there may be resistance to change and a reluctance to invest in green technology solutions.

4.2 Initial Investment Costs and Financial Constraints

Another significant barrier to adopting green technology in banking is the initial investment costs and financial constraints faced by institutions. Implementing sustainable practices often requires substantial upfront investment in technologies such as energy-efficient infrastructure, renewable energy systems, and digital platforms for eco-friendly banking services. Many banks, especially smaller ones, may struggle to allocate sufficient resources to initiate such projects, particularly when faced with competing financial priorities.

4.3 Regulatory Compliance and Reporting Challenges

The regulatory landscape in India poses another challenge to the adoption of green technology in banking. While there is growing pressure from regulators and policymakers to promote sustainability in the banking sector, compliance with environmental regulations can be complex and costly. Banks must navigate a myriad of regulations related to environmental standards, reporting requirements, and sustainability disclosures. Ensuring compliance with these regulations while maintaining profitability presents a significant challenge for many banking institutions.

4.4 Technological Limitations and Infrastructure Requirements

Additionally, technological limitations and infrastructure requirements present barriers to the implementation of green technology in Indian banks. Many existing banking systems may not be compatible with the latest green technology solutions, requiring significant upgrades or replacements. Furthermore, the lack of robust infrastructure, particularly in rural areas, may hinder the deployment of renewable energy systems and digital banking platforms. Addressing these technological limitations and infrastructure gaps is essential to successfully integrating green technology into banking operations.

5. Future Outlook and Opportunities

In recent years, the banking sector in India has witnessed a growing emphasis on sustainability and environmental responsibility. As the world grapples with the challenges of climate change and resource depletion, there is an increasing recognition of the role that financial institutions can play in promoting sustainable development. Green banking, which focuses on integrating environmental and social considerations into banking operations, has emerged as a key strategy for promoting sustainability in the financial sector.

5.1 Emerging Trends in Green Banking Technology

One of the most significant emerging trends in green banking technology is the adoption of digital platforms and blockchain technology to streamline processes and reduce environmental impact. Digital banking solutions not only enhance operational efficiency but also minimize the need for paper-based transactions, thus reducing the consumption of resources such as paper and ink. Additionally, blockchain technology offers opportunities for transparent and secure transactions, which can contribute to greater trust and accountability in the banking sector.

Another notable trend is the development of innovative financial products and services that promote environmental sustainability. For example, banks are increasingly offering green loans and financing options for renewable energy projects, energy-efficient buildings, and sustainable infrastructure. By providing financial incentives for environmentally friendly initiatives, banks can encourage businesses and individuals to adopt more sustainable practices.

5.2 Potential Areas for Innovation and Development

There are several potential areas for innovation and development in green banking technology. One area is the integration of artificial intelligence (AI) and machine learning algorithms to analyze data and identify opportunities for sustainable investments. AI-powered analytics can help banks assess environmental risks, evaluate the impact of their lending activities, and identify emerging trends in sustainable finance.

Another area for innovation is the development of mobile banking solutions that promote sustainable consumer behavior. Mobile apps can provide users with real-time information about their carbon footprint, offer tips for reducing energy consumption, and incentivize environmentally friendly purchasing decisions through rewards and discounts.

5.3 Opportunities for Collaboration and Partnerships

Collaboration and partnerships between banks, government agencies, non-profit organizations, and the private sector are essential for driving innovation and scaling up green banking initiatives. By working together, stakeholders can share knowledge and resources, leverage each other's strengths, and develop comprehensive solutions to sustainability challenges.

For example, banks can collaborate with renewable energy companies to finance the development of solar and wind power projects. They can also partner with technology firms to develop innovative digital banking solutions that promote environmental sustainability.

5.4 Policy Recommendations for Promoting Green Technology Adoption in Banking

To promote the adoption of green technology in the banking sector, policymakers should consider implementing the following recommendations:

- Provide financial incentives and tax breaks for banks that invest in green technology and sustainable infrastructure.
- Implement regulatory frameworks that require banks to disclose their environmental and social impact, thus promoting transparency and accountability.
- Offer training and capacity-building programs for banking professionals to increase awareness of green banking practices and technologies.
- Establish partnerships between government agencies, banks, and technology firms to support research and development in green banking technology.

6. Conclusion

In conclusion, this research paper has shed light on the critical role of green technology in fostering sustainable banking practices within the Indian context. As the banking sector increasingly recognizes its responsibility towards environmental conservation and social welfare, the integration of green technology has emerged as a pivotal strategy.

Throughout this review, it became evident that green technology offers multifaceted benefits to banks, the environment, and society at large. By leveraging renewable energy sources, optimizing resource utilization, and implementing eco-friendly practices, banks can mitigate their carbon footprint and contribute positively to environmental preservation. Moreover, the adoption of green technology enhances operational efficiency, reduces costs, and fosters innovation, thereby bolstering the financial resilience of banking institutions.

Key findings from this review underscore the imperative for Indian banks to prioritize investments in green technology and incorporate sustainability considerations into their core business strategies. The successful implementation of green initiatives requires a holistic approach encompassing technological innovation, regulatory

support, and stakeholder engagement. Furthermore, collaboration among banks, government agencies, and industry players is essential to accelerate the transition towards sustainable banking practices.

Looking ahead, the implications of embracing green technology in banking are profound. As India continues to pursue economic growth and development, sustainable banking will play a pivotal role in achieving the dual objectives of environmental protection and financial inclusion. By aligning their operations with sustainability principles, banks can not only enhance their competitiveness but also contribute significantly to India's broader environmental and social goals.

In conclusion, the integration of green technology into banking practices represents a paradigm shift towards a more sustainable and resilient financial sector in India. As the momentum for sustainability continues to grow, it is imperative for banks to embrace this transformative journey and pave the way for a greener, more inclusive future.

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Performance And Problems Of E-Marketing In Small Scale Agricultural Sector

Kumari Suchi Pandey¹, Dr. Nandan Singh²

¹Research Scholar,

²Assistant professor, Ramabai Government Women Post Graduate College, Akbarpur
Dr. Ram Manohar Lohia Avadh University, Ayodhya

ABSTRACT

The Agricultural sector has immense opportunities for the economy upbringing. The total contribution of agricultural sector to the GDP is about 18.3 % . Agriculture is the backbone of Indian economy. The performance of e-marketing in the small-scale agricultural sector can be influenced by various factors. On the positive side, e-marketing can provide greater reach, cost- effectiveness, and accessibility to potential customers. It allows small-scale farmers to showcase their products to a wider audience, facilitating direct sales and reducing dependency on intermediaries. However, there are challenges too. Limited internet access, digital literacy, and infrastructure in the rural areas can hinder effective e-marketing adoption. Additionally, concerns about data security, trustworthiness of online platforms, and payment methods can deter both farmers and consumers. Overcoming these obstacles requires targeted interventions such as improving digital infrastructure, providing training on e-marketing strategies, and fostering trust through transparent transactions and reliable online platforms tailored to the needs of small-scale agricultural producers. E-marketing in agriculture has the potential to transform the sector by promoting inclusivity, efficiency, and sustainability while empowering small-scale farmers to thrive in the digital age.

Keywords: E-marketing , Agricultural sector, Rural Area, Digital Empowerment, the Internet

INTRODUCTION

India is an agrarian economy with a wide angle of crops, cereals , pulses, horticulture crops, medicinal and aromatic plants, flowers . Agriculture is the main source of livelihood and contribute 18.3 % to GDP and provides employment to 60% population of the country. It also play a major role the export of agricultural produce commercial and industrial development. According to reports (PIB, 2020) in 2018-19 India achieved record food grain production of 285.17 million tonnes of produce. In horticulture production it was 310.14 million tonnes. Concerns have been raised about connectivity and market accessibility, particularly for marginal and small farmers. A fair price for rural producers, who are primarily marginal and small producers, is determined in large part by the agricultural market, which includes farm gate delivery, regulated markets, rural haat, and terminal markets. Small and marginal farmers who don't have a surplus to sell or a smaller quantity to sell always buy or sell their goods directly from the local market. Over time, it has been noted that marginal and small farmers have difficulties as a result of their social and economic circumstances as well as bottlenecks in marketing organisations. In order to address these issues, the Agricultural Produce Marketing Committee (APMC) Act of 2003, the Agricultural Produce & Livestock Market Committee (APLM) Act of 2017, the Model Contract Farming Act of 2018, the Farmer Producers Organisation Act of 2002, and the electronic-National Agriculture Market (e-NAM) of 2016 were all passed. The definition of a market now includes virtual platforms where buyers and sellers engage via electronic and digital devices instead of only physical space. It is determined that awareness, connectedness, and accessibility are critical for trading in this setting. Farmers who were force to distress sell were far way from the online connectivity in market and the government schemes. Modernisation of Agricultural marketing is a key necessity for better linking the farmers to local markets, distant market and even to the international markets also.

REVIEW OF LITERATURE

- Jairath & Yadav (2012) : In there study "Role of ICT in decision making in agricultural marketing-a case of arid India." suggested that direct marketing is the need of hour without mediator involvement farmers can get high revenue.
- Chand R. (2016) : In his study “e- platform for national agricultural market” stressed on the need of association of farmers to be organised in the form of Farmer Producer Organisation (FPO) and contract farming. E-NAM can overcome market inefficiency and increase revenue of the farmers.

- Bisen J. And Kumar.R. (2018) : "Agricultural marketing reforms and e-national agricultural market (e-NAM) in India: a review." Expressed that the e- marketing model in Karnataka was established to provide the package of marketing related services through auction and post auction facilities.
- Reddy (2018) : Study on E- NAM in Karnataka suggests improvement for the effective functioning of E-NAM .There was a fear of accountability during online transactions.
- Manage; (2018) : Study E- Nam in Telangana suggested role of e-nam in the integration of grading and assessing weigh, amalgamation of logistics banks and Negotiable Warehouse Receipt (NWR) for the benefit of farmers leading to fair price discovery.

DATA AND SOURCES

The study is based on the secondary data sourced from various data base like research articles, google scholar, journals, blogs and articles published in websites.

OBJECTIVES

- To study and evaluate market reach and access.
- To analyse economic impact and assess adoption and usage.
- To evaluate efficiency and transparency.
- To study customer satisfaction and usage experiences.
- Analyse impact on market dynamics .

E- Marketing in agricultural sector

E-marketing in agriculture involves the use of digital technologies and online platforms to promote, sell, and distribute agricultural products. This approach leverages the internet to connect farmers with consumers, suppliers, and other stakeholders, aiming to improve market efficiency, increase farmers' incomes, and provide better access to agricultural inputs and services. Here are key aspects of e-marketing in agriculture:

1. Online Marketplaces: Platforms like eNAM (National Agriculture Market), AgriBazaar, and DeHaat allow farmers to list and sell their produce directly to consumers, retailers, and wholesalers. This reduces dependency on traditional middlemen and can lead to better prices.
2. Digital Payments :E-marketing platforms facilitate secure digital transactions, allowing farmers to receive payments directly into their bank accounts, which reduces the risk associated with cash handling.
3. Market Information Systems : Digital platforms provide real-time information on market prices, demand trends, weather conditions, and best practices. This helps farmers make informed decisions about what and when to plant, harvest, and sell.
4. Supply Chain Management : E-marketing tools can streamline the supply chain by connecting farmers with logistics providers. This helps in efficient transportation and reduces post-harvest losses.
5. Access to Agricultural Inputs : Farmers can purchase seeds, fertiliser's, pesticides, and equipment online, often at competitive prices. Platforms like BigHaat and AgroStar offer a wide range of agricultural inputs with doorstep delivery.
6. Advisory Services : Many e-marketing platforms provide advisory services, including crop management, soil testing, pest control, and financial planning. These services are often supported by agronomists and agriculture experts.
7. Community Building : Digital platforms enable farmers to connect with each other, share experiences, and form cooperatives or farmer producer organisation's (FPOs). This collective approach can enhance bargaining power and resource sharing.

Benefits:

1. Increased Market Access : Farmers can reach a larger and more diverse customer base, including urban consumers and international markets.
2. Higher Profit Margins : By cutting out intermediaries, farmers can often secure higher prices for their produce.
3. Improved Transparency : Online transactions and digital records improve transparency in pricing and reduce opportunities for fraud.

4. Efficient Resource Use : Access to real-time data and advisory services can lead to more efficient use of resources, such as water, fertiliser's, and pesticides.
5. Enhanced Financial Inclusion : Digital payments and online credit facilities can improve financial inclusion for farmers, making it easier to access loans and insurance products.

Challenges and Prospects of E- Marketing

Agricultural markets are characterised by poor competitiveness, fragmentation, inefficiency, presence of middlemen and price manipulation. The electronic trading platform is an attempt for transforming the market system and brings a win-win situation for exploited farmers. There are many areas which restrict smooth functioning of electronic marketing in India are complete access and connectivity to regulated market, governance and institutional biases, information asymmetry among the functionaries, traders, producers & administrations, lack of effective transfers of technology, awareness, and institutional collaboration.

1. Digital Literacy : Many farmers, particularly older ones or those in remote areas, may lack the digital skills needed to use e-marketing platforms effectively.
2. Internet Connectivity : Poor internet connectivity in rural areas can limit the use of online platforms.
3. Trust Issues : Concerns about the reliability of online transactions and fear of fraud can deter farmers from adopting e-marketing.
4. Infrastructure Gaps : Inadequate rural infrastructure, such as poor roads and lack of cold storage, can hinder the efficiency of e-marketing systems.
5. Regulatory Barriers : Complex regulatory environments and lack of supportive policies can impede the growth of e-marketing in agriculture.
6. Economic Disparities : Larger and more resourceful farmers may benefit more than smallholders, potentially widening economic disparities within rural communities.

Future Directions:

1. Improved Connectivity: Expanding internet infrastructure and providing affordable data plans can enhance access to e-marketing platforms.
2. Training and Education : Providing digital literacy programs and training can help farmers better utilise e-marketing tools.
3. Policy Support : Government policies that support digital transactions, market integration, and data transparency can foster the growth of e-marketing.
4. Technological Innovations : Advances in mobile technology, AI, and blockchain can further improve the efficiency and security of e-marketing platforms.

E-marketing in agriculture has the potential to revolutionise the sector by making it more efficient, transparent, and profitable for farmers. By addressing the existing challenges and leveraging digital technologies, the agricultural sector can achieve sustainable growth and better livelihoods for farmers.

Conclusion

E-marketing in the agricultural sector in India holds significant value, but the extent to which it benefits farmers varies. Currently, about 10-20% of Indian farmers are leveraging e-marketing platforms effectively to sell their produce. This includes utilising services like the Electronic National Agricultural Market (e-NAM), various agri tech startups, and digital platforms provided by companies such as Jio and ITC. The primary benefits for these farmers include better price realisation, reduced dependency on intermediaries, and access to a broader market. For instance, platforms like e-NAM have been instrumental in connecting farmers directly with buyers, thus enhancing transparency and efficiency in the agricultural supply chain. However, there are several challenges that limit the broader adoption of e-marketing. These include digital literacy among farmers, infrastructure issues such as internet connectivity in rural areas, and resistance to change from traditional marketing methods. Additionally, small and marginal farmers often lack the resources to access and effectively use these digital platforms. To increase the percentage of farmers benefiting from e-marketing, there needs to be a concerted effort from both the government and private sector to improve digital infrastructure, provide training, and create more inclusive platforms that cater to the specific needs of smallholders. Initiatives like the Digital Agriculture Mission 2021-2025 are steps in the right direction, aiming to integrate technologies like AI, blockchain, and IoT into the agricultural ecosystem.

Overall, while the current impact of e-marketing on Indian farmers is substantial for a minority, there is significant potential for growth and greater inclusivity with the right interventions and support.

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Technological Innovations: Pioneering The Path To Progress

¹Mr. Mahesh Kumar, ²S. S. Patil, ³Dr. Ranjini M L

¹Research Scholar

²Research Foundation

³Research Supervisor

(A Recognised Research Center by University of Mysore)

B R Tambakad First Grade College and P G Studies

Hirekeruru, Karnataka

Assistant Professor of Commerce, Government College for Women Maddur

ABSTRACT:

It is more important than ever to prioritize sustainable development in light of major worldwide issues like resource depletion, social inequality, and climate change. The pursuit of economic growth while maintaining environmental preservation and social equity can be reconciled through innovative solutions, which make innovation a crucial lever. Using a thorough analysis of the literature, this review delves into the relationship between innovation and sustainable development, highlighting important themes, patterns, and research gaps. It explores the pivotal role of technological innovations in shaping a prosperous future across various domains. It highlights key areas such as renewable energy, clean transportation, healthcare technologies, artificial intelligence, blockchain, space exploration, biotechnology, IoT, advanced materials, and cybersecurity. These innovations hold the potential to address pressing global challenges, enhance sustainability, improve quality of life, and drive economic growth. By fostering continuous advancements in these areas, societies can build a future characterized by resilience, inclusivity, and sustainable development. This abstract provides a comprehensive overview of the transformative power of technology in shaping a brighter and more prosperous tomorrow.

Key words: Resource depletion, Social inequality, Climate change, Technological innovations, Challenges, Cybersecurity, Sustainable development, Economic growth.

INTRODUCTION:

In today's era, technological innovations have been instrumental in shaping society and driving progress by improving quality of life, fostering economic growth, promoting global connectivity, addressing environmental challenges, empowering individuals, driving social change, and raising ethical considerations. Embracing innovation while addressing its challenges is essential for realizing the full potential of technology to create a better future for humanity.

Technological innovations serve as the bedrock of societal advancement and prosperity. It examines the profound impact of technological breakthroughs across diverse sectors, illuminating their transformative potential in shaping the future. From harnessing renewable energy to pioneering healthcare solutions, from the integration of AI-driven advancements to the disruptive capabilities of block chain technology, each innovation assumes a pivotal role in tackling global challenges while paving the way for new avenues of growth and development. Through a synthesis of emerging trends and revolutionary discoveries and it offers a comprehensive overview of the dynamic landscape of technological innovation, underscoring its capacity to drive sustainable and inclusive progress in the years ahead.

Technological advancements are reshaping various sectors including driving innovation, improving efficiency, and addressing societal challenges. Embracing these technologies and leveraging their potential will be essential for driving future progress and fostering sustainable development across industries.

REVIEW OF LITERATURE:

The positive correlation between entrepreneurial activity and economic growth is well-established (Audretsch & Keilbach, 2004). Gries and Naudé (2011) argue that entrepreneurship serves as a crucial driver of technological progress and productivity enhancement, contributing to sustained economic expansion. Regional studies, including those by Fritsch and Mueller (2007) and Acs et al. (2018), underscore the regional variations in the impact of entrepreneurship on economic development.

Huang and Rust (2018) offer a nuanced view on AI's dual impact on service industries, emphasizing the technology's role in both innovation and the displacement of jobs. They propose a framework for understanding how businesses should navigate AI integration, highlighting the shift towards tasks requiring empathetic and intuitive human skills (Ming-Hui Huang & R. Rust, 2018).

Paschen, Kietzmann, and Kietzmann (2019) provide a comprehensive overview of AI's impact on market knowledge within B2B marketing. They detail AI's foundational components and discuss its implications for acquiring and managing customer, user, and external market knowledge. The study highlights AI's potential to significantly enhance knowledge-based marketing strategies in the B2B realm, offering avenues for future research to explore AI's evolving role.

Technology and innovation are pivotal components in the realm of entrepreneurship. Technology is broadly defined as the application of scientific knowledge for practical purposes, involving the usage of tools, processes, systems, and methodologies to solve problems or attain goals (Tidd & Bessant, 2020). It is a conduit through which ideas are manifested into practical solutions.

Innovation, as defined by Schumpeter and Opie (1934), is a process that involves the introduction of a new product or a qualitative change in an existing product, a new production method or process, opening a new market, acquiring a new source of new materials or parts, or implementing new ways to organize business. It can be a linchpin in creating value and attaining a competitive advantage in the market.

Chatterjee et al. (2021) analyze the effects of AI-based CRM systems on organizational performance and competitive advantage in a B2B context. Through empirical analysis, they explore how AI-CRM influences strategic relationship management activities, underscoring the critical success factors for implementing AI in B2B relationship management. The study integrates institutional theory and the resourcebased view, offering insights into AI-CRM's strategic importance.

Gladilin (2023) discusses AI's contribution to enhancing leadership efficiency and optimizing business processes. The paper explores AI's capabilities for learning, reasoning, and self-correction, and their implications for decision-making and competitive advantage in the managerial sphere (L. Y. Gladilin, 2023).

"The Second Machine Age" by Erik Brynjolfsson and Andrew McAfee: This book examines the impact of technological advancements, particularly in artificial intelligence and robotics, on the economy and society. It discusses how these innovations are reshaping industries and labor markets, and the implications for economic growth and inequality.

"Zero to One" by Peter Thiel: Thiel, a co-founder of PayPal and Palantir, offers insights into the process of creating and scaling successful startups. He emphasizes the importance of developing unique and valuable innovations that create monopolies rather than competing in crowded markets.

"The Fourth Industrial Revolution" by Klaus Schwab: Schwab discusses the transformative impact of emerging technologies such as artificial intelligence, robotics, and biotechnology on society and the economy. He argues that the convergence of digital, physical, and biological technologies is ushering in a new era of innovation and disruption.

AN OVERVIEW OF TECHNOLOGICAL INNOVATIONS:

This provides an overview of technological innovations and their transformative impact on various facets of human life. Beginning with a historical context, the article traces the evolution of technological advancements, highlighting key milestones and breakthroughs that have shaped contemporary society. It delves into the diverse array of innovations spanning renewable energy, healthcare, transportation, communication, agriculture, and beyond, illustrating how these advancements have revolutionized industries, economies, and lifestyles worldwide.

Through a systematic examination of emerging trends and disruptive technologies, the article explores the profound implications of innovation on socioeconomic development, environmental sustainability, and societal well-being. It also addresses critical considerations such as ethical implications, regulatory frameworks, and the digital divide, emphasizing the importance of responsible innovation and equitable access to technology.

It concludes by advocating for continued investment in research and development, collaborative partnerships, and policy interventions to harness the full power of technology for the benefit of humanity.

EVOLUTION OF TECHNOLOGICAL INNOVATIONS:

This paper provides the evolutionary trajectory of technological innovations throughout human history. It traces the development of tools and technologies from prehistoric times to the digital age, examining the key milestones, breakthroughs, and paradigm shifts that have shaped the course of innovation.

Beginning with the earliest human innovations such as stone tools and fire, the paper explores how early civilizations harnessed natural resources to improve agriculture, transportation, and communication. It then progresses through major technological revolutions including the agricultural, industrial, and digital revolutions, highlighting the transformative impact of inventions such as the wheel, steam engine, and computer.

By analyzing the interplay between societal needs, scientific discoveries, and technological advancements, the paper elucidates the complex dynamics driving innovation. It also explores the role of cultural exchange, trade, and collaboration in facilitating the spread of ideas and technologies across civilizations.

Furthermore, the paper examines contemporary trends in innovation, including the rapid advancement of digital technologies such as artificial intelligence, Blockchain, and biotechnology. It discusses the implications of these innovations for industries, economies, and societies, as well as the ethical and regulatory challenges they present.

Through it provides valuable insights into the evolutionary process of technological innovations, shedding light on the factors driving progress and shaping the future of human civilization. It concludes by emphasizing the importance of fostering a conducive environment for innovation, collaboration, and knowledge sharing to address global challenges and unlock the full potential of technology for the betterment of humanity.

NEED FOR THE STUDY:

The paper addresses the importance of technological innovations in fostering social inclusion and empowerment, particularly in marginalized communities. Need for technological innovations including job creation, increased productivity, and enhanced competitiveness. It also discusses the potential for innovations such as artificial intelligence, blockchain, and the Internet of Things to revolutionize industries and catalyze economic growth.

STATEMENT OF THE PROBLEM:

The rapid pace of technological advancements has revolutionized various sectors of society, from healthcare to transportation, finance to education. While these innovations have brought about unprecedented convenience and efficiency, they have also introduced complex challenges and uncertainties. One of the central issues confronting researchers and practitioners alike is the dilemma of technological obsolescence and its impact on organizational sustainability and competitive advantage.

OBJECTIVES OF THE STUDY:

1. To Identify Key Drivers of Technological Innovation
2. To Understand the Ethical, Legal, and Societal Implications of Technological Innovations
3. To Develop Frameworks for Collaborative Innovation

SCOPE OF THE STUDY:

This research article focuses on investigating the dynamics of technological innovations across various industries, with a particular emphasis on their implications for organizational strategy, performance, and societal impact. It acknowledges the breadth and complexity of the field of technological innovations; it focuses primarily on these key areas to provide a comprehensive understanding of the subject matter. By delving into these specific dimensions, the research aims to contribute valuable insights to the existing body of knowledge and inform practical decision-making in organizational and policy contexts.

RESEARCH METHODOLOGY:

The current study adopts a secondary data analysis approach, drawing upon existing data collected through various articles published in reputed journals. The decision to utilize secondary data was motivated by several factors, including the availability of extensive literature on technological innovations and the desire to synthesize and analyze existing knowledge in the field.

SIGNIFICANCE OF TECHNOLOGICAL INNOVATIONS:

Technological innovations have become a driving force behind societal progress, economic growth, and organizational transformation. From advancements in artificial intelligence and robotics to breakthroughs in renewable energy and healthcare, innovations in technology have the potential to revolutionize industries, improve quality of life, and address global challenges. Understanding the significance of technological innovations is crucial for policymakers, industry leaders, researchers, and society as a whole.



Sources: Google.com

- 1. Economic Growth and Competitiveness:** Technological innovations play a fundamental role in driving economic growth and enhancing competitiveness on both a national and global scale. Innovation-led growth models, characterized by investments in research and development (R&D), technology adoption, and entrepreneurship, have been shown to stimulate productivity gains, create new markets, and generate employment opportunities. Furthermore, countries and regions that prioritize innovation and technology-driven industries are better positioned to thrive in the rapidly evolving global economy.
- 2. Transformation of Industries and Business Models:** Technological innovations disrupt traditional industries and business models, leading to shifts in consumer behavior, market dynamics, and value chains. Organizations that embrace innovation are able to differentiate themselves from competitors, drive operational efficiencies, and capture new revenue streams. Moreover, innovations such as digital platforms, cloud computing, and the Internet of Things (IoT) enable novel business models and ecosystem collaborations, fostering greater connectivity and agility in the marketplace.
- 3. Societal Impact and Quality of Life:** Technological innovations have profound implications for society, influencing how we live, work, communicate, and interact with one another. Innovations in healthcare, for example, have led to improved medical treatments, enhanced diagnostic tools, and increased access to healthcare services. Similarly, advancements in education technology (EdTech) have transformed learning environments, making education more accessible, personalized, and inclusive. Moreover, technologies such as clean energy, smart infrastructure, and sustainable transportation have the potential to address pressing environmental challenges and improve the quality of life for future generations.
- 4. Addressing Global Challenges:** Technological innovations hold promise for addressing some of the most pressing global challenges, including climate change, resource scarcity, healthcare disparities, and poverty. Innovations in renewable energy technologies, for instance, offer sustainable alternatives to fossil fuels, reducing greenhouse gas emissions and mitigating the impacts of climate change. Likewise, innovations in biotechnology and precision medicine hold potential for improving healthcare outcomes and reducing healthcare inequalities worldwide.
- 5. Ethical and Societal Considerations:** While technological innovations offer numerous benefits, they also raise ethical, legal, and societal considerations that warrant careful attention. Issues such as data privacy, algorithmic

bias, job displacement, and digital divide require proactive management and regulation to ensure that technological advancements are deployed responsibly and equitably. Moreover, fostering a culture of ethical innovation and inclusive design principles is essential for building trust, promoting social cohesion, and safeguarding human rights in the digital age.



The 5 innovative government initiatives that signify India's commitment to harnessing the power of technology for the betterment of its citizens and the nation's overall progress.

Source: Google.com - 5 Indian Government Projects Ushering in the Next Era of Technology Advancement

- ❖ AI for everything
- ❖ Import restrictions and promoting domestic manufacturing
- ❖ MAHIR: Powering India's technological ascent
- ❖ iCET: Elevating technology partnerships
- ❖ Fortifying India's technology sector with the Digital Personal Data Protection Bill

CHALLENGES OF TECHNOLOGICAL INNOVATIONS:

While technological innovations hold immense promise for driving progress and transformation, they also present complex challenges that must be addressed to realize their full potential. Understanding and navigating these challenges is essential for organizations, policymakers, and society as a whole to effectively harness the benefits of innovation while mitigating its risks.

One of the primary challenges of technological innovations is the rapid pace of change and other challenges like Technological obsolescence, Skills gap and workforce displacement, Cybersecurity and Data Privacy, Ethical and Societal Implications and Regulatory and Policy Challenges.

FINDINGS:

The findings of this research underscore the transformative power of technological innovations and their profound impacts on organizations, industries, and society. By understanding the drivers, challenges, and implications of technological innovations, organizations and policymakers can develop informed strategies and policies to harness the benefits of innovation while mitigating its risks.

SUGGESTIONS:

The suggestions outlined in this research article provide actionable recommendations for organizations, policymakers, and stakeholders seeking to harness the transformative power of technological innovations. By cultivating a culture of innovation, investing in R&D, developing talent and skills, prioritizing cybersecurity and data privacy, fostering collaboration, and embracing responsible innovation practices, organizations can navigate the challenges of technological advancements and unlock new opportunities for growth and societal impact.

CONCLUSION:

Technological innovations have the potential to drive progress, transformation, and prosperity in the digital age. By understanding the drivers, challenges, and implications of technological innovations and implementing the recommendations outlined in this research, organizations and policymakers can navigate the complexities of technological change and unlock new opportunities for growth, sustainability, and societal well-being.

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Future Of Renewable Energy Technologies

Patne M.V., Ingle S.M.

Dayanand college of commerce latur

Abstract

The world is facing significant environmental challenges, and green technologies offer promising solutions to mitigate these issues. This paper explores the latest innovations in green technologies and their potential to shape a more sustainable future. It examines the key trends, applications, and future prospects of these technologies across various sectors, including energy, transportation, construction, and waste management. By highlighting the advancements and potential benefits of green technologies, this paper aims to provide insights into their role in creating a cleaner, greener, and more sustainable world. With the increasing global concern over climate change and environmental degradation, the development and adoption of green technologies have become crucial. This paper presents an overview of the top innovations in green technologies, exploring their current applications, benefits, and future prospects.

Introduction

Green technologies, also known as clean technologies or sustainable technologies, are technologies that are designed to minimize environmental impact and maximize resource efficiency. They include renewable energy sources, energy efficiency measures, and pollution control technologies.

The world is facing a critical environmental crisis, with climate change, pollution, and resource depletion posing significant threats to the planet's health and human well-being. In response, green technologies have emerged as a promising solution to mitigate these challenges. This paper presents an abstract of the top innovations in green technologies and their future prospects.

Importance of Renewable energy

There are numerous reasons why renewable energy is crucial for the future, particularly due to the harmful impacts of fossil fuels on our planet. These include air and water pollution, loss of habitats and wildlife, and greenhouse gas emissions leading to global warming, among others. Here are some key reasons why renewable energy holds such significance: - Mitigates air pollution: Renewable energy can contribute to enhancing global health by reducing air pollution. Air pollution is a significant environmental concern, especially in urban areas and developing regions, with approximately 7 million premature deaths occurring annually due to polluted air, as per the World Health Organization. - Alleviates floods and droughts: The use of renewable energy can also help in decreasing the occurrences of floods and droughts worldwide. The substantial water requirements for operating power plants that burn fossil fuels can result in droughts in regions with low rainfall, while climate change induced by fossil fuel combustion leads to increased rainfall in other areas, causing severe flooding. - Stimulates local economies: The advancement of renewable energy technologies also aids in creating jobs and injecting funds into local economies. The renewable energy sector is witnessing a growth in job opportunities, which are anticipated to become more stable as technology progresses. - Economically viable in the long term: Clean energy sources are now more appealing investment options compared to fossil fuels. With the increasing popularity of renewable energy sources like solar and wind power, investments are considered low risk despite high initial installation costs. Once installed, these sources can essentially generate energy at minimal costs for decades.

Benefits of Renewable Energy

Solar Energy

Solar energy is experiencing a rapid increase in popularity, primarily due to the decreasing costs of installation. This trend is expected to continue as the cost of solar energy is predicted to decline by 15% by 2024. In fact, solar energy has become so accessible that it is projected to account for 60% of the growth in renewable energy in the coming years, according to the International Energy Agency (IEA).

Countries around the world are expanding their solar energy resources, with the United States expected to double its total solar installations to 4 million by 2023. This demonstrates the growing recognition of the benefits and potential of solar power.

Wind Power

On the other hand, wind power is also experiencing significant growth, both onshore and offshore. By 2024, onshore wind capacity is expected to increase by 57% to reach 850GW, thanks to efforts led by China and the United States. Additionally, offshore wind capacity is projected to rise to 65GW, nearly tripling its current capacity and contributing to approximately 10% of global wind power generation.

Hydroelectric power

Hydroelectric power remains the primary renewable energy source worldwide, according to the IEA, and is expected to maintain this position for the next four years. Its reliability stems from the ability to generate power by controlling a water source. As long as there is water, hydroelectric power can be harnessed, making it a dependable and consistent energy source.

Furthermore, geothermal power is gaining popularity in the United States, particularly with the increasing adoption of geothermal heat pumps in homes and businesses. This more efficient heating solution is projected to surpass \$2 billion in market value by 2024, indicating its growing significance in the energy sector.

Overall, the renewable energy landscape is evolving, with solar, wind, hydroelectric, and geothermal power playing crucial roles in meeting the world's energy needs in a sustainable and environmentally friendly manner.

Renewable Energy Source For The Future

Renewable energy sources such as hydropower, solar energy, and wind power are considered to be the most efficient options for powering our future world. These resources are not only environmentally friendly but also suitable for various settings including residential areas, industrial zones, and the national grid.

In addition to providing a sustainable source of energy, these renewable sources can also have a positive impact on local economies. The advancement of wind power technology has already resulted in a significant rise in job opportunities and has boosted the economic growth of local communities. Furthermore, solar energy, which requires space for PV-panels, is a less obtrusive option compared to wind turbines. Although the initial costs of installation may be high, the widespread adoption of solar energy is expected to drive down these costs in the future.

Efficiency of Renewable Energy In Future

The measurement of the effectiveness of renewable energy lies in its ability to generate a significant amount of energy within a specific timeframe and at a reasonable production cost. Despite the initial high investment required for renewable energy technologies, the expenses associated with energy production are considerably lower compared to the extraction of fossil fuels. As renewable energy technologies continue to advance, this efficiency will undoubtedly be further enhanced, propelling us towards a promising future for renewable energy.

Advantages And Disadvantages of Renewable Energy In The Future

Advantages

1. There is an endless supply of renewable energy as long as we can harness the power of the sun, wind, water, and natural heat.
2. The impact of global warming, such as flooding, severe storms, droughts, and other extreme weather events, is significantly reduced.
3. Improved respiratory health due to fewer air pollutants in the environment.
4. A more stable climate is achieved with fewer greenhouse gas emissions.
5. The creation of more job opportunities that benefit local communities.

6. A more reliable energy supply that helps prevent power outages.
7. Enhanced accessibility to renewable energy sources.
8. Lower energy bills, especially with the decreasing costs of renewable energies.

Disadvantages

1. Significant upfront expenses during installation.
2. Inconsistent power generation due to reliance on specific renewable sources.
3. Storage solutions for renewable energy require further advancements.
4. Geographical constraints may limit the effectiveness of renewable energy in certain areas.

Main Factors Plays a Significant Role in Renewable Energy

The future of renewable energy is heavily influenced by two key factors: the environmental advantages it offers and the financial implications of transitioning to it. Despite the numerous benefits that renewable energy sources provide, the significant upfront expenses often deter potential investors. However, there is a silver lining as the growing awareness of environmental concerns has led to a decline in renewable energy prices, including installation costs. Consequently, there is now a greater incentive to embrace renewable energy solutions.

Conclusion

The urgent requirement for decarbonization and a decrease in the utilization of fossil fuels remains crucial. It is undeniable that renewable energy will spearhead the revolution on a global scale. By 2050, Solar, Wind, Hydro, and Geothermal energy sources are projected to be the primary contributors, with significant investments in solar and wind power. As existing technology continues to advance, including the development of more efficient solar panels, taller and more powerful wind turbines, and enhanced energy storage solutions, new technologies will also emerge, offering further alternatives for renewable energy.

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Navigating the Nexus: Challenges in Implementing AI for Sustainable Development Goals in the Financial Sector

Modish Kumar¹, Santosh Kumar²

¹Research Scholar

Himachal Pradesh University Business School, Shimla

²Assistant Professor

Himachal Pradesh University Business School, Shimla

Abstract:

This study investigates the manner of adoption of artificial intelligence (AI) is being incorporated into the banking industry as well as it affects the Sustainable Development Goals (SDGs). It examines the potential of AI technology to drive sustainability through resource optimisation, improved decision-making, and financial services transformation through an examination of existing trends and upcoming concerns. Key obstacles are noted in this study, such as model bias, data quality, regulatory compliance, and the requirement for a strong IT infrastructure. However, opportunities are also highlighted for advancing financial inclusion, transparency, and responsible AI implementation in the industry. By analysing the best practices and structures for effectively integrating AI solutions into financial institutions, this study achieves the objective. The study used qualitative research methods to analyse secondary data based on thematic content analysis on NVivo software. This article contributes to the ongoing discourse on AI-driven sustainable development in the financial industry by conducting a comprehensive analysis of the intricate link between AI adoption and SDGs. It offers practical recommendations for fostering responsible AI deployment and achieving long-term sustainability objectives.

Keywords: Artificial Intelligence (AI), Sustainable Development Goals (SDGs), Financial Sector, Sustainability, AI Implementation

Introduction:

The use of AI techniques in the financial industry is known as AI in finance, and it has garnered interest for many years. The intersection of sustainable development goals (SDGs) with artificial intelligence (AI) application offers both untapped opportunities and significant challenges in the rapidly evolving financial landscape of today (Chueca Vergara et al., 2021). It's critical that we understand how these developments may affect sustainable development as financial institutions use AI progressively to improve decision-making, increase efficiency, and provide innovative products and services (Mhlanga, 2023). Though interest in this field continues to grow, the academic literature is still dispersed and offers a limited comprehension of the distinctive opportunities and problems linked to AI integration in the financial industry. In order to mitigate the gap, this study aims to investigate the intricate connection between financial institutions' use of AI and the SDGs. This study attempts to provide useful insights for policymakers, industry practitioners, and researchers by highlighting important challenges, opportunities, and potential pathways for utilising AI to support sustainable goals. This study is conducted to analyse the existing challenges and barriers in implementing AI technologies within the financial sector to achieve Sustainable Development Goals (SDGs).

Literature review:

A extensive review of the challenges, methods, and prospects in AI and data science (AIDS) research in finance describes the difficulties, types the research, contrasts in traditional and contemporary AIDS methods, and also highlight about prospects for AIDS-enabled financing in the future (L. Cao, 2022). The use of AI in finance to the Sustainable Development Goals (SDGs) can be both challenging and promising. Studies using restricted data and controlled circumstances sometimes have little application in the actual world. AI needs to be adaptable and continuously studied to comprehend its shortcomings and societal effects in order to satisfy the changing demands of society. This highlights the significance of thorough evaluation techniques that go beyond profit-driven biases (Vinuesa et al., 2020). According to a new World Economic Forum (WEF) research, the integration of AI into the financial sector highlights the urgent need to increase the general public's awareness of the risks posed by artificial intelligence (AI) system failures in a society that is becoming increasingly dependent on technology (Deloitte & World Economic Forum, 2018). The potential benefits of AI for society make it significant; yet, in

order to prevent harm, practicality and sustainability must be taken into account while implementing AI. Harmonised regulations are necessary to address the global income disparities caused by the innovations in artificial intelligence. AI transparency makes monitoring and implementation easier, which is essential for its broad use. Shared goals of wealth through AI may reduce conflict and support environmental preservation and global wellbeing (Goh & Vinuesa, 2021). Although a substantial amount of research has demonstrated AI's ability to support many Sustainable Development Goal (SDG) aims and indicators, much of this research has been conducted in controlled laboratory environments using limited datasets or prototypes (Y. Cao et al., 2014; Gandhi et al., 2017).

Artificial Intelligence offer opportunities to optimise production systems and economic activity while aligning with sustainability goals for societal and environmental improvement. However, these technologies should prioritise inclusive governance to mitigate unintended negative consequences, especially for vulnerable communities. Collaborative policymaking incorporating diverse perspectives guides responsible innovation, fostering cooperation. Multi-stakeholder collaboration enable scaling effective solutions(Hong & Xiao, 2024). Artificial intelligence is being used increasingly in the financial services industry globally, particularly in emerging nations, to overcome obstacles such as high prices and identity verification by automating procedures and gaining access to new data sources. The use of AI ethically, competitive marketplaces, and continuous infrastructure investment are necessary for financial inclusion (Biallas & O'neill, 2020). Digital innovations have become necessary in today's banking industry as a result of financial organisations must adapt to changing customer requirements and increased competition (Fares et al., 2023). Milana & Ashta, (2021) incorporated AI into everyday life in the modern era. Features like voice and facial recognition, human-like machine interactions, data management, market analysis, natural language processing, financial services, risk assessment, and fintech innovations all have an impact on consumers. AI also interacts with cutting-edge technology, such as blockchain and cryptocurrencies, to increase its impact and reach.

Research Methodology:

With the objective to completely express the intricacies and nuances of the subject matter, a qualitative research method (Creswell, 2009) is used to examine the implementation issues of AI in achieving Sustainable Development Goals (SDGs) in the financial sector. Using a web browser plugin called NCapture, the study collected data from secondary sources, comprising 53 documents, including electronic newspaper articles, financial institution reports, and media stories. NVivo, a qualitative data analysis software, is used to analyse the data. The software facilitates in easier coding, methodically analysing and identify patterns and reoccurring themes about the difficulties in using AI for the SDGs in finance. The research process incorporates ethical issues at every stage, especially when it comes to data utilisation and anonymity. The process of data collection and analysis was iterative, ending when the information gathered reached saturation level(Flick, 2014) upon collection of 53 documents.However, this type of research has its own set of limitations, including potential researcher bias and non-generalizability, the study several iterations of analysis with objectivity to increase analytical depth and richness of data to reduce these problems. Taking into consideration the suggestions made in established research methodology(Creswell, 2009; Strauss & Corbin, 2008), this study method offers a solid groundwork for understanding the intricate issues surrounding the adoption of AI in the financial sector for SDGs, providing a thorough understanding of the topic at hand.The study used clustering and text search queries for analysis to achieve the objective. The results were presentedbased on the number of coded references from the documents using cluster diagrams, hierarchical charts, and tabular format.

Key challenges in financial and banking sectors in achieving SGDs:

The financial and banking industries face a number of issues as a result of the Sustainable Development Goals (SDGs). The following are some of the primary concerns highlighted in recent studies:

1. Sustainable Financial Products: Although the availability of sustainable financial products is presently constrained, there is a growing demand for them. To meet consumer demands while aligning with sustainable development goals, banks must integrate sustainability into their product line (McKinsey & Company, 2022b).
2. Governance and Societal Impact: Banks need to enhance their governance frameworks to assess and oversee the societal impact of their operations, aligning with the SDGs and the Paris Agreement (Baraldi, 2019).

3. Credit Risk and Project Economics: The financial sector has difficulty recognising the complex economics of sustainable projects and evaluating credit risk (McKinsey & Company, 2022a).
4. Regional Disparities: Some regions are in more favourable conditions for sustainability initiatives than others, and it is essential to ensure alignment across all regions for effective sustainable banking (Baraldi, 2019).
5. ESG Risks: Financial institutions need to strike a balance between important risks and integrate their Environmental, social, and governance (ESG) strategy into the organisation's ecosystem to foster long-term value (PWC NL, n.d.)
6. Lack of ESG Reporting Standards: It is difficult to monitor and encourage sustainable investments when Environmental, Social, and Governance (ESG) criteria are not standardised for reporting (McKinsey & Company, 2022b).
7. Economic and Consumption Patterns: The primary challenge in achieving the SDGs is uneven economic development and unsustainable patterns of production and consumption (United Nations Secretary General, 2019).
8. Reliance on Hydrocarbons: The hydrocarbon industries are the backbone of many economies, which can make the shift to sustainable methods more challenging (Baraldi, 2019).
9. Technological Infrastructure: Sufficient infrastructure is needed to facilitate sustainable finance, an important component that is lacking in many regions (McKinsey & Company, 2022b).
10. Public and Private Sector Engagement: More cooperation between the public and commercial sectors is required in order to finance projects in line with the Sustainable Development Goals (SDGs) in an efficient manner.

Governments, financial institutions, and international organisations must work together to address these concerns and provide a supportive climate for sustainable financing.

Data Analysis:

The data analysis reveals a total of 1395 coded references across all documents. The distribution of codes by theme is depicted in matrix form in Figure 1. "Data Quality and Bias" emerges as the most frequently coded theme, with 282 occurrences, followed by human-related challenges such as the lack of human intervention and insufficient skilled human resources. The third most significant challenge identified is the 'changing landscape of the financial sector', which is crucial to address to meet sustainability requirements while implementing AI.

The top ten broader themes that emerged from the analysis are: 'AI implementation in existing business processes,' 'Business and Data management,' 'Changes in financial services,' 'Lack of human interventions,' 'Data quality and Bias,' 'Regulation: Legal and ethical considerations,' 'Risk Management and Fraud detection,' 'Risk potential,' 'Banking and Financial systems,' and 'Training models: Challenges in implementing AI.' These themes are illustrated with the help of hierarchical charts (Figure 2) and clustering diagrams (Figure 3a. and Figure 3b). The hierarchical chart displays the hierarchical relationships between themes, while the clustering diagram created with NVivo visualizes the thematic clusters identified in the analysis.

Documents	A : AI implementation in existing business	B : Business and Data management	C : Changes in financial services	D : Lack of human interventions	E : Data quality and Bias	F : Regulation: Leagal and ethical consideration	G : Risk Management	H : Risk potential: Fraud detection	I : systems	J : Training models
1 Document	2	2	1	3	11	6	0	0	2	2
2 Document	2	2	1	4	11	6	0	0	2	2
3 Document	6	5	5	9	9	0	1	0	0	4
4 Document	1	1	0	5	4	0	1	0	2	5
5 Document	0	0	3	1	1	0	0	0	0	1
6 Document	2	1	0	2	1	2	1	0	2	2
7 Document	5	1	3	1	3	0	2	1	4	1
8 Document	0	3	3	6	2	0	3	3	0	9
9 Document	1	2	5	7	11	1	0	1	0	2
10 Document	2	0	5	0	7	1	1	1	0	0
11 Document	0	1	0	2	5	2	0	2	0	0
12 Document	10	2	9	5	19	5	14	4	6	14
13 Document	0	0	0	0	0	0	0	0	0	0
14 Document	5	2	1	5	7	6	2	1	1	3
15 Document	2	1	7	8	10	0	2	1	2	3
16 Document	0	1	0	3	6	2	1	1	3	0
17 Document	3	0	3	4	0	0	1	0	1	1
18 Document	0	0	2	0	0	0	0	0	1	0
19 Document	3	3	0	4	2	0	0	3	0	1
20 Document	3	4	0	4	1	0	0	3	0	1
21 Document	3	2	0	1	7	0	7	5	2	8
22 Document	1	0	2	1	0	0	0	0	0	0
23 Document	4	2	18	7	5	5	3	3	9	5
24 Document	0	0	0	0	0	0	2	1	0	0
25 Document	1	2	1	9	7	0	6	4	1	1
26 Document	4	3	12	18	18	5	10	6	0	8
27 Document	0	4	1	3	7	0	1	0	0	0
28 Document	0	0	0	1	0	0	0	0	0	0
29 Document	9	1	5	7	13	1	3	0	2	7
30 Document	0	0	0	0	0	0	0	0	0	1
31 Document	0	1	11	6	0	0	1	1	0	0
32 Document	3	2	4	9	2	0	1	2	3	3
33 Document	2	0	0	0	0	0	0	0	0	0
34 Document	2	0	9	13	3	0	2	1	0	8
35 Document	0	0	0	0	0	0	0	0	0	0
36 Document	0	0	2	7	7	2	2	0	2	2
37 Document	1	1	1	1	2	0	2	0	0	3
38 Document	1	1	1	1	2	0	2	0	0	3
39 Document	2	2	1	2	4	0	2	2	0	4
40 Document	2	2	0	3	8	1	3	2	2	0
41 Document	0	0	2	3	0	0	0	0	0	0
42 Document	2	1	6	6	3	0	0	1	2	2
43 Document	2	1	6	6	3	0	0	1	2	2
44 Document	2	1	6	6	3	0	0	1	2	2
45 Document	2	5	6	10	5	2	8	3	0	2
46 Document	2	5	6	10	5	2	8	3	0	2
47 Document	0	0	0	1	1	0	0	0	0	0
48 Document	7	6	18	12	8	1	1	0	1	2
49 Document	0	0	0	2	4	1	2	5	0	0
50 Document	0	2	0	5	11	3	2	0	3	5
51 Document	2	5	6	10	5	2	8	3	0	2
52 Document	0	0	2	7	7	2	2	0	2	2
53 Document	3	2	0	1	7	0	7	5	2	8

Figure 1: Matrix coding query

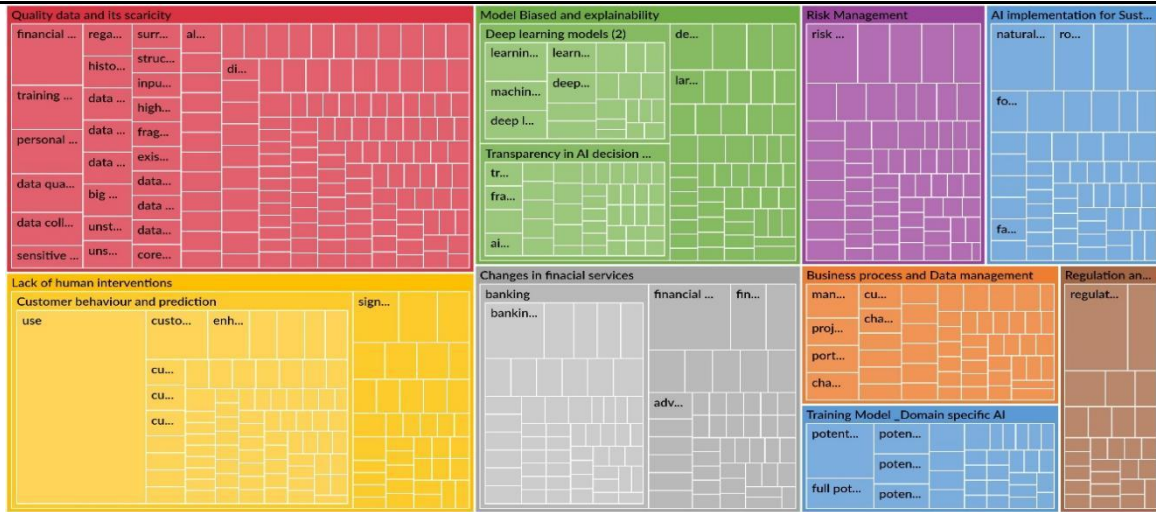


Figure 2: Hierarchical chart of relationships between themes

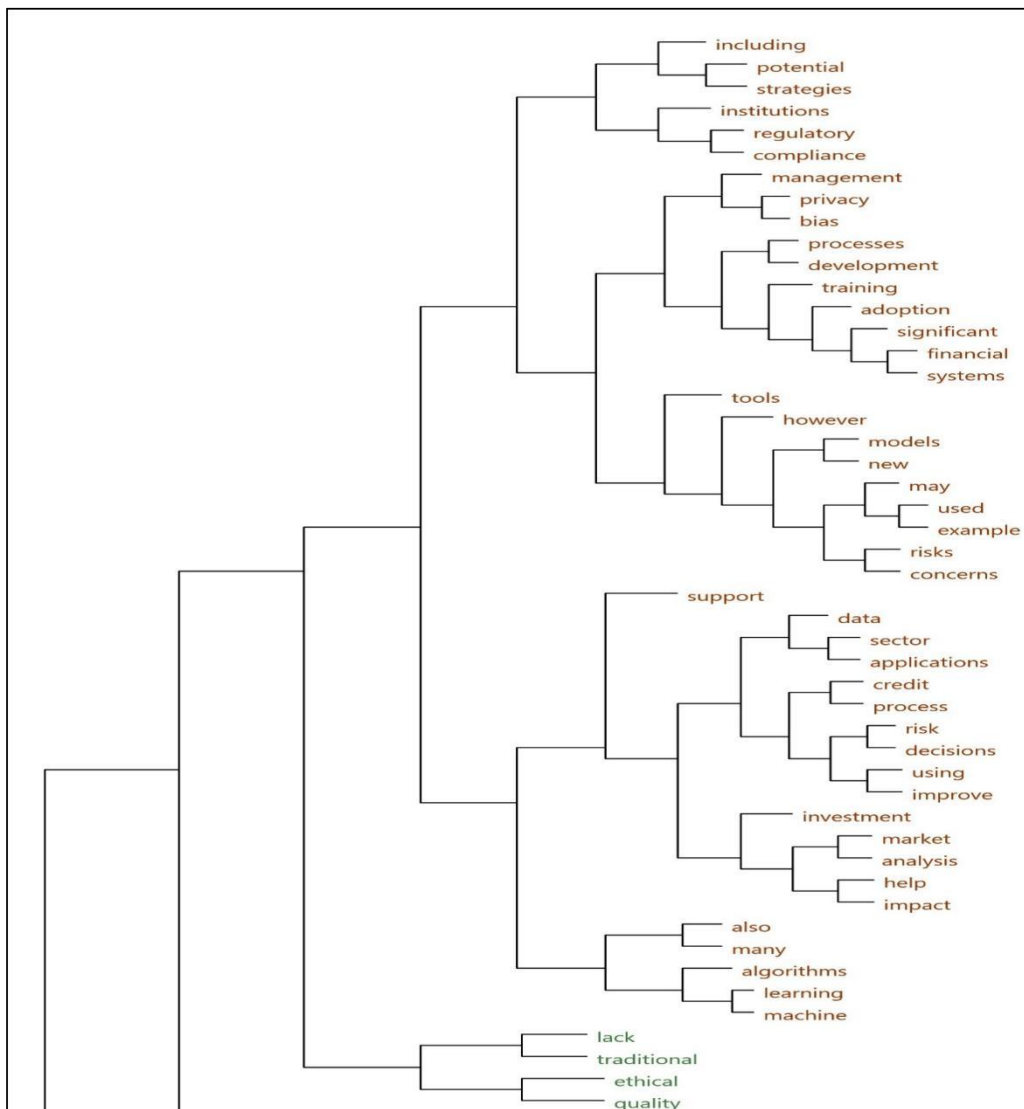


Figure 3(a): Thematic cluster diagram

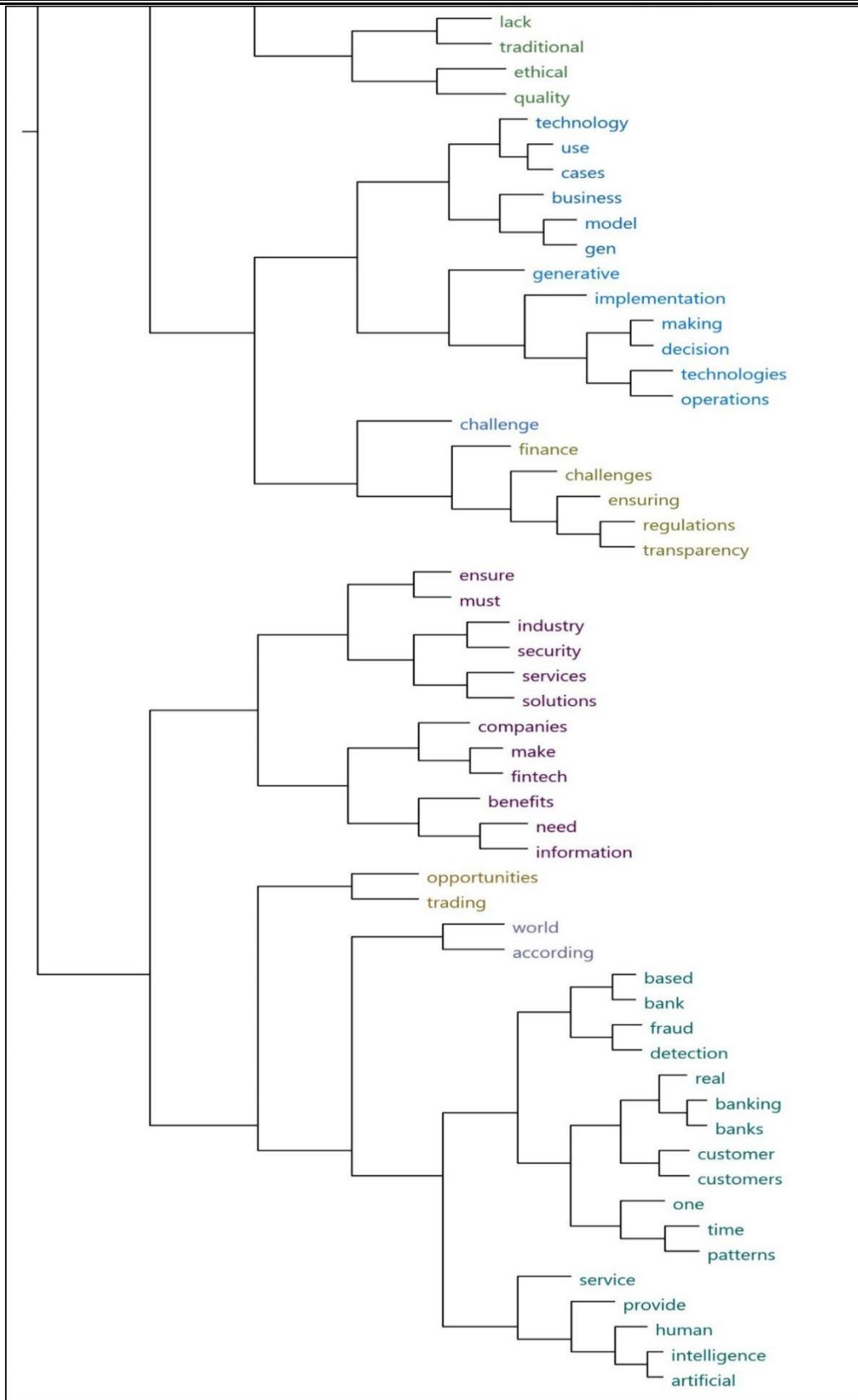


Figure 3(b): Thematic cluster diagram

Findings:

Several significant findings are drawn from data analysis studies, especially when considering AI application and sustainability in the financial sector:

- **AI Implementation for Sustainable Business:** AI promotes sustainable business practices by cutting waste, increasing decision-making for long-term gains, and optimising resource use.
- **Business Process and Data Management:** Artificial Intelligence (AI) improves business processes through task automation and data analytics insights that lead to better operational efficiency and decision-making.
- **Financial services are changing as a result of artificial intelligence (AI),** which transforms the industry with automated trading, personalised banking, and better customer support via chatbots and AI advisers.
- **Lack of Human Interventions and Model Bias:** Although AI automation reduces the role of humans, it also brings up issues related to job displacement and biases created by training data. These issues highlight the significance of human supervision and model bias mitigation for the ethical application of AI.
- **Domain-Specific Implementation Challenges:** Building trust among customers, regulatory compliance, and market volatility are just a few of the challenges that face the implementation of AI in finance. These obstacles demand for specialised expertise and specially designed solutions to be implemented successfully.
- **Lack of ESG Standards and Regulation of AI:** In order to guarantee ethical use and compliance with environmental, social, and governance (ESG) standards, regulation of AI in the financial industry is needed. But the absence of consistent regulations across globe, puts forward difficulties for both financial companies and regulators.
- **Regional disparities in AI Adoption:** Developed economies have more access to AI infrastructure and knowledge than emerging nations do, and there is a geographical disparity in the financial sector's adoption of AI technology. Addressing the goals of global sustainability necessitates bridging this gap.
- **Public-Private Engagement for AI Sustainability:** Encouraging AI sustainability in the financial industry requires effective public-private sector partnership. In order to support sustainable AI programmes, partnerships between the public and private sectors may help with information exchange, resource allocation, and policy formulation.
- **Needs for Technological Infrastructure:** Robust technological infrastructure, including data storage capacity, cybersecurity measures, and high-speed internet access, is necessary for the successful application of AI in banking. Harnessing AI's full potential for sustainable development in the financial sector requires investing in and modernising technology infrastructure.

Conclusion:

This study examines the intricate relationship between the financial sector's adoption of artificial intelligence (AI) and the Sustainable Development Goals (SDGs). Many significant findings have been derived from an in-depth analysis of many possibilities and challenges. Firstly, by means of accelerating decision-making, improving resource efficiency, and disrupting the financial services industry, artificial intelligence has enormous potential to advance sustainability in business processes. Adoption is not without challenges, though, as problems with data quality, model bias, and regulatory compliance emerge. Furthermore, despite the fact that AI offers encouraging solutions to sustainability problems like inequality and climate change, its use necessitates careful evaluation of domain-specific needs, geographical differences, and the demand for a strong technical infrastructure. Furthermore, encouraging public-private interaction, supporting sustainable AI efforts, and assuring compliance with ESG norms all depend on productive partnerships between the public and private sectors.

Future research area:

The limitation of this study is its dependence on secondary data. Additional empirical research is required to further support the findings and investigate other aspects that impact the application of AI in the financial industry. In order to promote the SDGs, future research might concentrate on creating frameworks and methods for successfully integrating AI technologies into financial institutions. Enhancing transparency, encouraging financial inclusion, reducing risks, and encouraging responsible AI deployment are among the areas that need more research.

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The Role Of Data Analytics In Sustainable Business Practices

Naik Sheetal Gajanan

Dayanand college of commerce latur

Abstract

The world is facing a growing environmental crisis, demanding a shift towards sustainable business practices. While many companies are making strides in this direction, the path to true sustainability requires a deeper understanding of their operations and their impact. By leveraging the power of data, companies can achieve measurable progress in environmental conservation, social responsibility, and economic resilience. As the global landscape continues to prioritize sustainability, embracing data analytics will be critical for businesses to thrive in the 21st century. Climate change, resource scarcity, and growing societal awareness, businesses are increasingly embracing sustainability as a core value. The modern business landscape is increasingly defined by the pursuit of sustainability. From environmental concerns to social responsibility, companies are recognizing the importance of operating in a way that minimizes their negative impact and maximizes their positive contributions to the world. Data analytics plays a crucial role in this journey, providing the insights and tools necessary to achieve sustainable business practices. This is where data analytics comes in, offering a powerful tool to guide businesses towards a future that is both profitable and environmentally responsible.

Data Analytics: A Powerful Tool for Sustainability

Data Analytics is the process of examining raw data to extract meaningful insights. In the context of sustainable business practices, this data can come from various sources:

Internal operations: Production data, energy consumption, waste generation, supply chain information, and employee engagement metrics.

External factors: Environmental regulations, consumer preferences, market trends, and competitor Activities.

Third-party data: Environmental impact assessments, carbon footprint data, and social Responsibility ratings

By analyzing this data, businesses can gain valuable insights into their:

Environmental impact: Identify areas with high energy consumption, waste generation, or Carbon emission.

Resource efficiency: Optimize resource utilization, reduce waste, and improve material sourcing practices.

Social impact: Analyze employee satisfaction, community engagement, and ethical sourcing practices.

Financial performance: Track the cost savings associated with sustainable practices and identifies Opportunities for investment.

Applications of Data Analytics in Sustainable Business practices

The applications of data analytics in sustainable business practices are wide-ranging:

1. Resource Optimization: Identifying patterns in energy consumption to optimize energy efficiency, predict demand fluctuations, and implement smart energy management systems.

Data analytics can help companies track and analyze their consumption of energy, water, materials, and other resources. This enables identification of areas for improvement and implementation of targeted efficiency measures.

2. Waste Reduction: Analyzing waste generation data to identify hotspots, optimize recycling processes, and implement circular economy principles. Analyzing waste generation data allows companies to optimize waste reduction strategies, implement circular economy principles, and identify opportunities for resource recovery.

3. Supply Chain Management: Tracking product life cycles, optimizing logistics, and ensuring ethical Sourcing of raw materials. Data analytics helps analyze supply chain data to identify inefficiencies and optimize logistics, minimizing transportation costs, reducing emissions, and Promoting sustainable sourcing practices.

4. Product Development: Using data to design eco-friendly products, reduce emissions in Production and analyze consumer preferences for sustainable options.

5. Emissions Tracking: Data analytics plays a crucial role in monitoring and reporting greenhouse gas emissions, facilitating compliance with regulations and achieving emission reduction targets.

6. Risk Management: Identifying potential environmental risks, assessing the impact of climate Change and implementing mitigation strategies. Predictive analytics can be used to assess environmental risks associated with operations, allowing for proactive mitigation measures and minimizing potential harm.

Optimizing operations for sustainability

Supply Chain Optimization: Data analytics helps analyze supply chain data to identify inefficiencies and optimize logistics, minimizing transportation costs, reducing emissions, and Promoting sustainable sourcing practices.

Production Process Efficiency: Data analysis can identify bottlenecks and inefficiencies in production processes, leading to optimized resource utilization, reduced waste, and improved energy efficiency.

Product Design and Innovation: Data analytics can inform the design of more sustainable products by analyzing consumer preferences, material usage, and lifecycle impacts.

Customer Engagement: Analyzing customer data allows companies to tailor communication and product offerings to promote sustainable choices and encourage eco-conscious behavior.

Driving Social Responsibility and Ethical Practices:

Employee Engagement and Wellbeing: Data analytics can be used to assess employee satisfaction, identify areas for improvement in workplace conditions, and promote a culture of social responsibility.

Diversity and Inclusion: Analyzing data on demographics and workforce representation can help companies identify and address inequalities, fostering a more inclusive and equitable workplace.

Community Impact Assessment: Data analytics can be used to assess the social impact of business operations, identify opportunities for community engagement, and support local initiatives.

Ethical Supply Chain Management: Data analytics can help companies track and monitor their supply chains for ethical practices, ensuring fair labor conditions and responsible sourcing.

Benefits of Incorporating Data Analytics

Adopting data analytics for sustainability offers numerous benefits:

- 1. Improved environmental performance:** Reduced emissions, energy consumption, and waste generation.
- 2. Enhanced resource efficiency:** Optimized resource utilization and reduced reliance on unsustainable practices.
- 3. Increased profitability:** Cost savings through resource optimization, reduced waste, and improved operational efficiency.
- 4. Enhanced brand reputation:** Demonstrating commitment to sustainability and attracting environmentally conscious customers.
- 5. Competitive advantage:** Gaining a competitive edge by implementing innovative and data- driven sustainability strategies.

Challenges and Opportunities

Despite its potential, the implementation of data analytics for sustainability also presents challenges:

- 1. Data quality and availability:** Ensuring access to accurate, consistent, and reliable data.
- 2. Data analysis expertise:** Building a team with the skills and knowledge to effectively analyze and interpret data.
- 3. Data privacy and security:** Protecting sensitive data and ensuring compliance with privacy regulations.
- 4. Integration with existing systems:** Integrating data analytics tools with existing business systems and processes.
- 5. Cost of implementation:** Investing in the necessary infrastructure, software, and expertise.

6. Data Quality and Integrity: Ensuring the accuracy and completeness of data is crucial for effective data analytics.

7. Data Privacy and Security: Handling data responsibly and ethically is essential to maintain Trust and comply with regulations.

8. Integration and Collaboration: Effective use of data analytics requires collaboration between different department sands take holders.

Skill Development: Building a workforce with the necessary data analytics skills is essential for successful implementation.

Conclusion

Data analytics is a crucial tool for businesses seeking to embrace sustainable practices. By leveraging data insights, companies can identify areas for improvement, optimize their operations, and minimize their environmental impact. While challenges exist, the benefits of integrating data analytics into sustainability strategies are significant, contributing to a more sustainable and profitable future for businesses and the planet.

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To Study Process Of Entrepreneurship Development And Factors Affecting Entrepreneurship

¹Miss.N.S. Waghmare, ²Dr.P.T. Pawar

¹Research Student

Research Center-Shivaji Mahavidyalay Renapur

²Shivaji Mahavidyalay Renapur

Abstract: -

Entrepreneurs play an important role in the development of any economy. For the development of a country, we need to promote entrepreneurs. Entrepreneurship is characterized by the process of recognizing opportunities to build a new product, service, or process and finding necessary resources to exploit the opportunity and improving the lifestyle of people. This can be accomplished as an individual or as a team. Effective entrepreneurs are characterized by traits such as creativity, innovativeness, proactivity, and risk propensity. The efficiency of entrepreneurial teams is influenced by various factors such as team member characteristics, team leadership, demographic and informational diversity. Entrepreneurial teams are most benefited in a context of strong interpersonal bonds and shared goals. For the development of an entrepreneur there is a specific procedure, because traditional thought is that "Entrepreneurs are born, we cannot create an entrepreneur." But with the help of modern methods and technology we can create entrepreneurs and also after becoming a successful entrepreneur they may also be affected by several direct and indirect factors and this paper flashes the torch on it.

Key Words: -Entrepreneurs, Entrepreneurship, Innovation, Creativity, etc.

Introduction: -

Entrepreneurship is a full-time job which requires dedication and hard work. Entrepreneurs are innovators. They are owners, producers, market creators, decision takers and risk takers.

Entrepreneurs are referred to as fourth 'Factor of Production' along with the other factors such as Land, labour and capital. They generate employment opportunities so they are the backbone of Nation's economic progress. They play a very important role in the development of any country.

The concept of entrepreneur varies from industry to industry, country to country as well as from time to time.

Economists never had a consistent definition of "entrepreneur" or "entrepreneurship". The word "entrepreneur" comes from the French verb *entreprendre*, it means "to undertake".

An entrepreneur is "a person who starts a business and is willing to risk loss in order to make money".

The common keywords 'businesses' and 'risk' are interrelated. If there is no real business or risk, a person cannot be called as an entrepreneur.

Entrepreneurship means the willingness of an individual to start a new business venture by taking risk and managing it in this technology enabled competitive global environment. The entrepreneurs are passionate to innovate, lead, invent or pioneer with a disruptive product or technology.

The size of the business, the type of work involved, the age or the formal education of the entrepreneur etc. does not restrict the entry of the entrepreneur. Similarly, the label of success or failure also does not matter. Entrepreneurship is a purposeful activity of an individual or a group of associated individuals, undertaken to initiate, maintain and aggrandize profit by production and distribution of economic goods and services.

Definition: -

- **Webster dictionary** gives a definition, "An entrepreneur is a person who starts a business and is willing to risk loss in order to make money."
- The **Oxford English Dictionary** defines "an entrepreneur is a person who organizes and operates a business or businesses, taking on greater than normal financial risks in order to do so."

Importance of Entrepreneurship to the Economy of India

Entrepreneurship is important because it improves the standard of living and generate capital. Let us look at some of the reasons for the importance of entrepreneurship.

1. Economic Development by Entrepreneurs:

It shows the importance of entrepreneurship in the best possible way. New products and services produced by entrepreneurs can fuel the economic development of the companies concerned. This is also true for areas that need to support new business.

For example, the boom of IT industries during the 1990s. The industry grew rapidly and it helped many other businesses. Businesses have grown in related sectors, such as call center operations, network repair firms and hardware suppliers.

2. Contribution of Entrepreneurs to National Profit:

Entrepreneurial projects help create fresh wealth. Established companies may remain confined to existing markets and reach a threshold in terms of profits. Better goods, services or technology from businesses enable the development of new markets and the creation of new wealth.

Entrepreneurial projects help create new capital. Better goods, services or technology from businesses enable the development of new markets and the creation of new wealth. Also, higher income in the form of increased jobs and higher tax revenue and expenditure leads to better national income.

So, this importance of entrepreneurship helps in making the national income of a country. The government will use these proceeds to invest in the country.

3. Social Change by Entrepreneurs: -

This importance of entrepreneurship breaks with tradition and reduces reliance on outdated systems by providing unique products and services. This will improve the quality of life. Smartphones and apps have changed working and playing around the world for a more modern case. As more than 5 billion people have mobile devices around the world. Smartphones are not limited to rich countries or people. Technological entrepreneurship will have an extreme, long-lasting effect on the planet as the development of the smartphone industry continues.

4. Creation of Societies

Entrepreneurs often help grow other like-minded people's projects. They also participate to begin something new in the city and provide local organizations that help needy people. Beyond their own projects, this allows further growth. So, this is one of the importance of entrepreneurship.

Some successful entrepreneurs, such as Bill Gates, have used their money to support good causes, from education to public health. The qualities that make a good businessman are the same qualities and lead them to charity.

Characteristics of Entrepreneurship

Entrepreneurship is a process of setting up a new business organization. It is the process whereone decides to build a business career by finding the market options and mobilizing the availableresources. The following are the characteristics of entrepreneurship.

1) Innovation-

Entrepreneurship is an innovation. The introduction of new combination of variousfactors of productions is innovation. A new product arrives in the market, uses new productiontechnology, discovers new source of supply of raw materials and opens a new market for thespecific product. In view of changing taste of consumers from time to time,entrepreneurship focuses on the research and development to produce goods to satisfy the customers.

2) Economic activity-

An entrepreneur produces a new product for the customers as per their needs. He feels the need of this to satisfy human wants and as well in exchange earn a better livelihood. It is a systematically planned activity as per the skills and knowledge of entrepreneur. Hence entrepreneurship is an economic activity.

3) Organization Building-

It is an activity where various factors of production have to be organized. Place utility, time utility, form utility etc. has to be considered to collect them under one roof for new production.

4) Creative activity-

Innovation should have a strong support of creativity. Introducing creativity in producing something new is a big challenge for the entrepreneur. Thus, creativity is an essential part of entrepreneurship.

5) Managerial skill and leadership-

A person who wants to be a successful entrepreneur should have more passion of doing something new than just earning profit. Leadership and managerial skills are the most important facets of entrepreneurship. Other skills can be considered secondary. An entrepreneur must have the ability to lead and manage.

Process of Entrepreneurship Development

In a very general sense, development refers to enhancing an existing potential or asset through the process of learning and application. It is a process of evolving one's skills in a systematic manner. Therefore, same goes for the process of entrepreneurship development. But before we dive headfirst into the process of entrepreneurship development, let us first shed some light upon what the term entrepreneurship development entails.

Entrepreneurship Development

Basically, entrepreneurship development is basically the process of improving the skill set as well as the knowledge of the entrepreneurs. This can be done through various methods such as classroom sessions or training programmes specially designed to increase the entrepreneurial acumen.

Another definition of this term could be the process of enhancing the capacity to develop, manage and organize a business venture while keeping in mind the risks associated with it.

But instead of complicating things with big words and sophisticated terminologies, let us understand it simply. The process of entrepreneurship development is nothing but helping the entrepreneurs develop their skills through training and application of that training. It instils in them the quality of making better decisions in the day to day business activities.

Now that we understand the meaning of entrepreneurship development, let's discuss the process of entrepreneurship development.

1) Training

2) Entrepreneurship Development Programme (EDP)

1) Training:-

The traditional school of thought had been thinking that 'entrepreneurs are born and not made'

where as the modern observation mentions that some entrepreneurs may be born but a large number of them can be made by education and training. Hence, today there is a need of training to produce eligible future entrepreneurs.

Training is a scheme of instructions which is planned, systematic, consistent, pervasive and monitored to measure its effectiveness. It is an integral input of managerial development.

Training broadens the vision of entrepreneurs by providing them suitable opportunities for an interchange of experience within and outside an industry. It builds necessary skills of new entrepreneurs. It imparts knowledge of marketing of goods, production methods, consumer's education etc. Training exposes an entrepreneur to the latest development which can directly or indirectly affects him.

With the help of training there can be minimization of excessive scraps, defective outputs and wastages in the production process. Training helps in improving overall efficiency of an entrepreneur. The process of training helps

an entrepreneur to accept new technology, team spirit, standardization, reduces fatigue, minimizes industrial accidents etc. Some methods of training are lecture method, demonstration method, individual instructions, group instructions, meetings, conferences, seminars, etc.

2) Entrepreneurship Development Programmes (EDP)

An entrepreneurship development programme has been defined as 'a programme designed to help a person in strengthening his entrepreneurial motive and in acquiring skills and capabilities necessary for playing his entrepreneurial role efficiently'.

EDP is a device through which people with latent entrepreneurial traits are identified, motivated to take up new industrial venture, trained in managing the unit and guided in all aspects of starting a venture/an enterprise.

EDP was first introduced in Gujarat in 1970 and was sponsored by the Gujarat Industrial Investment Corporation. The EDP's are based on McClelland's experiments in Kakinada District of Andhra Pradesh where businessmen were provided with motivation and training.

The EDP includes following steps:

- 1) Arrangement of Infrastructure.
- 2) Selection of potential entrepreneur.
- 3) Identification of enterprise.
- 4) Actual training program
- 5) Selection of training personnel.
- 6) Selection of method of training.
- 7) Actual training.
- 8) Monitoring and follow-up.

Objectives of EDP:

The following objectives of EDP are identified.

- 1) To foster entrepreneurial growth in the country.
- 2) Optimum use of available resources.
- 3) Development of backward regions and improving economic status of socially disadvantaged groups.
- 4) Generation of employment opportunities.
- 5) Widening base for small and medium scale industries.

Factors Affecting Entrepreneurship

Entrepreneurship is a human skill, which can be developed. Due to entrepreneurship development, living standards of society can tend to rise, new opportunities of employment can be created and rapid economic and industrial development become possible. There are a number of factors affecting entrepreneurship or motivating entrepreneurs as follows.

1. Individual:-

Entrepreneur is an individual having specific knowledge, skills and efficiency. Any new enterprise is created by an individual or group of individuals. The creativity of an individual encourages him to establish a new enterprise. Creativity consists of innovation, search and research. Personality, social conditions, social support, education and training etc. factors lay an important role for developing such skills and motivate an individual to become an entrepreneur.

2. **Industrial Development:-**
More suitable the industrial environment in a nation, more rapid development of entrepreneurship. More favourable industrial environment is one, where transportation, communication, electricity, labour, water, raw materials etc. are easily available. Such industrial environment by and large affect entrepreneur development.
3. **Social Environment:-**
Social system plays a vital role in social environment. As an individual is born and developed in a family and society, social values, ethical standards, family structure, caste and religious attitudes of social environment affect entrepreneurship development.
4. **Economic Environment:-**
The economy in which enough capital fund is available for establishing an enterprise and market incentives are also available, encourages entrepreneurship development. Banking, education, industrial policy, economic policy, Exim policy interest rate etc. Factors of economic environment affect entrepreneurship development. Thus, economic soundness and free economy motivate entrepreneur development.
5. **Technological Environment: -**
Technology is an art of converting the natural resources into goods and services more beneficial to society. Due to technological development new product, new production process new raw material, new researches are encouraged for modernization.
6. **Political Environment: -**
Government also plays an important role in entrepreneurship development. Due to Globalization, Indian economy has adopted free industrial policy, restrictions on industries have been minimized and MRTP act has been cancelled, which has motivated many entrepreneurs to establish and to develop industries in Indian economy.
7. **Incentives: -**
Incentives are also one of the important factors affecting entrepreneurship. If motivating loans, policies, organizations are developed, it leads to rapid entrepreneurship development.
8. **Profit Making: -**
It is the profit that induces the prospective entrepreneurs to get into the business and start new activities. Profit, therefore, is a factor which induces the entrepreneur to engage and utilize the factors of production and for development.

Conclusion: -

- This chapter provides an overview of entrepreneurship and innovation as it relates to sustainable business.
- The importance of entrepreneurship and innovation also applies to companies that change how they produce products and services.
- Many types of factors affect the entrepreneurship journey but some major factors include Economic Factors, Social Factors, Environmental Factors, Technological Factors, affecting entrepreneurship growth.
- Entrepreneurship Development Programs (EDPs) are crucial for people aiming to start their own businesses, or who are struggling with constant losses in their existing ventures. These programs provide the needed knowledge and skills to run a successful venture, contributing to the economy and job creation.

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Bridging The Bharat Gap: Conquering Challenges In India'S Digital Transformation Journey

Dr. Nayankumar Chamanlal Parmar

Assistant Professor, M.B.Patel College of Education, Sardar Patel University,
VallabhVidyanagar, Anand, Gujarat (India)

Abstract:

India's digital transformation journey, brimming with potential, confronts unique roadblocks. This article explores six key hurdles – uneven infrastructure, digital literacy gaps, cybersecurity threats, talent scarcity, regulatory complexities, and cultural resistance. It proposes solutions tailored to the Indian context, emphasizing the need to bridge the "Bharat Gap" and ensure inclusive digital progress.

Key Words:Digital, Transformation

1. Introduction

India is hurtling towards a digital future. From cashless transactions facilitated by UPI to e-governance initiatives like Aadhaar, digital technologies are transforming Indian life. However, this exciting odyssey faces challenges unlike those encountered by developed nations. A vast, geographically diverse country like India grapples with a unique set of hurdles that threaten to exacerbate the digital divide, creating a "Bharat Gap" – a disparity between urban, well-connected areas and rural, less-developed regions. This gap widens access to crucial digital tools and services, potentially hindering inclusive economic and social progress.

This article delves into six critical challenges specific to the Indian context and proposes potential solutions to bridge this gap and ensure inclusive digital progress. The first hurdle is uneven infrastructure. Stark disparities in internet penetration, particularly in rural areas with limited access to high-speed internet, hinder digital adoption. Accelerating government initiatives like "BharatNet" aiming to provide broadband connectivity to villages and fostering public-private partnerships can bridge this gap.

The second challenge is the digital literacy gap. A significant portion of the population, particularly in rural regions and among older demographics, lacks the basic skills required to navigate the digital world. Investing in digital literacy programs delivered through local community centers and NGOs can address this. Additionally, developing content in vernacular languages can promote digital inclusion by making technology more accessible and relatable.

2. Uneven Infrastructure

India races towards a digital future, a landscape painted with cashless transactions and e-governance initiatives. Yet, beneath this vibrant image lurks a shadow – the "Bharat Gap." This chasm separates urban India, buzzing with connectivity, from vast rural regions where internet access remains a distant dream. Here, the stark disparity in infrastructure acts as a formidable barrier, hindering digital adoption and leaving a significant portion of the population behind.

Imagine a farmer in a remote village. He toils under the sun, yearning for real-time market prices or weather forecasts that could optimize his harvest. But the internet, a crucial tool for such information, remains elusive. This lack of access isn't just an inconvenience; it's a roadblock to progress. It limits his ability to make informed decisions, restricts his participation in the digital economy, and widens the economic gap between rural and urban India.

The problem goes beyond mere availability. Even in areas with some internet connectivity, the quality is often unreliable and sluggish. This makes even basic online tasks, like video conferencing or accessing educational videos, a frustrating endeavor. Compounding the issue is the cost. For many rural families, with limited incomes, affording internet access, along with the necessary devices like smartphones and laptops, becomes a luxury they can't afford.

The consequences of uneven infrastructure are far-reaching. It throttles economic opportunities. Rural businesses struggle to expand their reach without online platforms and marketplaces. Farmers miss out on vital information

and learning opportunities crucial for optimizing their yields. Students in rural schools lack access to the wealth of online resources readily available to their urban counterparts, creating an uneven playing field in education. This digital exclusion extends beyond economic disadvantage, leading to social isolation and a sense of being left behind. Social media and online communication tools, vital for staying connected, become inaccessible, further widening the social divide.

Bridging the infrastructure gap is not just about connecting cables; it's about connecting people to a future filled with opportunity. By addressing this challenge, India can empower its rural population, unlock their immense potential, and create a digital future that is truly inclusive. The journey towards a digitally connected India requires overcoming this hurdle and ensuring that the benefits of technology reach every corner of the nation.

3. Digital Literacy Gap

India's digital transformation, while brimming with potential, confronts a significant roadblock – the digital literacy gap. A substantial portion of the population, particularly in rural areas and among older demographics, lacks the fundamental skills required to navigate the complexities of the digital world. This gap acts as a wall, separating them from the opportunities and benefits technology offers. Imagine a grandmother in a rural village receiving a new smartphone from her city-dwelling grandchild. Excited about staying connected, she fumbles with the unfamiliar device, the icons and menus a confusing labyrinth. The fear of making a mistake or breaking the device holds her back from exploring its potential. This scenario is a reality for millions in India. Understanding basic functions like downloading apps, sending messages, or using online services seems daunting without proper guidance.

The digital literacy gap has far-reaching consequences. It limits access to crucial government services. Benefits programs or social welfare schemes may require online applications, leaving those lacking the necessary skills excluded. Similarly, accessing healthcare information online or using telemedicine services becomes impossible. Financial inclusion also takes a hit, as digital literacy is essential for utilizing online banking facilities or mobile wallets, potentially perpetuating financial dependence on traditional methods. Education is another area deeply impacted. Online learning platforms and educational resources offer immense benefits, but without the ability to navigate them, students are left behind. This is particularly concerning in rural areas where access to quality education may already be limited. The digital divide widens the learning gap, creating an uneven playing field for students.

Bridging this literacy gap requires a multi-pronged approach. Investing in digital literacy programs tailored to different needs is crucial. Local community centers and NGOs can play a vital role in offering basic computer and internet skills training. These programs should be conducted in vernacular languages to overcome language barriers and foster a sense of familiarity. Technology itself can be a bridge. Developing user-friendly interfaces and applications designed for first-time users can make technology more accessible. Additionally, promoting digital literacy campaigns that showcase the benefits and applications of technology can help overcome apprehension and encourage exploration.

By addressing the digital literacy gap, India can unlock the true potential of its digital transformation journey. Empowering its citizens with the necessary skills will ensure that everyone can participate in the digital economy, access vital services, and reap the benefits of technology, paving the way for a more inclusive and equitable future.

4. Cybersecurity Threats

India's digital transformation, a force of progress and empowerment, carries an unforeseen hitchhiker: a surge in cybersecurity threats. As India's digital footprint expands, encompassing everything from cashless transactions to online governance, it becomes a more inviting target for malicious actors in the digital world. These threats lurk like unseen predators, waiting to exploit vulnerabilities and wreak havoc. Imagine a small business owner in a bustling Indian city, proud of his newly launched e-commerce website. However, his joy is short-lived when a cyberattack cripples his website, stealing customer data and disrupting his operations. This vulnerability, unfortunately, isn't a unique case. From large corporations to individual users, India's growing dependence on digital platforms makes it susceptible to a range of cyber threats. These include phishing scams designed to steal sensitive information, ransomware attacks that lock down data until a ransom is paid, and malware that can wreak havoc on computer systems.

The consequences of such attacks can be devastating. Financial losses, reputational damage, and even national security breaches are potential ramifications. The leaking of sensitive information, like personal data or government records, can erode public trust in digital systems, potentially hindering further digital adoption. To combat this growing threat, a multi-layered defense is necessary. Strengthening cybersecurity infrastructure is crucial. This involves investing in robust security systems, firewalls, and data encryption technologies to fortify digital defenses. Additionally, enacting robust data protection laws that mandate secure data storage and user privacy is essential. However, technology is only half the battle. Promoting cyber hygiene awareness campaigns is vital. Educating individuals and businesses about online safety practices, like strong password management and recognizing phishing scams, empowers them to become active participants in their own cybersecurity.

By recognizing the growing shadow of cyber threats and taking proactive measures, India can ensure a safer digital environment. A robust cybersecurity system will not only protect its citizens and businesses but also foster trust and confidence in the digital future, allowing India to reap the full benefits of technological advancements.

5. Talent Crunch

India's digital revolution, a chariot hurtling towards a future of innovation, faces a critical roadblock: a talent crunch. The journey demands a skilled workforce, individuals equipped with the technical expertise to navigate the complexities of the digital landscape. However, the current education system struggles to keep pace with the rapidly evolving digital landscape, creating a gap between the skills employers seek and the skills graduates possess. Imagine a bustling IT company in Bangalore, on the constant lookout for talented programmers. Despite an abundance of graduates, the company struggles to find individuals with the specific skillsets required for cutting-edge digital projects. This scenario highlights the disconnect between education and industry needs. Traditional curriculums may not adequately address the ever-evolving skillsets demanded by the digital age. Skills like data analysis, cloud computing, and cybersecurity are crucial but may not be readily integrated into existing educational programs.

The ramifications of this talent crunch are far-reaching. It can stifle innovation and hinder the growth of digital businesses. Without a readily available pool of skilled professionals, companies struggle to keep pace with technological advancements. This can lead to missed opportunities and a competitive disadvantage in the global digital marketplace. Bridging this talent gap requires a two-pronged approach. Revamping education systems to integrate digital skills training at all levels is crucial. This involves incorporating courses in coding, data analysis, and digital marketing into existing curriculums. Additionally, fostering stronger collaboration between educational institutions and the IT industry can ensure that educational programs remain relevant and aligned with current industry needs.

Education is a long-term solution. To address the immediate need for skilled workers, encouraging reskilling and upskilling initiatives for the existing workforce is essential. Offering training programs that equip professionals with the latest digital skills can bridge the current gap. Additionally, promoting a culture of lifelong learning will ensure that the workforce remains adaptable and prepared for the constant evolution of the digital world. By addressing the talent crunch, India can fuel its digital ambitions. A skilled workforce will not only propel innovation but also enable the nation to compete effectively on the global digital stage. The journey towards a digitally empowered India requires investing in its human capital, nurturing a generation of tech-savvy professionals ready to shape the nation's digital future.

6. Navigating Regulations

India's digital transformation, a vibrant tapestry woven with innovation and opportunity, faces a hidden complexity: the ever-evolving regulatory landscape. While regulations are essential for ensuring consumer protection and fair play in the digital space, their complexity can act as a stumbling block for businesses, particularly those new to the digital arena. Imagine a young entrepreneur brimming with ideas for a revolutionary new app. However, as he delves into the legalities, a maze of regulations – data privacy laws, e-commerce guidelines, and content moderation policies – threatens to overwhelm him. The sheer volume and complexity of these regulations can stifle innovation and deter potential entrants from venturing into the digital marketplace.

The consequences of a convoluted regulatory landscape are multifaceted. It can discourage new businesses from entering the digital space, hindering competition and innovation. Established businesses, too, may struggle to keep

pace with the changing regulations, leading to operational roadblocks and potential compliance issues. This can stifle the overall growth of the digital economy and limit the potential benefits for consumers. To navigate this complex terrain, a more streamlined approach is necessary. Increasing transparency around regulations is crucial. Businesses need clear and easily accessible guidelines outlining compliance requirements. Additionally, simplifying regulations and reducing duplication can ease the burden on businesses, allowing them to focus on innovation and growth.

However, clarity is only half the battle. Promoting open dialogue between regulators and businesses can foster a collaborative environment. Regular consultations and workshops can help ensure that regulations are not only effective but also practical and supportive of a thriving digital ecosystem. By working together, regulators and businesses can create a framework that fosters innovation while safeguarding consumer interests. This, in turn, will pave the way for a more vibrant and inclusive digital future for India.

7. Cultural Resistance

India's digital revolution, a bullock cart on a high-speed highway, faces a curious hurdle: the inertia of tradition. While some embrace the whirlwind of change, others, particularly in rural areas or older generations, cling to familiar ways. This cultural resistance, a subconscious tug towards the tried and true, can act as a brake pad on digital adoption.

Imagine a village elder, respected for his wisdom and knowledge of the land. He watches with a furrowed brow as his grandson navigates the glowing screen of a smartphone. The concept of online banking or shopping on a website seems alien, a world fraught with uncertainty. This hesitancy, a product of a lifetime spent relying on established methods, is a common thread in communities where tradition holds sway. The consequences of cultural resistance can be far-reaching. It can create a digital divide, leaving those hesitant to adopt technology behind. Without access to online services, government initiatives, or educational resources, they risk being marginalized in an increasingly digital world. This can exacerbate existing social and economic inequalities.

Bridging this cultural gap requires a delicate touch. Forceful imposition of technology will only breed further resistance. Instead, the focus should be on fostering a culture of digital empowerment. Community outreach programs, conducted in local languages, can showcase the practical benefits of technology in a familiar context. Highlighting success stories of individuals who have leveraged technology to improve their lives can inspire others to overcome their apprehension. The key lies in demonstrating how technology can complement, not replace, tradition. Imagine a farmer using a weather app to optimize his harvest or a village elder connecting with his children abroad via video call. Technology, when presented as a tool for progress rather than a threat to tradition, can become a bridge to a brighter future.

Hence, by acknowledging and addressing cultural resistance, India can ensure that its digital transformation journey is truly inclusive. Empowering its people, not just technologically, but also culturally, will pave the way for a future where tradition and technology coexist in harmony.

8. Conclusion

Bridging the "Bharat Gap" necessitates a multi-pronged approach. By addressing infrastructure disparity, digital literacy gaps, cybersecurity concerns, talent shortages, complex regulations, and cultural resistance, India can ensure inclusive and sustainable digital transformation. This transformation holds the power to unlock immense economic growth and social progress, propelling India towards a truly digital future.

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Understanding the Investment Behavior of Women Investors in Palghar

¹Mitali Suryakant Sankhe, ²Aparna Prakash Kulkarni

¹Assistant Professor - BMS – St Pauls College for Women

²Assistant Professor – BMS -Thakur Shyamnarayan Degree College

Abstract

Financial empowerment is a cornerstone of modern economic independence, and investing is pivotal in achieving this empowerment. In the context of Palghar, a region witnessing rapid socio-economic changes, the investment behavior of women presents a fascinating area of study. As a demographic often underrepresented in financial discourse, women investors in Palghar offer unique insights into the dynamics of financial decision-making within emerging markets

Using a quantitative approach, this paper employs surveys to gather demographic data, investment preferences, risk tolerance levels, and factors influencing investment decisions. This study uses primary data collected through a modified questionnaire from 100 women investors based in Palghar.

The study reveals that many women investors in Palghar, mostly from younger age groups and working-class backgrounds, favor investments like gold and mutual funds. They tend to be cautious about the stock market due to perceived risks.

The research aims to inform financial institutions and policymakers to tailor products and services for women investors in Palghar. Additionally, it seeks to advance our understanding of investment behavior, facilitating informed decisions for savings and investment in personal finance.

Key Words: Investment, Women Investors, Investment Avenues, and Financial Inclusion.

Introduction

In developing economies such as India, cultivating a savings culture holds significant implications for both individual financial security and broader societal advancement. Traditionally confined to domestic spheres, women have progressively diversified their roles, engaging in income-generating endeavors alongside household duties. This evolving dynamic underscores an emerging consciousness among women regarding the intrinsic value of saving, regardless of their occupational status.

Moreover, non-working women exhibit resourcefulness in augmenting their savings through various channels, including familial support structures and earnings from agricultural endeavors.

An in-depth comprehension of semi-rural women's savings behaviors and investment literacy is imperative for devising targeted interventions aimed at enhancing their financial resilience and empowerment. The integration of such insights into policymaking frameworks holds promise for fostering an inclusive financial ecosystem conducive to sustainable development and prosperity.

Literature Review

Dipti Periwal, & Dr. Reshma Nair. (2024). explored how financial literacy, behavioral biases, and investment decisions intersect among 197 working women in Mumbai. It finds that financial behavior, attitude, and regret aversion mediate the relationship between financial literacy and investment choices. Positive associations exist between financial literacy and financial behavior, attitude, and investment decisions, but a negative correlation is noted with regret aversion.

Devi and Anitha (2023) examined the investment behavior of working women in Chengalpattu. They found that investment habits differed based on factors such as financial status, safety concerns, tax benefits, and associated risks. Both public and private sector employees were knowledgeable about investment opportunities. Additionally, there was a correlation between working women's investment amounts and their annual income. Their investments were primarily directed towards retirement, emergencies, tax advantages, and their children's education.

Umair B et.al (2022) - explored the investment behavior of female entrepreneurs in the evolving competitive

market. The findings indicated that these entrepreneurs tend to prioritize savings in long-term funds, banks, or mutual funds. However, due to limited timing or knowledge, they refrain from investing in other areas.

Rekha G & Vishnupriya R, (2022) investigated investment awareness, patterns, and influencing factors among working women in Coimbatore city. Analyzing data from 148 respondents, they discovered that investment in children's education ranked highest in influence. Additionally, they observed significant differences in investment factors across various occupational groups among the participants.

Asandimitra (2019) emphasized that working women, particularly those with advanced financial literacy, are motivated to invest due to concerns regarding retirement and family security. The research underscored the significance of financial knowledge, mindset, and personal objectives in shaping the investment behavior of employed individuals.

Kaur J & Arora N, (2018) examined the perceptions of 150 investors regarding mutual funds as an investment option in Punjab. Their findings revealed investors' preference for mutual fund investments, driven by the potential for higher returns offered by growth fund schemes. Furthermore, the study highlighted the individualized nature of each investor's goals for mutual fund investment.

Vyakhyata S (2018) conducted a study to assess the investment preferences and socioeconomic backgrounds of employed women. The research revealed that women employed in the private sector significantly contribute to economic activities. Among them, investing in post office savings was perceived as the safest option, while commodities were regarded as less secure investments.

Research Gap

Previous research has predominantly focused on the investment behavior of women and the gender gap in venture funding on a global or national scale. However, a research void exists concerning the personal investment behavior and decisions of individual women investors at the local level, particularly in semi-urban and rural areas like Palghar. This gap is significant as local cultural, economic, and educational factors may uniquely influence the investment patterns and opportunities available to women in these areas, which may differ markedly from those in urban centers. Understanding these localized investment behaviors can provide valuable insights for creating targeted financial literacy programs and investment opportunities that cater specifically to the needs and constraints of women investors in Palghar.

Problem Statement

This study aims to explore the underlying factors that influence the investment behavior of women investors in Palghar. Despite the increasing participation of women in the economic sphere, there remains a significant knowledge gap in understanding the distinctive investment patterns, preferences, and constraints faced by women in this region. The research will investigate how socio-economic, cultural, and educational backgrounds shape the investment decisions of women investors, and which behavioral biases and risk appetites are prevalent among them. It seeks to address the lack of comprehensive data regarding the investment strategies adopted by women in Palghar and aims to contribute to the formulation of informed policies that support the financial empowerment of women in the region.

Objectives of the research

- To find out the various investment portfolios opted by women in Palghar.
- To examine the influencing factors for investment decisions.
- To understand the role of financial literacy in shaping investment behavior among women.
- To determine the level of risk tolerance among women investors in Palghar.
- To identify any barriers or challenges faced by women in accessing and managing investment opportunities.
- To explore the potential for empowering women through tailored financial education and investment support programs.

Research Methodology

Research Design

Research design is a structured plan for guiding a research study. It's all about seeking knowledge. Research involves discovering new facts or confirming existing ones by using scientific methods on natural or social phenomena.

Sampling Technique - Probability sampling is used for this research paper and respondents are randomly selected especially those who are within the area of Palghar District Region and are hence selected for primary data collection.

Source of data - Primary data - In this paper, primary data were mainly collected through surveys using a detailed structured questionnaire. Secondary data - In this paper, secondary data was obtained from various textbooks, registers, magazines, and journals.

Structure of Questionnaire - A well-structured questionnaire is used for this research paper which includes multiple choice questions and closed-ended questions.

Sample Size - A sample of 100 respondents both male and female were selected.

Tools Used - An Independent sample t-test was used **Sampling Unit** – The sampling unit is Palghar Women.

Hypothesis 1

HO - There is no significant relationship between educational qualification and the likelihood of seeking a financial advisor among individuals in Palghar.

H1 – There is a significant relationship between educational qualification and the likelihood of seeking a financial advisor among individuals in Palghar.

Independent Samples T-Test ▼

Independent Samples T-Test			
	t	df	p
What is your educational qualification?	3.694	98	< .001

Note. Student's t-test.

Based on the results of the independent sample t-test ($t = 3.694$, $df = 98$, $p < .001$), we reject the null hypothesis. This indicates that there is a statistically significant relationship between educational qualification and the likelihood of seeking a financial advisor among individuals in Palghar. In other words, the level of education appears to influence the decision to seek financial advice.

Hypothesis 2

HO – There is no relationship between higher levels of education and risk tolerance among women in Palghar

H1 - There is a relationship between higher levels of education and risk tolerance among women in Palghar

Independent Samples T-Test

Independent Samples T-Test			
	t	df	p
What is your educational qualification?	-2.679	98	0.009

Note. Student's t-test.

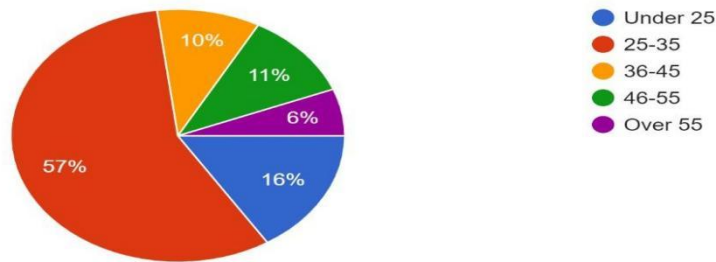
Based on the data from the t-test ($T = -2.679$, $DF = 98$, and $p = 0.009$), we reject the null hypothesis (HO) and accept the alternative hypothesis (H1). This indicates that there is indeed a relationship between higher levels of education and risk tolerance among women in Palghar. Specifically, the negative T-value suggests that as levels of education increase, risk tolerance tends to decrease among women in Palghar.

The low p-value ($p = 0.009$) indicates that this relationship is statistically significant. Therefore, higher education levels may influence women in Palghar to exhibit lower risk tolerance in their financial decision-making processes.

Data Analysis and Findings

Figure 1

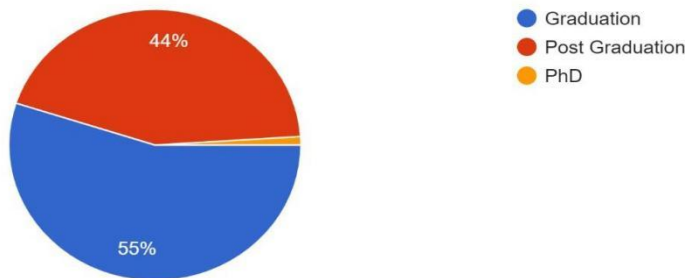
How old are you?
100 responses



The analysis highlights a peak demographic between ages 25-35, representing 57% of the sample. Conversely, those under 25 make up 16%, while the 36-45 and 46-55 age groups each constitute 10% and 11% respectively. Individuals over 55 are the smallest segment at 6%. This emphasizes the dominance of the 25-35 age bracket, possibly influenced by broader population trends or sampling biases.

Figure 2

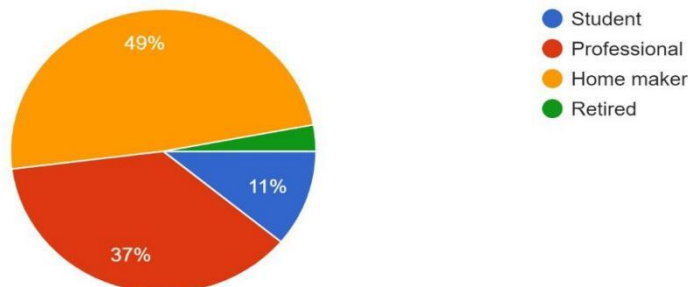
What is your educational qualification?
100 responses



The analysis indicates that 55% have a graduation degree, 44% have completed post-graduation, and only 1% hold a PhD.

Figure 3

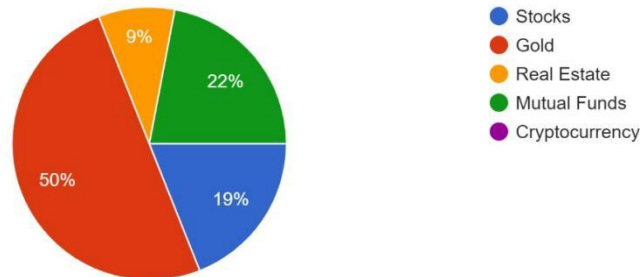
What is your current occupation?
100 responses



Occupationally, 49% are homemakers, 37% are professionals, 11% are students and 3% are retired.

Figure 4

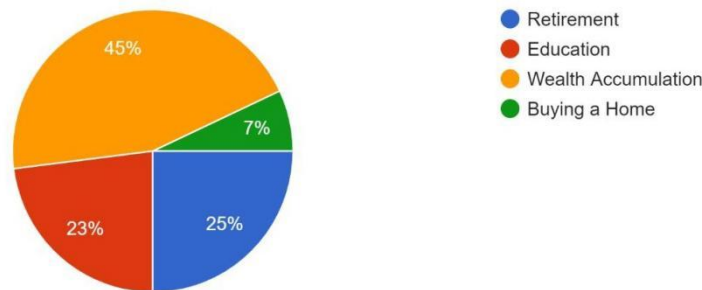
What type of investments do you prefer the most
100 responses



Within Palghar, women demonstrate distinct investment preferences, with 50% favoring gold, 22% opting for mutual funds, and 9% showing interest in real estate, showcasing a varied investment landscape.

Figure 5

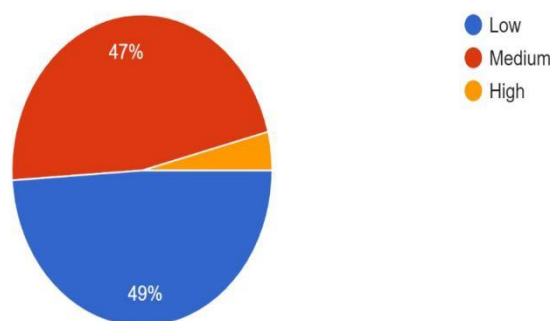
What is your primary investment goal?
100 responses



The data analysis reveals that among respondents, 45% prioritize wealth accumulation as their primary investment goal, followed by 25% focusing on retirement planning. Additionally, 23% emphasize investments in education, while only 7% aim to invest in buying a home, indicating diverse financial priorities among participants.

Figure 6

How would you rate your risk tolerance when it comes to investments?
100 responses



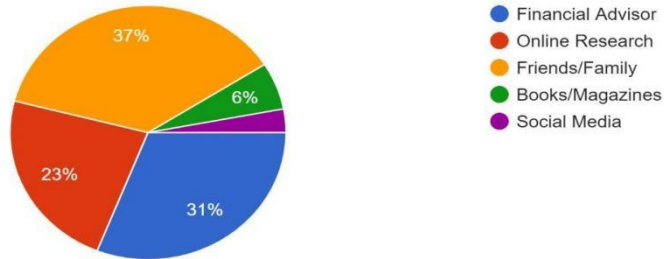
The data analysis highlights that the majority of investors exhibit a low-risk tolerance, comprising 49% of respondents, followed closely by 47% with a medium-risk tolerance. Conversely, only a small fraction, 4%,

demonstrate a high tolerance for investment risk, reflecting varying attitudes towards risk management among participants.

Figure 7

What sources do you use for investment advice?

100 responses

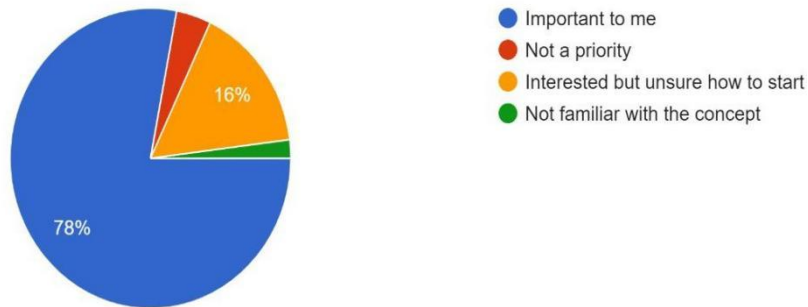


In seeking investment advice, respondents predominantly rely on friends and family, constituting 37%, followed by financial advisors at 31%. Additionally, 23% opt for online research, while only a small percentage resort to books and magazines (6%) or social media (3%), indicating diverse sources of financial guidance among participants.

Figure 8

What are your thoughts on sustainable or socially responsible investing?

100 responses

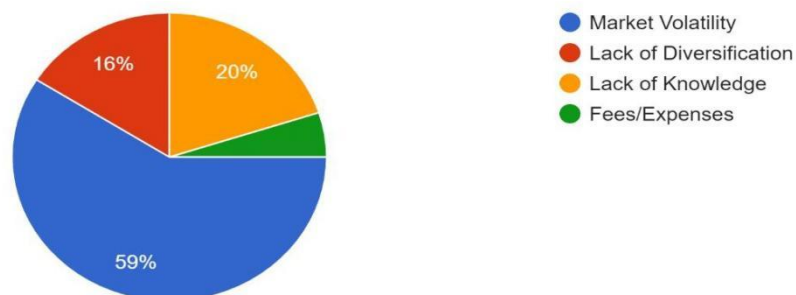


The data reveals a strong inclination towards sustainable or socially responsible investing, with 78% expressing its importance. Furthermore, 16% are interested but uncertain how to commence, while only 4% do not prioritize it, and 2% are unfamiliar with the concept, indicating a growing awareness and interest in ethical investment practices among respondents.

Figure 09

What are your biggest concerns when it comes to investing?

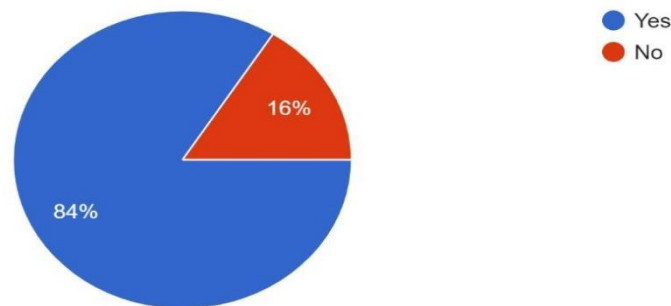
100 responses



When investing, 59% of respondents express concerns about market volatility, followed by 20% who cite a lack of knowledge, while 16% worry about a lack of diversification. Additionally, only 5% express concerns regarding fees or expenses, indicating a predominant focus on market-related risks and the importance of knowledge in investment decision-making.

Figure 10

Do you have a financial advisor to help with your investment decisions?
100 responses



Among respondents, 84% have enlisted the services of a financial advisor, while 16% have not, showcasing a significant reliance on financial guidance in investment decision-making.

Conclusion

In conclusion, this study sheds light on the investment behavior of women in Palghar, a region experiencing rapid socio-economic transformations. It reveals that women investors in Palghar, particularly from younger age groups and working-class backgrounds, show preferences for investments such as gold and mutual funds while demonstrating caution towards the stock market. These findings underscore the need for financial institutions and policymakers to develop tailored products and services to cater to the unique needs of women investors in Palghar. Furthermore, the study contributes to our understanding of investment behavior, facilitating informed decision-making in personal finance. Suggestions stemming from this research include the development of targeted financial literacy programs and the provision of accessible investment platforms tailored to the preferences and risk tolerances of women investors in emerging markets like Palghar.

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Investment In Human Capital: Effects Of Training & Development Practices

Ms. Nutan Vasant Ladi

M.com , NET , MPHIL

Assistant Professor in NES Ratnam College of Arts,
Science & Commerce, Bhandup (west), Mumbai.

Abstract

In any organization environment training & development is inter linked for the firm activities, increase participation to both individual and group performance. To improve and stand to a level of competitiveness towards the content of training & development which goes hand in hand to share a role that is referred to as “Human Capital. This research paper studied to evaluate the models, skill development program which is contributing to hinder the effectiveness in improving employee performance towards efficiency, productivity and profitability. The study adopt a qualitative case study approach, methods include semi-structured interviews with program participants, trainers, and key stakeholders, as well as document analysis of training materials and performance metrics. The qualitative data& quantitative data will be analyzed using thematic analysis techniques to identify key themes and patterns related to the effectiveness of the program. Researcher gathered the data by selecting a non-random convenience sampling technique with the ease of accessible survey based structure of 30 IT professionals, 50 HR managers , 20 automobiles employees ,20 construction industry, 20 from electronic sectors ,50 manufacturing sectors, 30 Hospital HR Managers and 30 bankers. In visualisation, research study insights into the designs, styles of training and development program's structure and execution, highlighting its advantages and shortcomings result in betterment of growth and measurement of the program is regarded to affect employee skills, growth in human capital productivity, resources allocation, leadership support and profitability.

Introduction :

Human Capital states the information regarding education, knowledge, innovation. Equality, productivity, economic growth, improvements, effective communication, coordination, competitive goals, achievement, measurement , analysis, commitment, overall performance to participate which all will lead to economic growth .

In any organization environment training & development is inter linked for the firm activities, increase participation to both individual and group performance. To improve and stand to a level of competitiveness the content of training & development goes hand in hand to share a role that is referred to as “Human Capital”.Peprah and Ganu (2018) postulate that human capital affects organizational culture, structure and impact positively on organizational sustainability

Training is the process of preparing people for upcoming responsibilities and tasks. The purpose of training and development is to create innovation in their learning work activities, the workers can carry out their responsibilities effectively through value addition, achievement in their self- growth. It carries out the self-assessment to find out the loop hole while carrying out the work and can improve thereon .This measureable performance will derive good training & development I their work and shall increase organizational overall development .

According to the research conducted by Nda and Fard (2013), TD plays a crucial role in improving employee and organizational efficiency. Training helps to enhance employee effectiveness within the organization by encouraging their initiative and elevating the quality of their work. ..

Organization gives the necessary tools to put the given information and expertise practices with the goal of improving employers to receive information from training and show their performance, productivity, the standard of human resource development. Human capital is knowledge-based, intellectual capital, practices of intellectual and innovation performance by enhancing structural and relational capital.

The human capital is highly related to HRA and the techniques to value human resources. The human capital structure consists of different types of employees employed in an organization. The types of employees involved in any firm as clerical, supervisor skilled and semi -skilled workers which requires help to provide training to up skill their knowledge and to play role in the development of any organization .so in this context, it's very necessary to conduct training and to assess the pattern of HRA information in an organization.

The success of any organization depends upon the efficiency and caliber of the people. Moreover, it's difficult to find a competent, knowledgeable, efficient, skills experienced, creativity of work and highly motivated people to work in an organization. Thus, Organizations must learn to recognize their human assets along with other assets.

Definition :

Human capital “According to Glaveli&Karassavidou (2011), the company’s human resources erve as synergistic element to put it on the path to success. Although each HR strategy is important for advancing a company’s workforce, training plays the most important role in creating a company’s assets, known as Human capital.

According to Hung (2010), training & development are questionably intended to improve work productivity. The National Economic and Development office reported that the rate of training in high performing companies is 8.9 days/ employees/ annually as opposed to 2.8 days/ employee/ annually of those corporates whose output is minimal. It seems highly regarded enterprises make significant investments in training and developing employees (Garner, 2012)

The contribution of training and development in evolving Human resources into Human capital (Gusdrof, 2009) for integrating a culture of teamwork, excellence and lifelong learning (Patron, peters And Quintas, 2005) in the business world has been highlighted in transforming business doctrines and an augmented organizational magnification.

Social Capital:

Relationships of two kinds are included in social capital: internal relationships among coworkers and external relationships with stakeholders . Intergroup and interpersonal interactions are the two categories into which Çavuş and Gökçen divide internal relationships, while interorganizational relationships make up external relationships. McCallum and O'Connell defined social capital as relational qualities including self-management, trust, network coordination, and social awareness. These are examples of traits of both human and social capital. Four factors were used by Hsu and Fang to measure social capital: an organization's ability to develop in its market, its consumers, its long-term connections with strong suppliers, and its strategic partnerships.

Practices for Employee Development (EDPs)

Four characteristics of staff development techniques have been identified by researchers: career management, training, duty delegation, and decision-making involvement. The moderating effect of market-oriented staff development strategies on organizational and employee performance has also been mentioned. Three aspects of employee development strategies have been used by other researchers: empowerment, informal coaching, and employee training. The literature also discusses work rotation, on-the-job training, and tuition reimbursement as additional aspects of EDP. Additionally, four categories of approaches to employee development have been identified by researchers: job experience, formal education, interpersonal interactions, and assessment.

EDP's effects on Human Capital

The literature has long demonstrated the link between employee training and human capital. It has been discovered that skill-enhancing HR strategies, such as staff development and training, significantly affect human capital .Yang and Lin noted that intellectual capital acted as a mediator in the relationship between organizational performance and HR activities (training and development, recruitment and selection, performance appraisal, compensation, and health and safety).

Rationale of the study:

Employee abilities, expertise, attitudes, and dedication are collectively referred to as human capital, which is considered a crucial corporate asset. Since the concept of human capital is closely linked to employee knowledge, skills, talent, and experiences, it may be justified as a major source of strategy renewal and innovation. Innovation is a creative process, and an organization is deemed innovative if it possesses this ability. A company's capacity for creativity increases with the number of innovations it can develop and apply. Intellectual assets (codified organizational knowledge) and human capitals (tacit employee knowledge) are the two categories into which a firm's intellectual capital can be separated. Four factors were used by Hsu and Fang to quantify human capital: employee capabilities, employee empowerment, successful training initiatives, and employee proactivity.

The three main categories of human resource activities are opportunity-enhancing, skill-enhancing, and motivation-enhancing. Recruitment, selection, and training of new hires are examples of skill-enhancing HR practices; performance reviews and employee incentives are examples of motivation-enhancing practices; and information sharing and employee involvement in decision-making are examples of opportunity- or empowerment-enhancing practices. Studies have shown that decision-making, training, delegating, and career management are all aspects of employee development methods. Thus, through training, empowerment, and involvement, employee development techniques can be defined as actions intended to give workers new information, enhance their abilities, and increase their willingness to work. So, there is a need to evaluate all the aspects of training & development practices in Indian IT sectors, Education Sectors, Banking sectors, Construction sectors, manufacturing sectors, automobiles sector, electronic sectors, transport industry, hospitals, etc. The purpose of this study is to raise a person's general task-related competencies and improve long run organisational success.

Objectives :

1. To evaluate the design and implementation of training and development
2. To assess the perceived impact of the program on employee skill development and knowledge enhancement.
3. To analyse the extent to which the program contributes in improving employee performance and productivity
4. To explore the organisational factors that facilitate or hinder the effectiveness of training & development initiatives
5. To provide recommendations for investment in training & development programs to maximize their profitability

Research Hypothesis:

To achieve the objectives of the study, following hypothesis will be considered:

1. H₀₁: there is no significant impact of program on employee performance and productivity
2. H₀₂: there is no explore of the organisational factors that facilitate or hinder the effectiveness of training & development initiatives
3. H₀₃: There is no perception towards design and implementation of training & development programs for employee practices.
4. H₀₄: There is no measurement in calculating the profitability towards the organisational growth

Research Methodology :

This study has adopted a qualitative case study approach, focusing on a specific organization that has implemented a training and development program aimed at enhancing human capital. Data collection methods will include semi-structured interviews with program participants, trainers, and key stakeholders, as well as document analysis of training materials and performance metrics. The qualitative data analyzed using thematic analysis techniques to identify key themes and patterns related to the effectiveness of the program.

The **sample size** of the studied from various sectors, such as IT sectors, Education Sectors, Banking sectors, Construction sectors, Manufacturing sectors, Automobiles sector, Electronic sectors, transport industry, Hospitals

Data collection & Analysis :

For this study, both Primary and secondary data will be taken into consideration on Information and communications technology and various other factors related to employee satisfaction survey. A non-random technique called convenience sampling is employed to satisfy particular requirements, like participants' availability at a particular time or ease of accessible. Analysis done through statistical tools and presentation tools.

Findings & Interpretation

1. Insights into the designs, styles training and development program's structure and execution, highlighting its advantages and shortcomings.
2. Knowledge of how the program is regarded to affect employee skill growth, improvement of knowledge, and total human capital.

3. Determining the organizational elements—such as resource allocation, organizational culture, and leadership support—that affect how effective training and development programs are.

Suggestions :

Suggestions for improving training and development program designs, Models and execution must be done to the training employees to optimize their efficacy in augmenting human capital and get the knowledge mastery in their work will lead to the organisational and economic scale to achieve higher returns on the money invested in training & development

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A Study Of Digital Transformation For Social Impact

Dr. Ausekar Kalyani Dattatraya

Assistant Professor,
Dayanand College of Commerce, Latur

Abstract

Digital transformation (DT) is the process of adoption and implementation of digital technology by an organization in order to create new or modify existing products, services and operations by the means of translating business processes into a digital format. The goal for its implementation is to increase value through innovation, invention, improved customer experience and efficiency

Digital Transformation (DT) is often perceived as a reactive measure to address customer demands, competition, and regulatory compliance. However, DT can be a proactive opportunity for organizations to achieve sustainable business practices and facilitate a circular economy. By building sensing, smart, sustainable, and social capabilities, enterprises can capture valuable information, make faster and smarter decisions, and adapt to changing environments.

In this paper we study about digital transformation for social impact. Though digital transformation has provided for massive connectivity across the country, however, those yet to be connected remain cut off from the benefits of the new era and remain further behind. These people mostly include women, the elderly, and persons with disabilities.

Keywords- Digital transformation, technology, society, impact

A.) Introduction

Digital technologies have advanced more rapidly than any innovation in the past- reaching around 50 percent of the developing world's population in only two decades. India itself has been on a digital-first trajectory for a few years. With recent developments in technology and an increase in smartphone penetration, the way we address issues in the social impact sector has drastically changed.

Digital Transformation begins with using new technology in a strategic way. This means understanding, implementing, and maximizing the use of digital processes. These processes involve the convergence of information technology and actual devices. Data, comprised of computer bits, can talk to physical entities. They talk back through sensors connected to cloud computing. This convergence challenges conventional manufacturing methods, but it also sparks digital innovation and promotes fundamental organizational change

Digital transformation may start with using technology, but it endures through societal response. Customer choices are sending a clear message to industry and to the research environment about the direction of the market: competitive advantage depends upon embracing digitalization.

B.) Definition Of Digital Transformation

According to Deloitte,

“Digital transformation is all about becoming a digital enterprise—an organization that uses technology to continuously evolve all aspects of its business models (what it offers, how it interacts with customers and how it operates).”

C.) Objectives Of The Study

The main objectives of the study are as follows.

1. To study what is the concept of Digital Transformation.
2. To study digital transformation impact on society.

3. To study application of digital transformation system to society.

D). Methodology Of Study

The data which is collected in this paper is secondary in nature. In this paper exploratory or descriptive method is used. The data is collected from various journals, newspapers, research papers, magazines, books, and use of internet.

E). Significance Of The Study

The main significant of the study is study the concept of Digital Transformation. as well as digital transformation impact on society .

F). Limitations Of The Study

In this study the original data is not used. Here only secondary data is used. Time limitation is one of the major limitations of this study.

G.)Digital Transformation For Social Impact

Whether a company sells directly to consumers or engages in a business-to-business (B2B) business model, individual end-users influence digital transformation. B2B digital transformation serves as a model for traditional companies struggling with navigating the digital age.

1.Societal Perception and Digital Transformation

Digital transformation rests upon four pillars, according to a paper published in IEEE Software. These four concepts serve as the underpinnings for a successful digital transformation strategy:

1. **Customer experience transformation:** Understanding a customer's needs and behaviors, upgrading the customer's experience, and automating sales processes
2. **Business process transformation:** Digitalization, supporting employees' tasks, and integrating analytics into performance management
3. **Business model transformation:** Incorporating organizational modifications, establishing new digital services, and planning digital international expansion
4. **Organizational transformation:** Integrating a digital strategy, creating new organizational structures, and acquiring and developing talent to help implement the digital transformation journey

2.Digital Transformation and Societal Perceptions of Value

Smart products—refrigerators, watches, even home gyms—collect data and share information with the parent company through IoT. The collection of this data is just the first step in the implementation of a digital transformation strategy.

Next, information moves upstream for analysis. All of these bits feedback into machine learning systems, which integrate and analyze data from all of a company's smart products. These patterns not only predict maintenance or other potential problems with a customer's product but also aid in prototype design.

Through IoT, the end-users and the manufacturer work together to customize the user experience. This provides value to the customer as well as a competitive advantage for businesses, inexorably connecting business and society.

3.Digital Transformation and the New Sales Model

A business leader understands consumer behaviors and expectations. Consumers expect an increasingly personal customer experience when interacting directly with businesses. A digital platform that addresses these needs upgrades the customer experience.

Businesses gain a competitive advantage from embracing this value proposition. For example, companies can provide end users a customized digital platform online, a specialized app, or automated kiosks at a physical location.

The digitalization of sales processes provides specialized reports concerning customer visits and a deeply personalized customer experience. At the same time, consumers expect privacy and protection of their personal information.

A comprehensive digital information strategy involves a company's sales force as well as the consumer. A company's digital transformation, thus, also involves the acquisition and training of talent.

Within a culture that embraces digital transformation, businesses can support their existing employees too. For example, a bank can familiarize its staff with new digital interfaces that improve the customer experience. In the manufacturing sector, workers can learn how to manage smart machines that communicate through IoT technology with the company's data repository in the cloud.

4.A Culture of Collaboration

Digital transformation blurs traditional boundaries. Information moves up and down the value chain and is becoming accessible to all stakeholders. Ultimately, a successful digital transformation strategy depends on fundamental change: for governments, businesses, academia, and the population at large to embrace a culture of collaboration. An ecosystem of innovation awaits.

G.) Application Of Digital Transformation For Society

As we continue to fight the Covid-19 pandemic, rapid digitalization has enabled the social impact sector to adapt to the new normal- remote data collection. This has been possible only because of the dramatic digital transformation in the country i.e., mobile connectivity and declining data costs that have dramatically spurred internet usage.

Digital technologies such as data pooling and Artificial intelligence are used to track and diagnose issues in agriculture, health, and the environment. Many NGOs, research organisations, and public policy institutions use National surveys like National Family Health Survey (NFHS), Annual Health Surveys (AHS), National Sample Survey (NSS), and Census to understand the prevalence of different health, livelihood, and wellness indicators across gender, age, location, religion, and caste. Oxfam India provides for one such example of data pooling- they used the NFHS-3 and NFHS-4 to create a deeper understanding of various aspects of domestic violence in the country, which further provided for evidence-based policy recommendations.

Mid-day meal distribution by Akshaya Patra Foundation is one of the best examples of using digital tools in achieving a large-scale social impact in our country. According to Social Cops Blog, They have been able to use big data analytics to minimize the transportation costs through efficient route allocation for distribution of food to about 2 million children across 10 states in India. They also use a data driven feedback from these children to ensure a high-quality meal every day.

There are some recent and emerging technology developments in survey research as well. These include Computer Assisted Telephonic Interviewing (CATI) and Computer Assisted Self Interviewing (CASI) methods using audio and video for collecting data. These developments are already having profound effects on survey data collection.

Educate Girls in Rajasthan has been able to retain 2,40,000 girl children in school. This was enabled through continuous collection and monitoring of data on attendance, learning outcomes and using mobile based tools. Another NGO which used technology to its power is the Swades Foundation in Raighad district of Maharashtra- by tracking every individual and household's livelihood, health, and education status through mobile based data collection tools, they have been able to effectively mobilize resources to create a sustainable impact.

H.) Findings

We can say that the development sector in the nation is realising the power of data and digital tools in improving work efficiency and cutting costs to make a long-lasting impact in society. One can expect the newer technological advancements like wireless applications and portable digital devices to offer many opportunities to expand the way we think of survey data collection, increasing the ways we can interact with survey respondents and expanding the range of stimulus material that can be used.

While digital technologies can make our world fairer, more peaceful, and just, they can also threaten privacy, erode security, and fuel inequality. These people mostly include women, the elderly, and persons with disabilities. While remote data collection is here to stay, some of its challenges are hard to overlook- difficulty in measuring anthropometric indicators, non-responsiveness, respondent fatigue, building rapport with the respondents, to name a few.

I.) Conclusion

one can say that technologies that are built and embedded in almost all aspects of our lives can change society for the greater good if used and handled wisely. Data breaching in the social impact sector can lead to an unveiling of a lot of sensitive information without consent and is something this sector needs to take care of. Though digital transformation has provided for massive connectivity across the country, however, those yet to be connected remain cut off from the benefits of the new era and remain further behind.

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Exploring The Impact Of Sustainable Practices On The Preservation Of Cultural Heritage Sites In Assam'S Tourism Industry

Chandan Jyoti Bezborah

Research Scholar

Department of Travel & Tourism Management,
The Assam Royal Global University

Abstract

The northeastern state of Assam is renowned for its vibrant cultural heritage and ecological diversity and stands at a crossroads of development and conservation. Its growing tourism industry, fueled by an increasing influx of visitors eager to explore its historical treasures and natural wonders, poses a unique challenge: how to sustainably manage this influx while safeguarding the very assets that draw people to the region. This research delves into the complex interplay between sustainable practices and the preservation of Assam's cultural heritage sites within the context of its evolving tourism landscape.

Central to this endeavour is a multifaceted analysis of sustainability, spanning environmental, socio-cultural, and economic dimensions. Through a critical examination of existing practices and policies, the research aims to identify the key sustainability issues facing Assam's cultural tourism sector. It interrogates the environmental ramifications of burgeoning visitor numbers, probing into questions of waste management, habitat conservation, and resource depletion. Likewise, it delves into the socio-cultural dynamics at play, exploring the impacts of tourism on local communities, indigenous traditions, and cultural landscapes.

This research represents a clarion call to action - a call to transcend the traditional boundaries separating tourism development from heritage conservation and forge a new paradigm rooted in sustainability. It is a testament to the belief that by harnessing the transformative power of tourism for the greater good, we can not only safeguard Assam's cultural treasures but also cultivate a legacy of stewardship that reverberates far beyond its borders.

Keywords: Assam, Cultural Tourism, Sustainability, Heritage Preservation, Sustainable Practices.

1. Introduction

1.1 Overview of Assam's cultural heritage and tourism industry

Nestled in the northeastern region of India, Assam is a land of unparalleled cultural richness and natural splendour. Its cultural heritage is as diverse as its landscape, encompassing a tapestry of traditions, languages, and ethnicities. From the majestic Brahmaputra River winding its way through lush plains to the mist-covered hills of the Eastern Himalayas, Assam's geographical diversity has shaped its cultural mosaic over millennia.

At the heart of Assam's cultural heritage are its people, whose vibrant traditions and customs reflect the region's rich historical tapestry. The state is home to numerous indigenous communities, each with its own unique cultural practices, festivals, and art forms. From the colourful Bihu dance celebrating the harvest season to the intricate handloom weaves of the Assamese silk Mekhela Chadors, every aspect of life in Assam is infused with cultural significance.

One of the most iconic symbols of Assam's cultural heritage is its array of ancient monuments and historical landmarks. From the awe-inspiring temples of Sivasagar, built by the Ahom dynasty in the medieval period, to the UNESCO World Heritage-listed Kaziranga National Park, home to the world's largest population of one-horned rhinoceroses, Assam's heritage sites are a testament to its storied past and ecological wealth.

Against this backdrop of cultural richness, Assam's tourism industry has emerged as a vital engine of economic growth and cultural exchange. The state's tourism offerings span a wide spectrum, catering to diverse interests ranging from wildlife enthusiasts and adventure seekers to history buffs and spiritual pilgrims. Visitors flock to Assam to explore its pristine national parks, cruise along its scenic rivers, and immerse themselves in its vibrant festivals and traditions.

However, the rapid growth of tourism in Assam has also brought with it a host of challenges. Pressures on the environment, strain on infrastructure, and the commodification of culture are just some of the issues confronting the sustainable development of the tourism sector. As Assam seeks to strike a delicate balance between promoting tourism and preserving its cultural heritage, the need for sustainable practices and responsible tourism becomes increasingly paramount.

1.2 Importance of Cultural Tourism for Economic Development and Heritage Preservation

Cultural tourism serves as a powerful catalyst for economic development and heritage preservation in Assam, playing a pivotal role in fostering sustainable livelihoods, promoting local industries, and safeguarding cultural assets for future generations.

1.2.1 Economic Impacts:

Cultural tourism contributes significantly to Assam's economy by generating revenue, creating employment opportunities, and stimulating investment in infrastructure development. The influx of tourists fuels the demand for goods and services, ranging from accommodation and transportation to handicrafts and culinary experiences. Small-scale entrepreneurs and artisans, in particular, benefit from the tourism value chain, as visitors seek authentic cultural experiences and locally made souvenirs. Moreover, tourism-related activities such as guided tours, cultural performances, and heritage conservation projects generate income for communities living in proximity to tourist sites, thereby fostering inclusive economic growth.

1.2.2 Heritage Preservation:

Cultural tourism serves as a powerful incentive for the preservation and maintenance of Assam's cultural heritage sites. Recognizing the economic potential of their cultural assets, local communities and government authorities are incentivized to invest in the restoration, conservation, and interpretation of historical monuments, archaeological sites, and traditional art forms. By showcasing Assam's rich cultural heritage to visitors, tourism creates a sense of pride and ownership among local stakeholders, fostering a collective commitment to safeguarding these treasures for future generations. Furthermore, revenue generated from tourism can be earmarked for heritage conservation projects, providing sustainable funding sources for ongoing maintenance and preservation efforts.

1.2.3 Promotion of Cultural Exchange:

Cultural tourism serves as a bridge between diverse communities, fostering cross-cultural understanding, dialogue, and exchange. As visitors immerse themselves in Assam's cultural traditions, they gain insights into the region's history, beliefs, and values, fostering mutual respect and appreciation for cultural diversity. Moreover, tourism provides opportunities for cultural practitioners, such as artisans, musicians, and storytellers, to share their traditions with a global audience, preserving intangible cultural heritage while promoting intercultural dialogue. By promoting cultural exchange and collaboration, tourism not only enriches the visitor experience but also strengthens social cohesion and promotes peace and understanding.

1.3 Research Objectives

1. To assess the current state of cultural tourism in Assam and identify key sustainability challenges
2. To examine the impact of sustainable practices on the preservation of cultural heritage sites in Assam
3. To propose strategies for integrating sustainable practices into Assam's cultural tourism industry

1.4 Research Methodology

A qualitative and ethnographic approach is adopted to gain a comprehensive understanding of the multifaceted dynamics of the Cultural Heritage sites of the state along with the various sustainable practices in preserving those sites. Qualitative research methods allow for in-depth exploration and interpretation of subjective experiences, perspectives, and meanings associated with cultural heritage and tourism.

2. Literature Review

Cultural tourism and sustainability are multifaceted concepts that intersect at the nexus of heritage preservation, economic development, and environmental conservation. To contextualize the discourse surrounding sustainable

cultural tourism in Assam, it is imperative to elucidate the fundamental definitions and theoretical underpinnings of these constructs.

Cultural tourism, as defined by Richards (2001), refers to travel undertaken to experience the cultural heritage of a destination, including its tangible and intangible assets such as historical sites, monuments, rituals, and traditions. This form of tourism not only enriches the visitor experience but also plays a pivotal role in promoting cross-cultural understanding and fostering social cohesion (Richards & Munsters, 2010).

Sustainability, on the other hand, embodies a holistic approach to development that seeks to meet the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). Within the context of tourism, sustainability encompasses environmental conservation, socio-cultural integrity, and economic viability (UNWTO, 2019). Sustainable tourism practices aim to minimize negative impacts on the environment, respect local cultures and traditions, and distribute economic benefits equitably among stakeholders (UNWTO, 2005).

A plethora of research has been conducted on the intersection of sustainable tourism practices and cultural heritage preservation. Studies by Gössling et al. (2012) and Hall (2010) have highlighted the potential of sustainable tourism to mitigate environmental degradation and promote biodiversity conservation in ecologically sensitive areas. Similarly, research by Timothy and Nyaupane (2009) underscores the importance of community involvement and stakeholder collaboration in ensuring the sustainability of tourism development initiatives, particularly in culturally significant destinations.

Also, numerous case studies from around the globe provide valuable insights into successful strategies and challenges encountered in the implementation of sustainable cultural tourism practices. For instance, the community-based tourism initiatives in Bhutan, as documented by Jamtsho (2016), exemplify how the principles of sustainability can be integrated into tourism planning and management to preserve cultural heritage and empower local communities. Conversely, studies by Garrod and Fyall (2000) have identified challenges such as over-tourism, cultural commodification, and inadequate infrastructure as impediments to sustainable cultural tourism development.

3. Cultural Tourism in Assam

Cultural tourism in Assam has deep roots that trace back centuries, entwined with the region's rich history, diverse communities, and vibrant traditions. This section provides a comprehensive examination of the historical evolution of cultural tourism in Assam, an analysis of its popular cultural heritage sites, and an exploration of the current trends and challenges facing its development.

3.1 Historical Overview:

Assam's cultural heritage is a tapestry woven from the threads of its indigenous communities, dynastic rulers, and diverse religious influences. The region's strategic location along ancient trade routes facilitated cultural exchanges with neighbouring kingdoms and empires, leaving an indelible mark on its heritage landscape.

The Ahom dynasty, which ruled Assam for over six centuries (from the 13th to the 19th century), played a pivotal role in shaping the region's cultural identity. Under Ahom's patronage, Assam witnessed a flourishing of art, architecture, and religious practices, with notable monuments such as the Sivasagar temples and the Rang Ghar pavilion serving as enduring symbols of Ahom grandeur.

In addition to the rich tapestry of cultural influences that shaped Assam's heritage, the region is also deeply rooted in Neo-Vaishnavism, a religious and cultural movement that emerged during the Bhakti movement in medieval India. Neo-Vaishnavism, founded by the saint-scholar Srimanta Sankardev in the 15th century, transformed Assam's socio-religious landscape and laid the foundation for the establishment of Sattras, monastic institutions that became centres of art, education, and spiritual practice.

Sankardev's teachings emphasized devotion (bhakti) to Lord Krishna and advocated for social reform, religious harmony, and cultural revitalization. The Sattras, which served as hubs of Neo-Vaishnavite learning and dissemination, played a pivotal role in promoting his philosophy and preserving Assam's cultural heritage.

These Sattras, located across Assam, served as repositories of art, literature, and performing arts, nurturing traditional crafts such as mask-making, pottery, and weaving. Moreover, they provided platforms for cultural expression through music, dance, and theatre, with annual festivals and religious ceremonies drawing devotees and tourists alike.

Today, the Sattras continue to be vibrant centres of cultural activity, attracting visitors seeking spiritual solace and cultural immersion. The preservation of Neo-Vaishnavite traditions and the legacy of Srimanta Sankardeva are a testament to Assam's enduring cultural heritage and the resilience of its people in safeguarding their religious and artistic legacy amidst changing times.

The colonial era also brought further transformations to Assam's cultural landscape, as British administrators introduced Western education, infrastructure, and governance systems to the region. The legacy of British colonialism is evident in the architectural landmarks of Assam's colonial towns, such as the quaint hill station of Haflong and the tea estates of Jorhat and Dibrugarh, which continue to attract heritage enthusiasts and nostalgia seekers alike.

Table: 3.1 A chronological overview of the historical development of cultural tourism sites in Assam

Period	Key Events
Ancient Era	Establishment of ancient pilgrimage sites such as Kamakhya Temple
Medieval Era	The rise of the Ahom dynasty and the construction of architectural marvels like the Sivasagar temples. Also, the establishment of Neo-Vaishnavism and Sattras.
Colonial Period	Introduction of Western education and infrastructure; establishment of tea estates and hill stations
Post-Independence	Development of tourism infrastructure and promotion of cultural festivals and heritage sites

Source: *Researcher's Adoption from Literature Review*

3.2 Analysis of Popular Cultural Heritage Sites:

Assam boasts a wealth of cultural heritage sites that reflect its rich tapestry of traditions, religions, and architectural styles. Among the most iconic landmarks is the Kamakhya Temple, dedicated to the goddess Kamakhya and revered as one of the most important Shakti Peethas in Hindu mythology. Perched atop the Nilachal Hill overlooking the Brahmaputra River, the temple attracts pilgrims and tourists from far and wide, especially during the annual Ambubachi Mela festival.

Another jewel in Assam's crown is the Kaziranga National Park, a UNESCO World Heritage site and a global hotspot for biodiversity conservation. Home to the world's largest population of one-horned rhinoceroses, as well as tigers, elephants, and myriad bird species, Kaziranga offers visitors a unique opportunity to immerse themselves in Assam's natural heritage while supporting conservation efforts.

Majuli, the world's largest river island, is yet another cultural gem nestled in the Brahmaputra's embrace. Renowned for its Neo-Vaishnavite monasteries (Sattras), traditional mask-making workshops, and vibrant dance and music traditions, Majuli offers visitors a glimpse into Assam's spiritual and artistic heritage.

3.3 Current Trends and Challenges:

Despite its rich cultural heritage and natural beauty, Assam faces numerous challenges in developing its cultural tourism sector sustainably. Rapid urbanization, encroachment on historical sites, and inadequate infrastructure pose threats to the preservation of Assam's cultural heritage. Moreover, socio-political tensions and security concerns in certain regions have hindered tourist access to culturally significant areas.

The COVID-19 pandemic has dealt a severe blow to Assam's tourism industry, with travel restrictions and lockdown measures stifling visitor arrivals and economic activity. As the tourism sector grapples with the aftermath of the pandemic, there is an urgent need to reevaluate strategies for promoting cultural tourism in Assam while ensuring the safety and well-being of local communities and visitors alike.

Cultural tourism in Assam is a multifaceted phenomenon shaped by historical legacies, natural landscapes, and contemporary challenges. By harnessing its cultural heritage as a driver of sustainable development, Assam has the potential to showcase its rich tapestry of traditions while safeguarding its precious heritage for future generations.

4. Sustainable Practices for Cultural Heritage Preservation

Preserving the cultural heritage of Assam while promoting tourism necessitates the adoption of sustainable practices that ensure the long-term integrity of its historical sites, natural landscapes, and traditional communities. This section explores three key dimensions of sustainability—environmental, socio-cultural, and economic—and delineates strategies for integrating these principles into Assam's cultural tourism industry.

4.1 Environmental Sustainability:

Environmental sustainability lies at the heart of cultural heritage preservation, as Assam's historical sites and natural landscapes are intrinsically linked to its ecological health. Minimizing the ecological footprint of tourism activities is imperative to mitigate adverse impacts such as habitat degradation, pollution, and biodiversity loss. One approach involves implementing carrying capacity assessments to determine the maximum number of visitors a site can sustainably accommodate without compromising its ecological integrity.

Additionally, waste management measures, such as recycling, composting, and waste reduction initiatives, can minimize the environmental impact of tourist activities. Promoting sustainable transportation options, such as cycling, walking tours, and eco-friendly vehicles, can reduce carbon emissions and alleviate pressure on fragile ecosystems.

Conservation of natural resources, including water, energy, and biodiversity, is also paramount. Implementing energy-efficient practices, such as using renewable energy sources and energy-efficient lighting, can reduce the carbon footprint of tourist facilities. Moreover, enforcing regulations to protect biodiversity hotspots and sensitive habitats, such as Kaziranga National Park and the Brahmaputra River basin, is essential for maintaining ecological balance.

4.2 Socio-Cultural Sustainability:

Socio-cultural sustainability entails fostering meaningful engagement with local communities, respecting their cultural heritage, and promoting intercultural exchange. Community involvement in tourism planning and decision-making processes is crucial to ensure that their voices are heard and their interests are represented. This can be achieved through participatory approaches, such as community-based tourism initiatives and stakeholder consultations, which empower communities to take ownership of tourism development.

Cultural sensitivity and heritage education programs can enhance visitors' understanding and appreciation of Assam's cultural heritage, fostering respect for local customs, traditions, and sacred sites. Interpretation centres, guided tours led by local experts, and immersive cultural experiences, such as homestays and artisan workshops, can provide authentic insights into Assam's diverse cultural tapestry.

4.3 Economic Sustainability:

Economic sustainability entails balancing the economic benefits of tourism with the costs of heritage conservation and community development. Assam's cultural tourism industry should strive to maximize local economic linkages and promote value-added products and services that benefit local communities. This can be achieved through initiatives such as community-based tourism enterprises, fair trade partnerships with artisans and producers, and destination marketing campaigns that highlight the unique cultural offerings of Assam.

Also, diversifying tourism products and experiences beyond mainstream attractions can distribute tourist spending more equitably across the region. Supporting micro-enterprises, cultural festivals, and heritage trails in rural and remote areas can stimulate local economies and reduce dependence on a few iconic sites. Additionally, investing in tourism infrastructure and capacity-building programs can enhance the competitiveness of Assam's tourism industry while creating employment opportunities and improving standards of living in host communities.

Integrating environmental, socio-cultural, and economic sustainability principles into Assam's cultural tourism industry is essential for preserving its rich cultural heritage while ensuring the well-being of local communities and

ecosystems. By adopting a holistic approach to sustainable tourism development, Assam can harness the transformative power of tourism to foster inclusive growth, promote cultural exchange, and safeguard its cultural and natural legacy for future generations.

5. Case Studies on the implementation of sustainable tourism practices in Assam's cultural heritage sites

Here, we delve into two illuminating case studies that highlight the implementation of sustainable tourism practices in Assam's cultural heritage sites. Through an in-depth analysis of these case studies, we glean insights into the challenges, successes, and lessons learned in promoting sustainability within the tourism sector.

Case Study 1: Implementation of Sustainable Tourism Practices at Kaziranga National Park

Kaziranga National Park, a UNESCO World Heritage Site located in the heart of Assam, is renowned for its rich biodiversity, including the iconic one-horned rhinoceros. However, the park faces numerous challenges, including habitat degradation, poaching, and human-wildlife conflict. To address these issues, the park authorities have implemented a range of sustainable tourism practices aimed at conserving biodiversity while promoting visitor experiences.

One key initiative is the implementation of controlled visitor access and carrying capacity management. By limiting the number of vehicles and visitors allowed in the park at any given time, the authorities minimize disturbance to wildlife habitats and reduce the risk of over-tourism. Additionally, the park offers guided safari tours led by trained naturalists, providing visitors with educational insights into the park's ecology and conservation efforts.

Kaziranga National Park has also pioneered community-based conservation initiatives that empower local communities to participate in tourism management and benefit from conservation efforts. Through partnerships with neighbouring villages, the park authorities have established eco-development committees and provided training in eco-tourism activities such as nature-guiding handicraft production, and homestay accommodations. These initiatives not only generate alternative livelihoods for local communities but also foster a sense of stewardship and ownership over the park's conservation.

Case Study 2: Community-based Ecotourism Initiatives in Majuli Island

Majuli, the world's largest inhabited river island located in the Brahmaputra River, is a cultural and spiritual hub of Assam, renowned for its Neo-Vaishnavite monasteries (Sattras), traditional arts, and festivals. However, the island faces threats from erosion, climate change, and unsustainable tourism practices. In response, local communities and non-profit organizations have spearheaded community-based ecotourism initiatives aimed at promoting sustainable development while conserving Majuli's cultural and natural heritage.

One such initiative is the establishment of homestay accommodations and cultural immersion experiences, where visitors can stay with local families, participate in traditional activities such as pottery making and mask crafting, and learn about the island's unique cultural traditions. These initiatives not only provide economic opportunities for local households but also foster cultural exchange and mutual understanding between visitors and hosts.

Community-led conservation efforts have been instrumental in protecting Majuli's fragile ecosystem and biodiversity. Local youth groups and environmental organizations have initiated tree plantation drives, riverbank erosion control measures, and wetland conservation projects to mitigate the impacts of erosion and climate change. Moreover, awareness campaigns and educational programs on environmental conservation and sustainable tourism practices have been conducted to engage residents and visitors in conservation efforts.

5.1 Lessons Learned and Best Practices

Through these case studies, several key lessons and best practices emerge for promoting sustainable tourism in Assam's cultural heritage sites:

5.1.1 Community Engagement: Engaging local communities as partners in tourism planning and management is essential for ensuring the success and sustainability of tourism initiatives. Empowering communities to participate in decision-making processes and benefit from tourism revenues fosters a sense of ownership and responsibility for conservation efforts.

5.1.2 Education and Interpretation: Providing educational opportunities for visitors and residents to learn about the cultural and natural significance of heritage sites fosters appreciation and respect for these resources. Interpretive programs, guided tours, and interactive exhibits can enhance visitor experiences and promote conservation values.

5.1.3 Balancing Conservation and Visitor Experience: Implementing carrying capacity limits, visitor management strategies, and zoning regulations can help mitigate the impacts of tourism on fragile ecosystems while providing meaningful and enjoyable experiences for visitors.

6. Proposed Strategies for Sustainable Cultural Tourism in Assam

As Assam seeks to navigate the delicate balance between cultural tourism development and heritage preservation, it is imperative to formulate robust strategies that prioritize sustainability at every stage of tourism planning and management. This section outlines three key strategies aimed at fostering sustainable cultural tourism in Assam: policy recommendations, capacity-building initiatives, and promotion of responsible tourism practices.

6.1 Policy Recommendations

Policy frameworks play a pivotal role in shaping the trajectory of tourism development and conservation efforts. In Assam, there is a pressing need for policy interventions that prioritize sustainability, cultural preservation, and community engagement. One key recommendation is the formulation of comprehensive tourism development plans that integrate environmental, socio-cultural, and economic considerations. These plans should delineate clear objectives, strategies, and mechanisms for monitoring and evaluation, ensuring that tourism development aligns with broader sustainability goals.

Additionally, regulatory mechanisms, such as zoning regulations, carrying capacity limits, and environmental impact assessments, should be enforced to safeguard cultural heritage sites and natural landscapes from over-exploitation and degradation. Moreover, incentives and support mechanisms should be provided to encourage private sector investment in sustainable tourism infrastructure and enterprises, such as eco-lodges, community-based tourism initiatives, and heritage conservation projects.

6.2 Capacity Building and Training Programs

Building the capacity of local communities, tourism operators, and government agencies is essential for implementing sustainable tourism practices effectively. Capacity-building initiatives should focus on enhancing skills and knowledge in areas such as environmental conservation, cultural heritage management, community-based tourism planning, and sustainable business practices. Training programs, workshops, and seminars can provide stakeholders with practical tools and strategies for integrating sustainability principles into their operations.

Fostering partnerships and collaboration among diverse stakeholders, including government agencies, non-profit organizations, academia, and the private sector, can facilitate knowledge sharing, resource mobilization, and collective action towards common sustainability goals. Public-private partnerships, in particular, can leverage the strengths and resources of both sectors to drive innovation, investment, and inclusive growth in the tourism industry.

6.3 Promotion of Responsible Tourism Practices

Promoting responsible tourism practices among visitors is crucial for minimizing negative impacts on cultural heritage sites, natural environments, and local communities. Education and awareness campaigns should be launched to raise awareness about the importance of cultural sensitivity, environmental conservation, and ethical behaviour among tourists. Informational materials, interpretive signage, and visitor centres can provide visitors with guidelines and information on sustainable tourism practices, local customs, and conservation initiatives.

Moreover, certification programs, such as eco-tourism certifications and sustainable tourism labels, can help consumers identify and support tourism businesses that adhere to sustainability standards and best practices. By incentivizing responsible behaviour and rewarding environmentally and socially responsible tourism operators, these programs can create market demand for sustainable tourism products and services.

By implementing these proposed strategies, Assam can harness the transformative power of tourism to promote cultural preservation, environmental conservation, and socio-economic development. Through policy interventions,

capacity-building initiatives, and the promotion of responsible tourism practices, Assam can chart a path towards a more sustainable and inclusive tourism future, where cultural heritage is cherished, communities thrive, and nature flourishes.

7. Conclusion

In the pursuit of balancing tourism development with cultural heritage preservation, Assam stands at a critical juncture where sustainability principles must guide future endeavours. This conclusion synthesizes key findings, underscores the significance of sustainable practices for Assam's cultural heritage, and outlines future research directions and recommendations for policymakers and stakeholders.

Throughout this research, an array of insights has emerged regarding the intersection of cultural tourism and sustainability in Assam. We have explored the historical evolution of cultural tourism, analyzed popular cultural heritage sites, and examined sustainable practices through case studies. Key findings include the importance of community engagement, the need for policy interventions, and the potential of responsible tourism practices to mitigate negative impacts.

One notable implication is the imperative for a holistic approach to tourism development that integrates environmental, socio-cultural, and economic considerations. By fostering partnerships, empowering communities, and promoting responsible behaviour, Assam can harness the transformative power of tourism to safeguard its cultural heritage for future generations.

Sustainable practices are not merely optional but essential for the long-term preservation of Assam's cultural heritage. The region's cultural treasures, from ancient temples to pristine landscapes, are fragile and susceptible to degradation from unchecked tourism activities. By adopting sustainable practices, Assam can strike a balance between promoting tourism and conserving its cultural and natural assets, ensuring their integrity and resilience for generations to come.

Moreover, sustainable tourism practices can yield numerous benefits beyond conservation, including economic development, social empowerment, and cultural revitalization. By investing in sustainable tourism initiatives, Assam can create inclusive growth opportunities, empower local communities, and foster intercultural exchange and understanding.

Looking ahead, several avenues for future research and action emerge. Firstly, there is a need for continued research to monitor and evaluate the effectiveness of sustainable tourism initiatives in Assam. Longitudinal studies tracking key indicators such as visitor satisfaction, environmental quality, and community well-being can provide valuable insights into the long-term impacts of tourism development.

Secondly, policymakers and stakeholders should prioritize the implementation of sustainable tourism policies and initiatives. This includes strengthening regulatory frameworks, investing in infrastructure, and promoting capacity-building and education programs for tourism stakeholders.

Also, fostering collaboration and knowledge sharing among diverse stakeholders, including government agencies, local communities, academia, and the private sector, is essential for achieving shared sustainability goals. By working together, Assam can leverage its cultural heritage as a driver of sustainable development, prosperity, and resilience.

Sustainable practices are not only imperative for the preservation of Assam's cultural heritage but also hold the key to unlocking the region's full tourism potential. By embracing sustainability as a guiding principle, Assam can chart a course towards a more equitable, resilient, and vibrant tourism future, where cultural heritage is cherished, communities thrive, and nature flourishes.

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Digital Transformation For Social Media: A Catalyst For Achieving Sustainable Development Goals

Sharma D.V

Dayanand College of Commerce, Latur

Abstract

The study examines the connections between digital transformation, open innovation, and sustainability. Despite the growing interest in these concepts among the scientific community, there is a lack of research on how digital transformation promotes open innovation and sustainability. This research aims to analyze the conceptual frameworks of digital transformation, open innovation, and sustainability, and explore the extent to which digital transformation drives sustainability and open innovation. The research follows a three-phase methodology. Firstly, a literature review is conducted to trace the evolution of digital transformation concepts and definitions over the years and establish a typology. Secondly, a scoping review is performed to identify existing literature and determine the underlying principles and conceptual frameworks of digital transformation, open innovation, sustainability, and their interconnections. Lastly, a qualitative content analysis is carried out on the selected literature to address the main research question and sub-questions. The findings of the research lead to the development and validation of a framework illustrating the interconnections between digital transformation, open innovation, and sustainability. It is demonstrated that digital transformation plays a crucial role in enabling and fostering sustainability and open innovation. However, it is important to note that digital transformation can also have negative implications for sustainability, particularly in terms of its environmental impact.

Introduction

Digitalization and computerized alter (DT) have gotten to be a subject of wide conversation among consistent examiners and pros over diverse disciplines. While experts center on the commonsense inclinations and proposals of progressed alter for businesses, the coherent community is successfully searching for to conceptualize the relationship between computerized alter and key zones such as commerce organization, organization, viability, open headway, and other related concepts. Computerized alter (DT) implies to the strategy through which organizations alter their value-creating shapes by joining computerized advancements in reaction to changes inside the exchange environment (Vial, 2019). By getting a handle on computerized alter, organizations can drive headway by getting advanced data and aptitudes, developing collaboration both interior and over businesses, making unused commerce models, and ensuring the viable utilization of organizational resources (Mayakova, 2019, Tabrizi et al., 2019, Armengaud et al., 2017). Other than, progressed change brings approximately social and assistant changes all through the entire organization (Kraus et al., 2021, Singh and Hess, 2017, Hinings et al., 2018, Ivančić et al., 2019, Hanelt et al., 2020, Olsen Ti, 2020, Jones et al., 2021, Fischer et al., 2020, Schneider and Kokshagina, 2021), catalyzing additional changes in organization, HR, and IT capacities interior organizations (Sia et al., 2021, Mergel et al., 2019, Trivedi and Pillai, 2020). Objective To carry out the examine in a efficient way To consider the concepts of progressed alter and open headway.

Objective

- To carry out the research in a systematic manner
- To study the concepts of digital transformation and open innovation.

Methodology

The literature review to conceptualize digital transformation was carried out between November 2021 and January 2022 using Scopus and Web of Science databases for citation search and Google Scholar as an additional source. A systematic search strategy was employed to ensure a balance between sensitivity and specificity, taking into account the limited timeframe and research scope. The initial search focused on publications containing the term "digital transformation" in their title, with a preference for scientific articles in English or Russian.

A total of 54 literature sources were examined, leading to the selection of 27 articles with digital transformation definitions for detailed analysis. Selection criteria were based on the timeframe constraints and the interdisciplinary

nature of digital transformation research across various domains such as technology, IT, business, and organization. The goal of the literature review was to establish a comprehensive terminology for elucidating digital transformation without restricting the research scope by discipline. The authors did not limit the timeframe to identify the first instances of the term "digital transformation." Definitions were categorized, and a typology of definitions, along with other research findings, is presented in subsequent sections of the paper.

In the second phase of the study, a scoping review was conducted to explore the interplay between digital transformation, open innovation, and sustainability, assess the existing literature landscape, and identify knowledge gaps. A scoping review serves as a tool to gauge the extent of coverage in the literature and provide an overview. Additionally, it can shed light on research methodologies employed.

Results

The scientific and industrial communities are increasingly interested in research on digital transformation, with growing attention year after year. This topic garners interest from both academia and businesses in various sectors and industries. The term "digital transformation" first appeared in a journal article titled "Digital Transformations of Time: The Aesthetics of the Internet" by Marlena Corcoran in 1996, as found in the Web of Science database. This article explores the relationship between art and technology in the context of digital transformation, highlighting how new technologies are reshaping the aesthetics of art perception.

Discussion & reviews

According to the literature review, digital transformation is a continuous process facilitated by digital technologies, resulting in specific changes and enhancements. It is a transformative force that impacts the entire organization, influencing the creation and delivery of value, and can also lead to the emergence of new business models and ecosystem operations. The authors have categorized digital transformation into three perspectives - impact, change, and process, as illustrated in Table 1. This typology aligns with previous research, which defines "digital transformation" as encompassing the process, impact, and change brought about by the adoption of new digital technologies (Karekla et al., 2021).

In the current dynamic operational landscape, companies and organizations must embrace agility to survive and achieve sustainable growth. They need to continually respond to customer needs, enhance efficiency, adopt innovative technologies and solutions, refine processes and organizational culture, and both enhance existing products/services and introduce new ones to the market - in other words, they must innovate. Closed innovation is no longer viable, as it restricts research projects to the organization's internal knowledge base, potentially hindering the development of promising initiatives. Internal decision-making processes may impede the progress of certain projects. Conversely, open innovation allows research projects to enter and exit the organization through various channels, leveraging both internal and external knowledge more effectively (Chesbrough, 2012).

Conclusion

In the initial phase of the study, the researchers developed a classification system for digital transformation. In the subsequent phase, they identified the key themes related to the interplay between digital transformation, open innovation, and sustainability. Finally, the theoretical propositions were validated through qualitative content analysis in the third phase.

For companies to be sustainable, they must continuously enhance their performance, efficiency, and productivity, while also offering new products, services, and experiences to their customers. This necessitates innovation. Digital transformation, as an innovative approach, utilizes digital technologies to fundamentally transform how companies operate, meet the needs of their stakeholders, and deliver value and social well-being. It is regarded as a process, a change, and an influence.

Digital transformation has a positive impact on the economic development of both companies and societies. It achieves this by optimizing resource utilization, reducing waste, simplifying and streamlining business processes, and ultimately lowering costs. Additionally, it facilitates the creation of new business models and ecosystems, such as circular economy and cross-industry collaborations, enabling companies to swiftly adapt to evolving market demands. This, in turn, leads to increased revenue generation, economic value, and the cultivation of an innovation-driven culture.

Digital technologies play a pivotal role in enhancing companies' environmental and social performance, as well as improving working conditions, employee well-being, and overall quality of life. Examples of digital transformation's potential in promoting environmental sustainability include energy efficiency monitoring solutions, efficient utilization of water and other resources, and the development of environmentally friendly manufacturing methods and materials using advanced technologies.

In the social realm, digital transformation offers numerous opportunities to enhance various aspects of society.

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A Study On Awareness And Adoption Towards Green Banking Among Bank Customers

Dr. Preety¹, Dr. Dolly Vaish²

^{1,2}Assistant Professor, Faculty of Management & Commerce
Swami Vivekanand Subharti University, Meerut

Abstract

Banks are really important for the economy and the environment. They can help make sure businesses are eco-friendly and socially responsible. Lately, a new idea called "green banking" has been getting popular worldwide. Green banking is all about being environmentally friendly while doing banking stuff. It's also called ethical banking. People care a lot about keeping the environment healthy, so this idea has caught on. Governments, society, workers, and customers all find it interesting. Green banking means using better methods, technology and getting customers to change their habits to help the environment. This study tries to figure out what green banking is all about, level of awareness of bank's customers and what challenges and reasons make customers want to adopt it. We'll look at how aware people are of green banking, what issues come up, and why people decide to go for it.

Keywords: *Green Banking, Challenges, Technology, Awareness, Adoption*

INTRODUCTION

The focus on environmental sustainability within the banking sector has spurred the emergence of Green Banking, a concept that promises mutual benefits for banks, industries and the economy at large. At its core, Green Banking encompasses a range of practices aimed at promoting environmental responsibility and reducing carbon footprints in banking activities.[17][8]

In essence, Green Banking operates much like traditional banking but with a heightened awareness of social and environmental impacts. It involves conducting banking activities while considering the broader implications for both society and the environment. As the 21st century unfolded, banking underwent significant transformations, marked by the adoption of innovative products and services such as ATMs, internet banking, online transfers, debit and credit cards. These innovations not only save time and costs for both banks and customers but also contribute to reduced environmental pollution, particularly through the widespread use of internet-based services.[21][6]

Furthermore, the pursuit of environmental sustainability extends beyond merely minimizing negative impacts on the environment. True sustainability involves developing processes and practices that support long-term, environmentally responsible growth.[21]

PROBLEM OF THE STUDY

Green Banking refers to the practice where financial institutions encourage environmentally sustainable and socially responsible investments. Green Banking entails conducting banking operations in a manner that contributes to the reduction of both external carbon emissions and internal carbon footprints.

To achieve this, banks can finance projects focused on green technology and pollution reduction initiatives, thus aiding in the broader effort to mitigate environmental impact. Moreover, beyond its environmental benefits, Green Banking offers unparalleled convenience, aligning with the modern consumer's preference for sustainable and efficient banking solutions.

GREEN BANKING PRODUCT & SERVICE

Online Savings Account: Transitioning to an online savings account and utilizing mobile banking represents a simple yet impactful way to engage in green banking practices while supporting environmental conservation. Embracing online and mobile banking not only streamlines financial management but also minimizes late payment fees, contributing to a more efficient and environmentally friendly banking experience.[17]

Paperless Statements: Embracing paperless statements is a key step towards reducing paper waste in banking operations. Through online banking platforms, customers can securely access their statements electronically.

Storing banking records digitally enhances convenience and security, while also reducing the risk of identity theft associated with paper statements.[20]

Utilize Direct Deposit: Opting for direct deposit for receiving paychecks not only accelerates access to funds and eliminates the need for bank visits but also significantly reduces paper usage and associated paperwork. This simple adjustment supports green banking initiatives by minimizing paper waste in payroll processing.[9]

Online Bill Payments: Embracing online bill payments represent a lifestyle change with significant environmental benefits. Whether it's utility bills, credit card payments, or mortgage payments, transitioning to electronic payments reduces reliance on paper checks and envelopes. Beyond the convenience of streamlined recordkeeping, online payments contribute to substantial paper savings, fostering a more sustainable banking ecosystem.[20][9]

Net Banking: Engaging in net banking, or online banking, offers a comprehensive suite of services for managing finances efficiently while promoting environmental sustainability. From fund transfers to account management, net banking provides a convenient and eco-friendly alternative to traditional banking practices. [2][8]

Credit and Debit Cards: Credit and debit cards offer convenient payment options for various expenses, eliminating the need to carry cash. Their widespread usage contributes to the efficiency and ease of financial transactions.[10][12]

Solar ATM: Automatic teller machines (ATM's) requires a continuous power supply to work. The introduction of a green method of generating the power required to make these machines work through solar energy is reducing the usage of electricity considered one of the best green practices by the banking sector.[10][9]

Electronic Fund Transfer: Electronic banking, or electronic fund transfer is when computers and electronic devices are used instead of paper for banking. Instead of writing checks, people can use cards or codes to access their accounts securely. Banks often provide ATM or debit cards and PINs for these electronic transfers.[8][19]

Mobile Banking: Mobile banking encompasses a range of financial activities, including balance checks, account transactions, payments, and credit applications, performed via mobile devices such as Smartphone or personal digital assistants (PDAs). It offers customers flexibility and convenience in managing their finances on the go.[3][13]

Green Car Loans: Green car loans offer below-market interest rates to encourage the purchase of vehicles with high fuel efficiency. By providing financial incentives for environmentally friendly transportation options, these loans support efforts to reduce carbon emissions and promote sustainability in the automotive sector.[18][21]

LITERATURE REVIEWS

K. Sudhalakshmi and K.M. Chinnadurai (2014) Banks need to think about the environment when they give out loans. Every action we take now will make the world healthier in the future. So, India needs a plan to encourage banks to be more environmentally friendly. Right now, Indian banks are falling behind in catching up with this important trend.[8]

Vadrale, Kavita (2016) In the research paper ,compared how banks are going green, both public and private ones. They found out that public banks are doing better than private ones in adopting eco-friendly banking practices.[21]

According to Jayabal and Soundarya (2018) The Green Bank Initiative is about making banking and energy use more eco-friendly. It involves things like using ATMs, doing banking without paper, and building wind farms in rural India. Two main parts of this initiative are being careful with how we use resources and energy to lower our carbon footprint. The other part is encouraging and funding investments that are good for the environment.[6]

H.M.A.K & H.M.S.P (2019) Green banking projects considers things like security, trust, convenience, creating value, and caring about the environment and society. All of these factors will affect how satisfied customers are with green banking.[5]

Murugan, Soundarya (2021), studied the impact of green banking in India laying emphasis on the opportunities and challenges of green banking.[11]

Ellahi et al. (2021), Customers are open to and eager to adopt the changes brought about by the banks' green initiatives. The findings show that consumers are cognizant of the environmental impact of traditional banking practises, and as a response, they are eager to adopt and improve their perspective.[3]

Praveen and Harina (2022), In their study, the researchers came to the conclusion that banking institutions in Kerala need to take numerous steps to promote green banking awareness and habits among staff members and clients. Customers are substantially benefited by convenient green banking services, quick and easy transactions, and reduced transaction costs. The Indian financial system is changing, and new payment methods including ATMs, debit and credit cards, mobile and internet banking are part of this. The implementation of green banking has positive effects on banks as well, including reduced operating costs, higher income, and improved public perception.[15]

Devi Mallika Priya Seenu & Kalyani Gorti(2023), lack of awareness of the green banking methods is the main reason for not using green banking methods. Inertia to shift from use of traditional banking methods, lack of required technical knowledge, privacy and security issues are also some of the reasons for not using green banking methods.[2]

RESEARCH OBJECTIVES

1. Find out how much customers know about green banking
2. To identify factors influence customers' decisions to adopt products and services of green banking
3. To study the challenges related with green banking from the customer perspective

RESEARCH METHODOLOGY

Sampling Design

The study population for researching Bank's Customers' awareness and adoption of Green Banking comprises individuals actively utilizing green banking products and services.

Sample Size

Sample size for this research is 100 responses has been collected from the friends, family, and others who are who using green banking product and services.

Sample Techniques: Convenience Sampling

Data Collection Methods: Primary and secondary data was used for the study. Primary data was collected through a structured questionnaire and secondary data was collected from books, journals and web sites.

Area of the study: The research is limited to the Bank's customers of Meerut City

ANALYSIS OF DATA AND INTERPRETATION

Demographic Distribution of the respondents

Table-1: Gender wise and Age wise Profile

S.N.	Age	Female	Male	Total
1	19-24	5	9	14
2	25 - 34	14	16	30
3	35- 44	10	12	22
4	45- 54	9	11	20
5	55- 64	5	4	09
6	Above 64	2	3	5
Total		45	55	100

Source: Primary data

The data in Table 1, In term of gender and age groups. Overall, there were 100 respondents surveyed, with 45 being female and 55 male. Among the age groups, the highest number of respondents falls within the 25-34 age bracket, with a total of 30 respondents. The 35-44 age group follows closely with 22 respondents. In terms of gender distribution within each age group, males consistently outnumber females in every category except for the 55-64 age group, where females have a slight edge.

Table- 2: Qualification Profile of Respondents

S.N.	Qualification	Frequency	Percentage
1	Graduate	25	25
2	Post Graduate	60	60
3	Doctorate	15	15
Total		100	100

Source: Primary Data

The table 2, presents the qualification profile of respondents, revealing a predominant trend towards higher education levels. Post graduates represent the largest group at 60%, followed by graduates at 25%, and doctorates at 15%. This distribution underscores a well-educated respondent pool, indicating a propensity towards advanced academic qualifications among the surveyed population.

Table-3: Income Profile of Respondents

S.N	Income (per Annum)	Frequency	Percentage
1	Below 5,00,000	53	53
2	Rs. 5,00,000-Rs. 10,00,00	47	47
3	Rs. 10,00,000-Rs. 15,00,000	-	-
4	Above 15,00,000	-	-
Total		100	100

Source: Primary Data

The data in Table-3 present income profiles of respondents, highlighting the distribution of annual income levels. Over half of the respondents (53%) reported earning below 500,000 rupees per annum, while nearly half (47%) reported incomes ranging from 500,000 to 1,000,000 rupees annually. None of the respondents reported incomes between 1,000,000 to 1,500,000 rupees or above 1,500,000 rupees per annum. This suggests a substantial portion of respondents belong to lower income categories, with a smaller yet significant proportion earning moderate incomes.

Table-4: Distribution of respondents as per their occupation

S.N.	Particular	Frequency	Percentage
1	Government sector employees	8	8
2	Private sector Employees	76	76
3	Business Professionals	16	16
4	Farmer	0	0
Total		100	100

Source: Primary Data

Upon analyzing the table 4, In term of respondents occupation. Private employees constitute the majority with 76 respondents, making up 76% of the total. Following them are business professionals with 16 respondents, comprising 16% of the sample. Interestingly, there are no farmers among the respondents. Government employees represent the smallest proportion, with 8 respondents, accounting for 8% of the total. This distribution indicates a predominantly private-sector-oriented sample, with minimal representation from the government sector and none from farming occupations.

Table 5: Awareness level of respondents towards Green Banking Product & Service

S.N.	Green Banking Product & Service	Awareness of Green Banking		
		High	Medium	Low
1	Net Banking	80	20	-
2	Mobile Banking	80	20	-
3	Online Bill Payment	70	20	10
4	Green Car Loan	30	20	50
5	Paperless Statements	65	15	20
6	Solar ATM	40	30	30
7	Electronic Fund Transfer	85	15	-
8	Cash Deposit System	45	35	20

Source: Primary Data

The table 5, the data presents respondents' awareness levels regarding various Green Banking products and services. Net Banking, Mobile Banking, and Electronic Fund Transfer exhibit the highest awareness, ranging from 80% to 85% among respondents. In contrast, Green Car Loan and Solar ATM have lower awareness levels, with only around 30% and 40% of respondents respectively showing high awareness. Online Bill Payment and Paperless Statements demonstrate moderate awareness levels, with approximately 70% to 65% and 65% to 50% respectively. The Cash Deposit System registers the lowest high awareness rate at 45%, suggesting a necessity for enhanced promotion or education about this service

Table 6: Customers' Challenges in adoption of Green Banking

S.N.	Challenges in adoption of Green Banking	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Insufficient knowledge	65	30	5	-	-
2	Technical Issues	85	10	5	-	-
3	Possibility of fraud	70	22	8	-	-
4	Customer Satisfaction	25	30	10	20	15

Source: Primary Data

From the table 6, Challenges encountered in adopting Green Banking methods. It reveals a consensus on technical issues as a significant hurdle, with 85 respondents strongly agreeing and only 10 disagreeing. Insufficient knowledge is also highlighted as a major barrier, with 65 respondents strongly agreeing. Moreover, concerns regarding fraud possibilities are widespread, with 70 respondents strongly agreeing. Customer satisfaction presents

a mixed perspective, with 25 respondents strongly disagreeing, 30 agreeing, and 20 disagreeing, indicating diverse perceptions of its impact. In summary, the data emphasizes the multifaceted obstacles confronting the implementation of Green Banking practices, including technical, knowledge-related, and customer-centric challenges.

Table 7: Factors influence customers' decisions to adopt Green Banking

S.N.	Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Paper Saving	20	35	20	15	10
2	Time Saving	70	30	-	-	-
3	24x7 Accessibility	90	10	-	-	-
4	Easy to operate	80	20	-	-	-
5	Cost Saving	30	40	20	10	-
6	Limited access to physical banking services	80	20	-	-	-
7	Cash back or rewards	40	30	5	15	10

Source: Primary Data

From the table 7, factors influencing customers' decisions to adopt Green Banking. It reveals varying degrees of agreement across different factors. Notably, 24x7 accessibility and easy operation appear to strongly influence adoption, with 90% and 80% strongly agreeing respectively. Additionally, time saving is highly favored, with 70% in agreement. Meanwhile, factors like paper and cost saving show mixed responses, with significant agreement but also notable disagreement. Limited access to physical banking services and the presence of cash back or rewards also contribute though with less consensus among respondents.

SUGGESTION

1. Banks encourage customers to utilize green banking services.
2. Banks need to promote green banking through TV, radio, and newspapers, with help from different groups.
3. Even though green banking helps the environment, people worry about safety. Staying safe depends a lot on how careful users are. So, it's important to follow the bank's rules closely to lower the risks of using green banking.
4. Deliver education via e-learning programs.

CONCLUSION

An increasing number of individuals are opting green banking services, Banks should enhance their efforts to educate young individuals about their services..Banks should create new products that benefit both people and society. Banks have learned that being sustainable can also be profitable, as they find ways to save money, improve how they work, and plan for the future. This idea is the same for their business customers. The government should lead the way by making green rules and offering money incentives to be more environmentally friendly.

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The Crucial Role Of Consumers In Fostering Legal Awareness And Promoting Consumer Sustainability

Dr. Ranganathaiah C.B

Associate Professor of Law

Department of Law Government Law College, Kolar-563101

Abstract:

In today's globalized marketplace, consumers wield significant influence as agents of change. This article explores the intersection of consumer empowerment, legal awareness, and sustainability, emphasizing the pivotal role of consumers in driving positive societal and environmental outcomes. The concept of consumer sustainability, encompassing environmentally and socially responsible consumption patterns, is elucidated as a guiding principle for individual action. Central to this discussion is the importance of legal literacy among consumers, enabling them to assert their rights and advocate for ethical business practices. Through informed choices and collective action, consumers can catalyze systemic change, holding businesses and policymakers accountable for their actions. Collaborative partnerships among stakeholders are highlighted as essential for fostering a culture of sustainability and promoting consumer empowerment. Ultimately, the article underscores the transformative potential of consumer activism in shaping a more just, equitable, and sustainable future for all.

Keywords: Consumer empowerment, legal awareness, sustainability, advocacy, transformative potential

Introduction:

In the modern marketplace, consumers are not merely passive participants but active agents driving change. Their choices reverberate throughout the global economy, influencing the practices of businesses and shaping the trajectory of sustainable development. In recent years, there has been a paradigm shift in consumer consciousness, with growing awareness of the interconnectedness between consumption patterns, environmental sustainability, and legal rights.

Amidst burgeoning concerns about climate change, resource depletion, and social injustice, consumers are increasingly scrutinizing the ethical and environmental implications of their purchasing decisions. This newfound awareness has sparked a movement towards consumer sustainability, where individuals seek to align their consumption habits with principles of environmental stewardship and social responsibility.

At the heart of this movement lies the recognition of consumers' pivotal role in fostering legal awareness and promoting sustainability. By understanding their rights, advocating for ethical business practices, and making informed choices, consumers have the power to drive systemic change and catalyze a transition toward a more equitable and sustainable global economy.

This article explores the multifaceted role of consumers in shaping the landscape of legal awareness and sustainability. It delves into the concept of consumer sustainability, elucidates the importance of legal literacy among consumers, and examines the mechanisms through which individuals can exert influence as advocates for sustainable consumption.

Through collaborative partnerships and collective action, consumers have the potential to wield considerable influence in addressing pressing societal and environmental challenges. By harnessing the power of informed consumerism, individuals can not only safeguard their interests but also contribute to the greater good of society and the planet.

As we embark on this journey towards a more sustainable future, it is imperative to recognize the agency of consumers in driving positive change. By empowering consumers with knowledge, resources, and a sense of collective purpose, we can unlock the transformative potential of consumer activism and pave the way for a more just, equitable, and sustainable world.

Understanding Consumer Sustainability:

Consumer sustainability¹ encapsulates the idea of making environmentally and socially responsible choices in consumption patterns. It extends beyond mere product selection to encompass the entire lifecycle of a product, including its production, distribution, and disposal. Consumers embracing sustainability seek to minimize their ecological footprint while also advocating for fair labor practices and ethical business conduct.

The Power of Informed Consumers:

In today's interconnected world, consumers are more empowered than ever before. The advent of **social media**² and online platforms have facilitated the rapid dissemination of information, enabling consumers to scrutinize companies' practices and hold them accountable for their actions. Armed with knowledge, consumers can make informed choices, opting for products and services that align with their values of sustainability and ethical conduct.

Fostering Legal Awareness:

Legal awareness among consumers is essential for safeguarding their rights and interests in the marketplace. Many consumers, however, lack a comprehensive understanding of their legal rights and the avenues available for redress in case of disputes or grievances. Herein lies the importance of consumer education initiatives aimed at enhancing legal literacy. By familiarizing themselves with consumer protection laws, individuals can assert their rights effectively and navigate the complexities of commercial transactions with confidence.

The Role of Consumers in Advocacy:

Consumer advocacy groups and grassroots movements play a crucial role in amplifying consumer voices and driving systemic change. By mobilizing collective action, consumers can exert pressure on policymakers and corporations to adopt more sustainable and equitable practices. Through campaigns, petitions, and boycotts, consumers can raise awareness about pressing issues such as environmental degradation, worker exploitation, and product safety concerns, compelling stakeholders to prioritize ethical considerations in their business operations.

Collaborative Partnerships for Sustainable Consumption:

Achieving consumer sustainability requires collaboration among various stakeholders, including governments, businesses, civil society organizations, and educational institutions. Governments can enact and enforce robust consumer protection laws, while businesses can embrace transparency and accountability in their operations. Civil society organizations and educational institutions, on the other hand, can spearhead initiatives to promote consumer education and awareness.

Conclusion:

In the ever-evolving landscape of global commerce, consumers emerge not just as purchasers but as catalysts for change. The journey towards sustainability and legal awareness is not merely a solitary endeavor but a collective movement, driven by the concerted efforts of individuals, businesses, governments, and civil society organizations. As we draw the curtains on this exploration of consumer empowerment, it becomes evident that the role of consumers in shaping a more just, equitable, and sustainable world cannot be overstated.

By prioritizing sustainability in their consumption habits, consumers have the power to effectuate tangible change, from reducing carbon emissions to promoting fair labor practices across supply chains. Through advocacy and activism, consumers amplify their voices, holding businesses and policymakers accountable for their actions and demanding greater transparency and accountability.

Moreover, consumer empowerment extends beyond the realm of individual choices to encompass broader systemic transformations. By fostering collaboration and dialogue among stakeholders, consumers can drive the adoption of innovative solutions and policies that prioritize environmental sustainability and social justice.

¹ Consumer Sustainability

² Social Media

As we look towards the future, it is imperative to harness the momentum of consumer activism and channel it towards meaningful action. Governments must enact and enforce robust consumer protection laws, while businesses must embrace sustainability as a core tenet of their corporate ethos. Civil society organizations and educational institutions play a pivotal role in equipping consumers with the knowledge and skills needed to navigate the complexities of the modern marketplace.

In closing, the journey towards consumer sustainability and legal awareness is a marathon, not a sprint. It requires perseverance, solidarity, and a shared commitment to a common goal. By empowering consumers with the tools and resources needed to make informed choices, we can unleash the transformative potential of consumer activism and pave the way for a more resilient, inclusive, and sustainable future for generations to come.

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New Education Policy 2020: From The Eyes Of Rural Student; Special Reference To Chalisgaon Taluka.

Dr. Punam. N. Nikam

Asst. Professor

B.P.Arts, S.M.A. Science and K.K.C.Commerce

College Chalisgaon

Abstract:

National Education Policy (2020) is a most looming and challenging phase in Education sector of India. National Education plan has many major changes in current scenario. Coping with this new changes and challenges are difficult for both the implementers and implementees. Students who are really going to affect with this NeP seems to be confused, happy, scared and excited at the same time. Again students from different social, economic, cultural and geographical background responds and reacts differently. NeP was implemented in majority of universities in India in education year 2023-24. This research paper contributes to give insight to the perspective of students who belongs to Chalisgaon which is a important tehsil under Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon, Maharashtra. Students acceptance, awareness and expectations and expected outcome are studied and discussed in this research paper. The author studied and analysed National Education Policy 2020 issued by Government of India, Author collected data through structured questionnaire from students perusing their under graduation and post graduations and belongs to Chalisgaon.

Keywords: National Education Policy, NeP 2020, Rural students, KBCNMU and Qualitative analysis.

National Education plan is a dynamic and recent move in the Education Sector of India. The promotion of inter-multidisciplinary, pliant curriculum that look after diverse skills and encourages seamless attainment of knowledge. The NEP 2020 encourages multi and interdisciplinary and multilingual education. Still, Indian students, educationist and academicians are in confusion about it's positive and negative effects. It is important to study, analyse and evaluate the NeP from the eye of student. On to this, perspective of students may be differ according to their backgrounds. The factors which can affect the understanding and acceptance of NeP could be Economic, Social or geographical. Rural student face more problems and challenges in persuing their education compared to urban one. Kavayitri Bahinabai Chaudhari Implemented NeP in its PG courses in year 2023-24 and implementing in UG from the year . On this background understanding the NeP from the eye of rural student of KBCNMU has its important role. Chalisgaon Taluka is a major tehsil of KBCNMU. Majority of researchers think that **Understanding NeP is the key to implement**. This research paper will throw a light on how rural students look at NeP, their understanding towards NeP along with their expectation from NeP.

The global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for sustainable Development, adopted by India in 2015 – seeks to “ensure inclusive and equitable quality education and promote equitable quality education and promote lifelong learning opportunities for all” by 2030. Such a lofty goal will require the entire education system to be reconfigured to support and foster learning, so that all the of the critical targets and goals (SDG's) of the 2030 Agenda for Sustainable Development to be achieved. (Ministry of Human Resource Development, 2020)

The National Education plan didn't come out of clear blue sky. First draft was published in 1986, later modified in the year 1992. The Right of Children to free and compulsory Education Act 2009 was a massive support to National Education Plan. This National Education Policy 2020 is the first Indian education policy of the 21st century and aims to address the many developing trends and also tries to incorporate better practices which are renowned worldwide.

Following is the vision of this policy

The Vision of this Policy This National Education Policy envisions an education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower. The Policy envisages that the curriculum and pedagogy of our institutions must develop among the students a deep sense of respect towards the Fundamental Duties and Constitutional values, bonding with one's country, and a

conscious awareness of one's roles and responsibilities in a changing world. The vision of the Policy is to install among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen. (Ministry of Human Resource Development, 2020).

This policy is primarily described in 4 parts.

PART I: SCHOOL EDUCATION

This policy breaks 10+2 division into 5+3+3+4, covers age group of 3 to 18.

Part I is further divided into following steps for effective and systematic implementation of the policy

- Step 1: Early Childhood Care and Education: The Foundation of Learning
- Step 2: Foundational Literacy and Numeracy: An Urgent & Necessary Prerequisite to Learning
- Step 3: Curtailing Dropout Rates and Ensuring Universal Access to Education at All Levels
- Step 4: Curriculum and Pedagogy in Schools: Learning Should be Holistic, Integrated, Enjoyable, and Engaging
- Step 5: Teachers
- Step 6: Equitable and Inclusive Education: Learning for All
- Step 7: Efficient Resourcing and Effective Governance through School Complexes/Clusters
- Step 8: Standard-setting and Accreditation for School Education

Part II. HIGHER EDUCATION

- Step 9: Quality Universities and Colleges: A New and Forward-looking Vision for India's Higher Education System
- Step 10: Institutional Restructuring and Consolidation
- Step 11: Towards a More Holistic and Multidisciplinary Education
- Step 12: Optimal Learning Environments and Support for Students
- Step 13: Motivated, Energized, and Capable Faculty
- Step 14: Equity and Inclusion in Higher Education
- Step 15: Teacher Education
- Step 16: Reimagining Vocational Education
- Step 17: Catalysing Quality Academic Research in All Fields through a new National Research Foundation
- Step 18: Transforming the Regulatory System of Higher Education
- Step 19: Effective Governance and Leadership for Higher Education Institutions

Part III. OTHER KEY AREAS OF FOCUS

- Step 20: Professional Education
- Step 21: Adult Education and Lifelong Learning
- Step 22: Promotion of Indian Languages, Arts, and Culture
- Step 23: Technology Use and Integration

Step 24: Online and Digital Education: Ensuring Equitable Use of Technology

Part IV. MAKING IT HAPPEN

- Step 25: Strengthening the Central Advisory Board of Education
- Step 26. Financing: Affordable and Quality Education for All
- Step 27. Implementation (Ministry of Human Resource Development, 2020)

Research Methodology

Objective-

1. To analyse the awareness about National Education plan (NeP 2020) among the students of Chalisgaon.

2. To understand the acceptance and expectations of Chalisgaon tehsil students from NeP

Type of Research-

This is a descriptive type of study. The objectives are revolved around the perspective of Chalisgaon students about NeP 2020. This research is aimed at seeing the NeP from the eyes of rural student. It will study their awareness, are they accepting NeP and what are their expectations from NeP. The study is based on primary data which is collected through offline questionnaire which is a combination of open ended and closed ended questions.

Scope of the study-

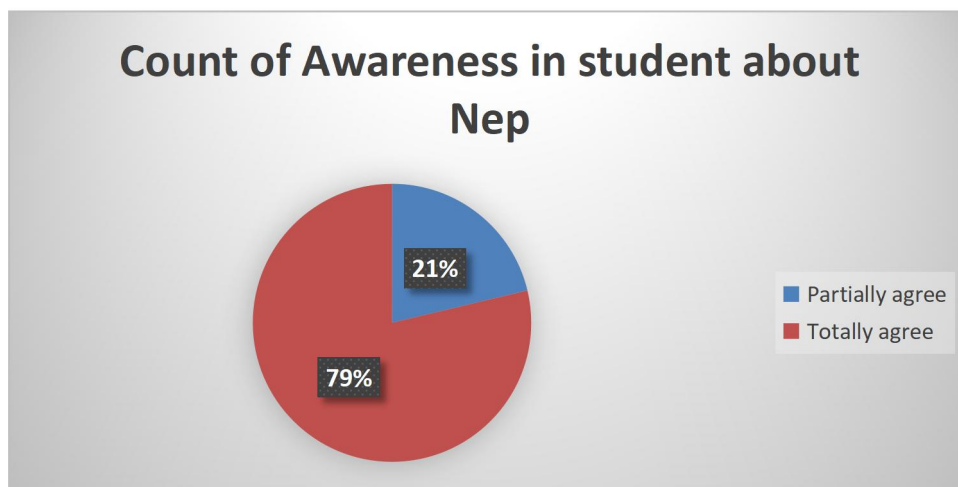
The research paper tried to give insight in how students belong to rural area are perceiving NeP 2020. Study was conducted with the help of structured questionnaire responded by UG and PG students from Rural area.

Sample size-

Data is collected from 127 student who are taking their graduation or post-graduation degree and primarily perusing their education from Chalisgaon tehsil.

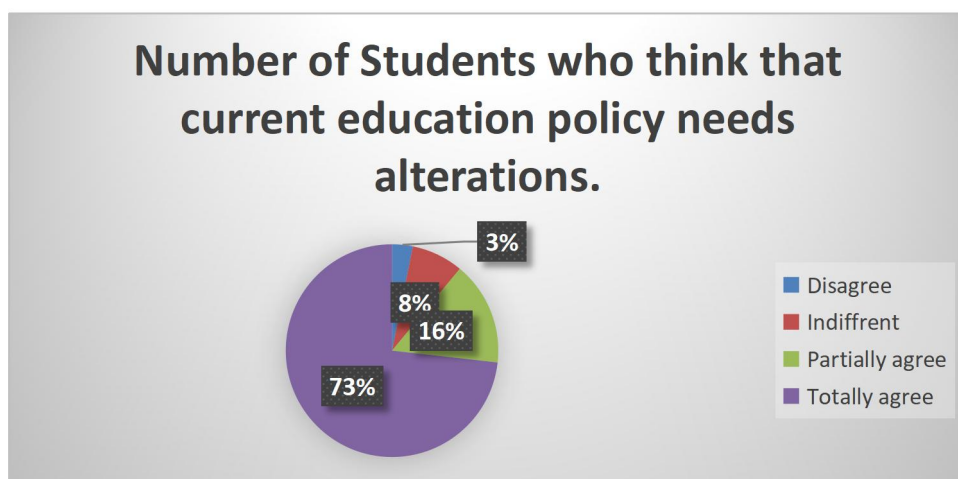
Data Analysis-

Graph 1



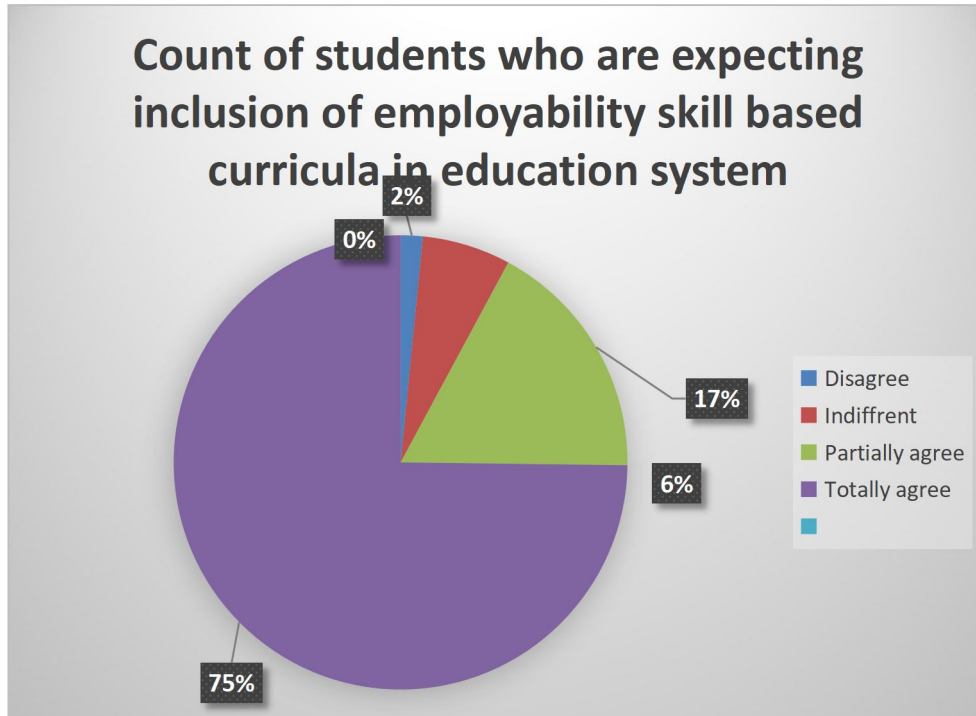
There are 100 students out of 127 who are aware about the implementation of National Education Plan 2020. If the percentage is calculated awareness percentage is 79%.

Graph 2



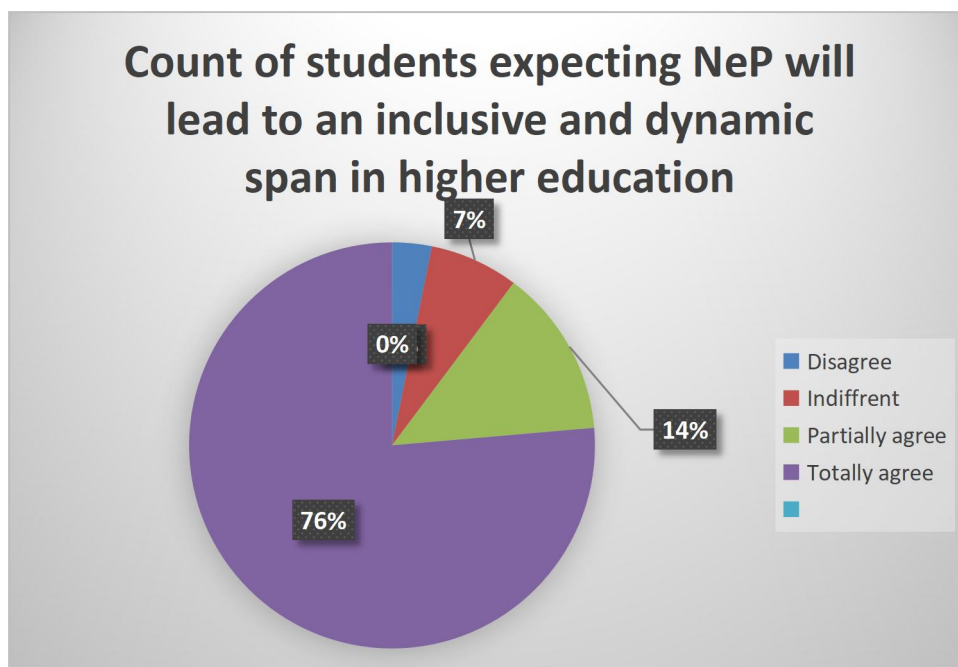
There are 73% students who strongly agree that current education policy need alteration, there are whereas 16% students who are partially agree with the change. Number students who are indifferent about the change is 8% and 3% are disagree.

Graph 3



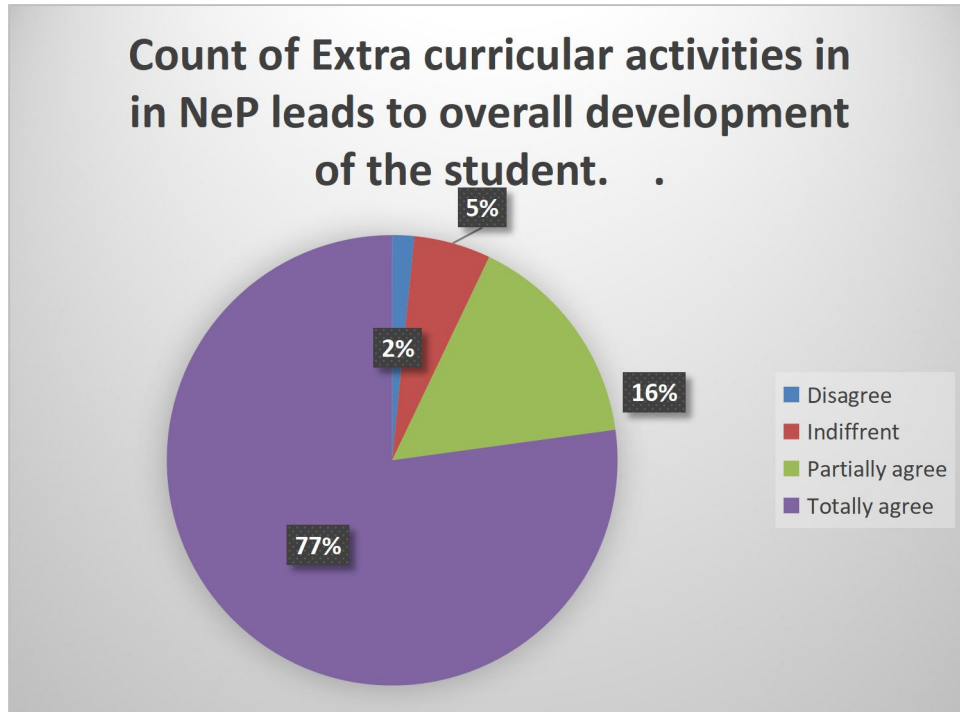
There are 75% students who are expecting that NeP should include employability skill-based curricula in education system, 17% students are partially agreeing with the statement. There are 6% students who are indifferent about the inclusion and 2% are disagree with the statement.

Graph 4



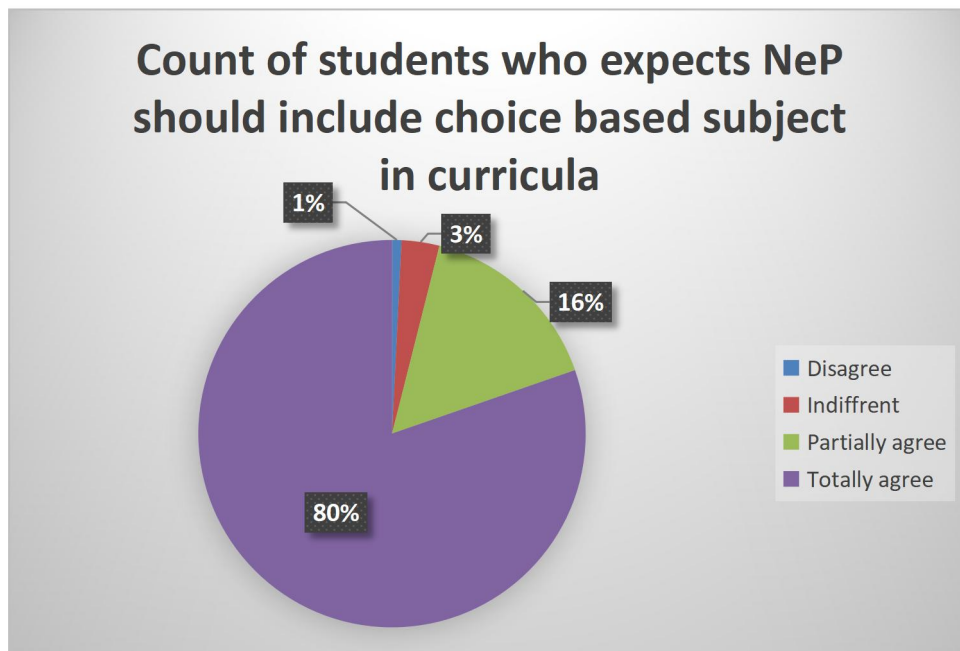
There are 76% student who are totally agreeing that they are expecting NeP will lead to an inclusive and dynamic span in higher education. There are 14% student who are agree,7% are indifferent but 3% are disagree with the expectations.

Graph 5



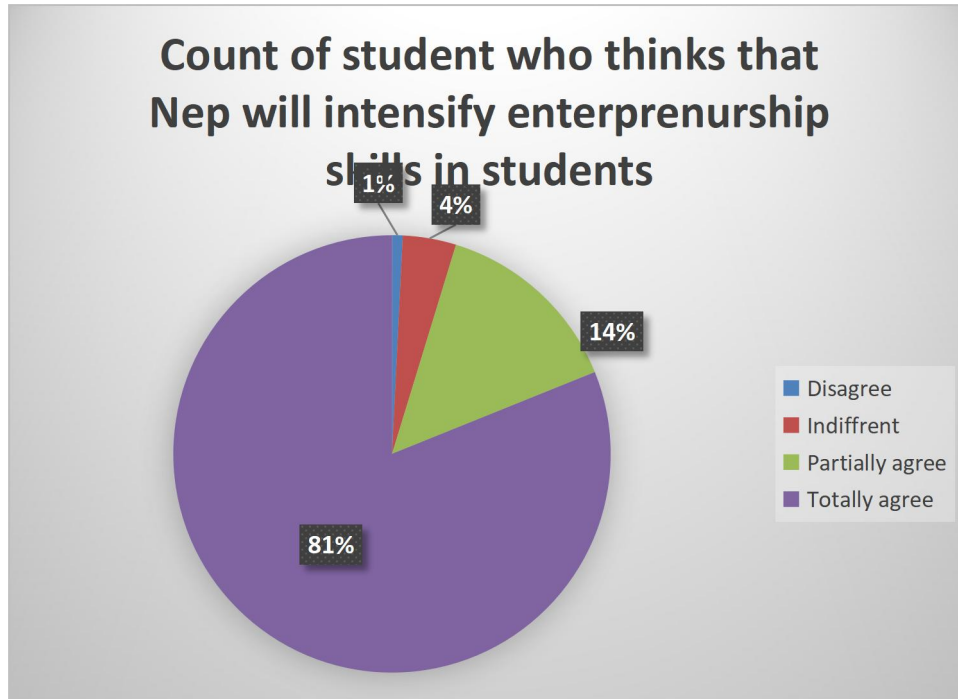
There are 77% students who are totally agree that NeP will leads to overall development of students 16% are partially agree,5% are indifferent whereas 2% are disagree with the statement.

Graph 6



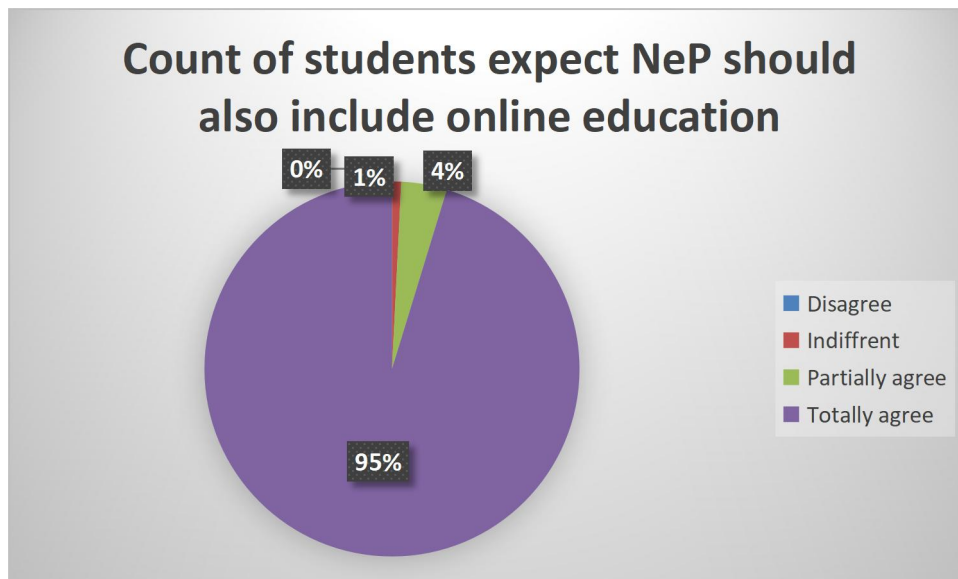
Highest percentage i.e. 80% student strongly expects that NeP should include choice based subject in curricula, 16% are partially agree 3% are indifferent and only 1% student don't feel that NeP should include choice based subject in Curricula.

Graph 7



There are 81% student who thinks that NeP will intensify enterprenurship skills in student whre are 14 % students are not that sure and partially agree with the statement. 4% students are indiffrent and 1% are not at all expecting the change thus disagree with the statement.

Graph 8



There is no student who doesn't expect online mode in NeP. There are 95 % student who are expecting convinience of online education, 4% are partially agree and only 1% student are indiffrent.

Finding and Recommendations

Following are the findings and recommendations drawn on the basis of study.

1. Majority of students are aware about the adoption of NeP 2020.
2. Majority of students who strongly agrees that current education policy need alteration.
3. Maximum students are expecting that NeP should include employability skill-based curricula in education system.
4. There are larger number of students who are totally agreeing that they are expecting NeP will lead to an inclusive and dynamic span in higher education.
5. Greatest part of the sample are totally agree that NeP will leads to overall development of students .
6. Highest percentage of student strongly expects that NeP should include choice based subject in curricula.
7. Highest number of student thinks that NeP will intensify enterprenurship skills
8. There is no student who doesn't expect online mode in NeP and largest number of students are expecting convinience of online education.

Recommendations

1. Convinience or option of online education should be provided to the students.
2. Students are accepting and expecting will lead to more value added courses which will enhance their enterprenurship skills and employability skills.
3. Stunts are expecting more involed and zestful college years after implementation of NeP.

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Intersectionality In Gender, Gender Equality, And Parity In The Workforce: Public Perceptions

Dr. I. Azma

Assistant Professor,

Thiagarajar College, Teppakulam, Madurai, Tamilnadu

ABSTRACT

Gender equality, Gender parity and Overlap and Diversity! Are they regarded as being interchangeable? Public perception on the subject may present a different image despite the abundance of information and opinions on the economic advantages of gender parity within organizations and how it can support women's empowerment and inclusion in male-dominated professional sectors. In order to understand public opinions regarding one company's perceived success with their organizational gender parity initiative, this paper uses data collected from the social media platform Twitter to perform a content analysis. Rosetta Stone is an American technology firm. In 2018, Rosetta stone announced on Twitter that they had successfully hired new tech staff at a 50:50 male: female ratio. While many Twitter users agreed with Rosetta stone that this was a success, the reaction on the platform shows that many others did not. To gain a thorough understanding of how the general public perceives and responds to the concepts of gender parity, gender equality, and diversity and inter sectionalists, the Tweets are classified and analyzed according to sentiment as well as coded according to the main topic in their communication. This paper supports an investigation via case study into whether or not gender parity is publicly viewed and understood as a positive organizational strategy towards gender equality by textual and visual analysis of 275 Tweet or whether it is perceived to be maintaining gender and intersectional stereotypes, biases, and standards while escalating gender disparities.

Keywords: Content analysis, Gender, Gender equality, Gender Parity, Social media, Public Perception etc,

INTRODUCTION

The Diversity and an intersectionality as well as female parity and equality are the unique world. Although they are related, not all related ideas are the same. The highest levels of the United Nations have acknowledged gender parity as a moral requirement and a practical necessity. Gender parity is a notion that compares the relative numbers of men and women. (2020). The advantages of achieving gender parity in the workplace have been argued for and supported by data to demonstrate the financial and organizational benefits. (McKinsey 2016). The public's perceptions of the subject and what gender diversity, gender equality, and intersectionality imply for specific people are presently the subject of little research. The Twitter social media platform is being used in this case study to shed light on these questions and reveal how the general public perceives and responds to these ideas. This research paper uses sentiment analysis and data coding during the data analysis process, fusing quantitative and qualitative methods. The findings are used to examine how the public perceives gender parity efforts and whether they are seen as reinforcing gender stereotypes, norms, and biases because they use binary gender categorizations. The study of strategies to analyse how targeted recruitment initiatives can expand or limit possibilities for women and men in the workplace, as well as the idea of gender in organizations, can lead to a variety of stories. (Alvesson and Billing 2009, p.11). In order to gain knowledge about how public perception and sentiment regarding gender parity, gender equality, and intersectionality can help inform strategy and/or policy development for the empowerment of women and marginalized groups in the workplace, one story is investigated through this case study. The research paper will be analyzing data posted on the Twitter social media platform in response to one organization - Rosetta Stone, an American tech company with a world-renowned language learning application - who promoted their own gender parity approach and its perceived success in achieving a 50:50 balance of men and women in a campaign for new engineering recruits. By examining the data generated from a social constructionist theoretical approach, integrating feminist concepts, and analyzing the case from an intersectional point-of-view, this research initiative aims to produce knowledge and insights that will be useful to inform change and transformation towards equal opportunities in the future.

Research Questions

The following research questions will serve as a guide for the paper:

- 1) What can be learned about popular perceptions of gender parity, gender equality, and intersectionality from tweets in response to Rosetta stone's equally gender parity strategy? and,

2) What responses do Twitter users have to their grasp of intersectionality, gender parity, and gender equality?

Literature Review

Many authors have examined gender parity in specific contexts and settings in previous academic writing using the case study method. In one instance, academic staffing data from Romania was analyzed to comprehend how gender parity can help university administration structures be sustainable. (Drumea et al. 2020). How the nation is achieving its goal to show sustainability through its universities has been evaluated using the quantitative data analysis of male and female gender groups in management positions in Romanian universities. The gender balance of women in science in Colombia throughout the twenty-first century was also examined (López-Aguirre 2019). The results of this research were intriguing because they showed that the only professions in Colombia where gender parity had been achieved up to this point were medicine and health science. But they also used a model of future projection to estimate how long it would take for gender parity to be achieved nationally in related disciplines. There are a growing number of academic articles discussing the advantages of using Twitter as a data source and as a tool for sentiment analysis. Numerous articles from numerous academic disciplines recognize and support this. Researchers acknowledge in a paper on education for sustainable development and climate change that traditional data collection techniques like participant observation and interviews may produce biased results because they depend on the willingness of the participant to be open and honest (Goritz, Kolleck, and Jörgens 2019). But given that the user and their discourse are automatically included in the analysis, they contend that using data sources from the Twitter platform to perform content analysis may be more trustworthy. The current research also made use of a paper written for the Hawaii International Conference on System Sciences that focused on sentiment analysis of Twitter data. (Salehan and Kim 2020). The authors admit that social media has had a significant impact on how people interact with one another. The piece first focuses on how emotions are sparked in a social media context, after which it looks into the impact that this emotional stimulation may have on people's decisions to retreat content from Twitter. By examining how Twitter users will use information provided to them through the social media platform and whether their sentiments and emotional arousal will influence how they go on to share this information, their research model adds to the body of theoretical literature in this field. A previous case study and research project by the researcher, titled "Tweeting towards 50:50 - What can Twitter reveal about public sentiment and gender parity strategies," will also be used in the research. (De Kretser 2020) completed for the Linköping University course "Analyzing Change."

Methodology

As the research methodology for this study, a case study strategy that incorporates and makes use of mixed methods has been chosen. According to Martin Denscombe, the purpose of a case study is to produce an in-depth analysis and account of the processes and findings happening in one specific instance of a phenomenon. (2007, p. 35). The case study approach was determined to be appropriate to discover findings using an inductive logic. The researcher sought to investigate a real-life case of the application of a gender parity strategy and the sentiments, understandings, and reactions to strategy implementation in an organizational context. (Ibid, p. 38). In order to investigate and make an effort to comprehend the issues raised within the specific context—in this case, a thread of tweets in response to a company's Twitter statement about the results of the implementation of its gender parity recruitment strategy—this paper uses a discovery-led case study.

Denscombe supports the idea that each case study, despite being an example of a particular collection of data and content, may still be viewed as a "example of a broader class of things." (2007, p. 43). The Rosetta Stone case was chosen because it offered a scenario for the implementation of an organizational gender parity strategy while still allowing for the analysis of data that might be suggestive of thought and understanding trends that could aid in the production of knowledge about public perceptions on the subject. The researcher admits the difficulties in generalizing all case study results. A wider public sentiment and social constructionist theoretical lens are used to interpret and analyze the applicability of the study's results. The goal is to look for patterns in how this case study might be able to generate conclusions that can be somewhat applied to other organizational settings. The use of mixed methods in this study was found to be appropriate and novel because it gave the researcher access to additional data sets to address the contextual and content-based nuances of a challenging social situation involving the issue of gender equality in an organizational context. The researcher also sought to improve the accuracy of results and create a more comprehensive image by combining quantitative data on numerical trends in sentiment analysis with qualitative content analysis. (Denscombe 2007, p. 109). The sentiment analysis technique continues to be applied in this research to categorize and comprehend the information obtained from the Twitter platform.

The empirical data used in the proposition research was downloaded from public tweets by Twitter users (and paraphrased for ethical reasons), along with statements and articles published by Rosetta Stone and other pertinent empirical literature on the subjects of gender parity, gender equality, and intersectionality. In reaction to the initial Tweet sent out by Rosetta stone, 275 Tweets were made public. The two-stage content analysis method was used to categories all 275 Tweets after they had been received. This was accomplished first through the researcher's method for classifying data based on sentiment analysis and then later through the data coding procedure.

Content Analysis

An interpretative content analysis methodology was used on the Twitter data as part of the case study, along with the mixed-method approach mentioned above. A research technique called content analysis is used to support the study of communications. For the purposes of this case study, Twitter messages containing both text and visual content (emojis and GIFs)) were analyzed. According to Drisco and Maschi, this research method encourages drawing conclusions from the particular messages being examined in this instance, tweets. (2015, p. 2).

Sentiment Analysis

In this case study, sentiment analysis was the primary technique used through content analysis to ascertain the feeling, viewpoint, and/or attitude of the Twitter users through their tweets. Even though it was possible to buy sentiment analysis software online, the researcher physically downloaded and performed individual sentiment analyses for each Tweet in the thread being studied. In their article on the subject, Nabizath Saleena Ankit (2018) identified three main challenges with performing Twitter sentiment analysis.

Theoretical Framework

Socialism of construction

Social constructionism also emphasizes how power and status affect gender relations, identifying the perception of women as having a lower rank as a characteristic of their gender and how this may be used to produce differences between males and females. (Berenbaum, Blakemore and Liben 2009, p. 192).It should be mentioned that the genetic viewpoint on the role of gender development contrasts with the social constructionist theory of gendered identity. The difference between the sexes as caused by the genes on a person's sex chromosomes is the foundation for genetic theories on the evolution of gender. (Berenbaum, Blakemore and Liben 2009, p. 138).

Intersectionality

Theoretically, intersectionality first gained traction in the USA in the 1990s. It is known for challenging the idea that "women" is an all-encompassing category of people and emphasizing the need to instead concentrate on the individual (Dicker 2016, p. 7). When activist Barbara Smith spoke at the National Women's Studies Association conference in 1979, the idea that women don't fall into one wide category was already brought up. A black woman, for instance, cannot separate her race and her sex because these axes of her identity intersect and are always present, according to Dicker, who quotes Smith as saying that "women come in all shapes and sizes, with all kinds of concerns; to talk about "women" as one broad category is thus impossible." (2016, p. 7).In making its case for women's rights and gender equality, this statement emphasizes the third-wave movement's emphasis on the varying backgrounds and requirements of all women.

Considering the Ethics

According to Twitter's privacy policy, "most activity on Twitter is public," and this includes each user's Tweets, profile information, and username. (2020). Unless the Twitter user chooses to have a "protected" account, in which case only their followers can see their messages. The researcher neither had access to nor awareness of any protected tweets that were made in the thread; all of the tweets used in this study were public. However, the researcher believed that in order to conduct ethical research, it was essential to safeguard the privacy and irretrievability of individual user information and their corresponding tweets. In a perfect world, the researcher would have been able to get in touch with every user whose tweets were used in the study and get their informed permission. Due to the size of the data, this has not been feasible. Additionally, the researcher has established their own ethical guideline and process to protect the anonymity of each Twitter user whose tweets are used in this study

because there isn't an established academic guideline on ethics and the ethical utilization of data obtained on social media platforms in academic writing.

Limitations

Any research project that uses the case study approach could come under fire for the "credibility of generalizations drawn from its findings." (Denscombe 2007, p. 45). Case studies may come under scrutiny if they make claims about how they can be used outside of the case's confines and how the knowledge and results from one case can be applied to other cases. Furthermore, the ability of interpretative methods of analysis to produce objective findings that can be used in subsequent research may be questioned in contrast to a focus on statistical methods. The researcher has made an effort to mitigate these limitations to the study by ensuring transparency (within ethical considerations) of the data used, clarity in the analytical concepts being applied, and reliance on established theory. This is done in order to produce research with rig our and aligned with the research paper's goals to produce knowledge that may be capable of informing future organizational strategies on the topics of gender parity, gender equality, and intersectionality.

Analysis of Data

Both quantitative and qualitative techniques were highly effective in helping to interpret and comprehend the research questions that served as the foundation for this research paper. The researcher expanded on a similar sentiment analysis procedure used in a case study that was also based on the Rosetta Stone Twitter response thread for the first stage of content analysis, called the sentiment analysis. (De Kretser 2020). The method of categorizing sentiments was further developed in this research paper's sentiment analysis, which also examined written communications and the visual communication provided by GIFs and emojis shared by Twitter users in the data set. The quantitative results of the researcher's initial case study were supported in the first stage of this content analysis by the sentiment analysis, which classified the same number of tweets using the methodology-specific classification scheme. Once the data had been combined into the designated classification categories, it was possible to analyze and evaluate each Tweet's sentiment as part of an overall evaluation. According to the researcher's previous case study, 129 out of the total tweets were interpreted as ambiguous, 117 were classified as positive, and 29 were classified as negative. (Ibid). The public's perception of Rosetta stone's corporate perception of an effective implementation of a gender parity strategy is revealed by the sentiment analysis of the Twitter data in response to reading of the article. The analysis of the data in this Positive-Negative-Ambiguous classification system gives a general overview of how the public feels about such strategies in general as well as the instant reaction to whether or not such strategies are accepted or rejected. According to the researcher's previous case study, when ambiguous tweets are taken into account, a strong positive majority of 80.1% of tweets are classified as positive, compared to 19.9% of tweets that are classified as negative. This condensed data set illustrates the majority of public opinion that supports Rosetta stone's efforts to promote gender parity from a quantitative perspective. However, in this study, the data coding stage of content analysis provides additional insight and knowledge regarding public understanding of and reactions to the concepts of gender parity, gender equality, and intersectionality. This information can be used to guide further application of such strategies.

In this case study, the tweets were organized using the data coding method to identify the Twitter data that was pertinent for additional qualitative analysis. In order to determine which ideas were most frequently debated throughout the Twitter thread, the four categories of the code list were applied to each tweet during the coding process. The total number of tweets per code is shown in Image 3 below, which gives a summary of the data coding results from the aggregated data. The majority of the tweets (53%) could not be classified using the content analysis coding scheme used in this research, as shown by the graph. This was a reflection of the large number of tweets that contained emojis or had 5 or fewer words and could have been categorized according to sentiment (e.g., tweets with the word "congratulations" or emojis of clapping hands), allowing the researcher to analyze them according to sentiment, but which were not interpreted as conveying a reaction, insight, or opinion for the coding process. The information in Image 3 does give a general idea of whether the majority of tweets that could be coded were actually communicating a response to gender parity, which was the subject of the Rosetta Stone post to which the Twitter user was responding, or one of the other key ideas the researcher was examining. (gender equality or diversity and intersectionality). A quantifiable analysis of the coding process reveals that more tweets conceptually referenced gender equity (41%) than gender parity (32.5%), when comparing just the tweets that could be classified. Finding that 36% of the tweets that could be classified after being coded were discussing diversity and intersectionality is an

intriguing result of this number comparison. This emphasizes the need to analyze the data qualitatively in terms of these three conceptual topics in order to fully comprehend the mental trends and the corresponding personal responses. The comparison of the sentiment analysis results with the coding scheme based on tweet text is interesting. The majority (nearly 60%) of the tweets coded as mainly communicating on the subject of gender parity were clearly negative, as shown in Image 4 below. This is a disproportionately large cluster of tweets when compared to the other sentiment classifications, showing that the majority of Twitter users who were commenting specifically on the idea of gender parity were not in favour of the strategy as it was being implemented by Rosetta Stone. The same was discovered to be coded as communicating on gender equity, again with negative sentiment, albeit in a lower percentage group with 33%. While gender parity as a concept may be more divisive, gender equality is perceived and interpreted across the sentiment scales in not-so-contrasting opinion groups, as evidenced by the strength of the tweets coded as communicating on the topic of gender equality across all sentiments, positive, negative, and ambiguous. The majority of the pertinent tweets were categorized as having ambiguous sentiment, which was used to code diversity and intersectionality. The idea of diversity or intersectionality was discussed in 22% of all tweets with ambiguous sentiment. This shows that when gender parity is a problem, the subject must be taken into consideration, but Twitter users were primarily using the service to raise awareness of the problem rather than to express clearly categorized positive or negative feelings about it. The quantitative analysis of the data identified a few key ideas that need more research. The three key concepts being communicated within the data set—gender parity, gender equality, and diversity and intersectionality—need to be further investigated through content analysis on a qualitative level, in line with the research questions, in order to better understand the perspectives of the Twitter users who had commented through the Rosetta Stone twitter feed.

Gender Parity

The researcher understands that gender parity is not the same as gender equality, despite the fact that it is a numerical concept linked to gender equality, as per the definitions drawn from the European Institute for Gender Equality. (2020). According to Rosetta Stone in the article by Sohn, the male to female 50:50 ratio in this case study relates to the contract offers as accepted by new hires through a targeted recruitment round of engineering graduates. (2018). Although there is some disagreement about what gender parity means among the general public, the content analysis of the tweets in reaction to Rosetta Stone's Twitter post about their perceived success of the 50:50 male: female recruitment ratio does reveal some of it. From a definitional perspective, tweets are examined to determine whether or not Twitter users understood the word "gender parity" in accordance with the definition provided by the European Institute for Gender Equality. A few tweets show the idea to be understood correctly. It's a quest for a 50% male and 50% female society, according to one tweet. "The hiring ratio finally meets the population ratio," said another. These tweets serve as examples of those that demonstrate awareness that gender parity refers to the proportionate equality of a particular indicator, in this case, the genders of those who participated in a particular recruitment round.

Gender Equality

The European Institute for Gender Equality's (2020) definitions states that gender parity and gender equality are connected but distinct concepts. Gender equality is the real equalization of opportunities, duties, and rights for men and women, whereas gender parity is the goal of having roughly equal numbers of men and women in the workforce. The information gathered from responses to the Rosetta Stone Twitter post emphasizes that gender parity and equality, while widely known, can occasionally be used incorrectly or that the terms can be used interchangeably with the result being a skewed meaning. Even though the two concepts have distinct meanings, how they were understood in the Twitter posts does demonstrate how gender parity depends on gender equality. The tweets also show how complicated the issue of gender equality in the workplace is from the viewpoint of the general population. Why is Rosetta Stone imposing "equality," one tweet asked? The basis for hiring should be ability, not gender. This reflects the knowledge that a 50:50 gender ratio may be referred to as "equal" from a numerical perspective but may not be the same as "gender equality" as a concept. It must be emphasized that the idea of gender equality pertains to men and women having equivalent rights, opportunities, and responsibilities. This is expressly stated in the definition, which was derived from the European Institute for Gender Equality (2020). Some Twitter users have observed that the definition does not specifically state that achieving gender equality entails raising women to the same standard as men. It's important to note that some messages emphasize that if gender parity initiatives like Rosetta Stone's are being used to recruit more women into industries with a male preponderance, then the same is required to recruit more men into industries with a female preponderance. This is

essential to demonstrate that men and women can pursue the same goals, according to one tweet. This social problem, according to a subsequent tweet, "even prevents men from entering traditionally female-dominated sectors like health-care." When analyzing the general public's perception of gender equality, this point is crucial. It acknowledges that in order to change social norms regarding gendered divisions of labor, gender equality is as important for men as it is for women, and the potential effects of gender parity on men's job prospects are just as deserving of concern.

Intersectionality and Diversity

Although neither is specifically mentioned in the original Rosetta Stone Twitter post in this case study, diversity and intersectionality are communicated to a large extent in the tweet thread being examined. The tweets demonstrate that even though the two concepts are frequently discussed (along with their implications for the gender parity strategy), they are frequently used synonymously and, on occasion, correctly, are differentiated from one another. In accordance with the definitions provided by the European Institute of Gender, this research paper defines diversity as variations among a collection of people due to factors such as gender, sexual orientation, cultural background, etc. Diversity in the context of gender parity, for example, would be seen as the presence of people of different gender identities (women, males, and non-binary) in the same workplace. On the other hand, intersectionality draws attention to a person's gender as well as other characteristics like color, ethnicity, sexual orientation, etc., leading to the experience of discrimination or disadvantage. (An European Institute of Gender 2020). These meanings serve as the framework for understanding how "intersectionality" would emphasize various aspects of a person's identity, not just their gender, as opposed to "diversity," which might see women as a homogenous group. The tweets and requests for the business to increase racial diversity among its staff represent a call for intersectionality awareness. The sentiment of the tweets demonstrates an innate understanding of the concept of intersectionality and public pressure in their statements for it to be taken into account in recruitments, even though the term "intersectionality" is not being specifically stated and is possibly not familiar enough to be used in common parlance on social media. Next you can increase racial diversity, maybe you can recruit on ethnic and religious backgrounds as well, and this is wonderful but where are the black people here, read one tweet. These weren't the only ones to point out the lack of intersectional representation in the company's image posted in honour of Women in Tech Week; many other people did as well. Tweets like "we can't see any black or hispanic women here," "did no one notice there is no black women or am I imagining it?!" and "did no one notice there is no black women here." Understanding diversity and intersectionality is crucial for determining how the public will react to these ideas and what expectations they will have for workplaces in the future. Although the word "diversity" appears frequently in the tweet stream, we can see that it was also used to refer to intersectionality. Even though the term "intersectional" is less well-known, public figures' responses to the Rosetta Stone tweet indicate that it refers to a strong conviction and a legitimate step towards equality that demands attention.

Conclusion

The results of this case study demonstrate how crucial it is to take into account how gender is socially constructed as well as gendered norms when creating and putting into practice initiatives to promote gender equality. On many levels, the data obtained from the social media site Twitter is illuminating. The widespread use of social media as a platform for communication on every conceivable subject is a sign of the potential for such data to be used in academic research as well as to guide policy and social change in the future. The tweets that were used in this research paper do more than just show peoples' reactions to Rosetta Stone's gender parity plan. Additionally, they shed light on how the general public perceives the concepts of gender equity, gender equality, diversity, and intersectionality. This emphasizes the importance of paying attention to how we communicate on these concepts and how crucial it is to make sure our language is built in a way that is understandable and instructive to our audience for researchers, universities, organizations, and governmental entities. Despite not intending to reach a firm conclusion regarding the perceived benefits of gender parity efforts as a step towards gender equality, this research was able to draw some conclusive conclusions and/or make some specific recommendations based on public opinions and statements. According to the researcher, organizations of all sizes must take into account these findings, particularly if they want the buy-in and support of their "followers" or beneficiaries. Therefore, as a result of the data analysis, it is discovered that, as derived from this research, some of the following are significant factors to be taken into account in the development and implementation of gender parity initiatives:

- The language that is used to converse is crucial. It's possible that the meanings of the words we use are not always understood and applied as intended. It is crucial to take into account specifically how an organization

employs social media and these ideas in online communications, keeping in mind the expected reactions (and frequently close scrutiny). Thus, it is essential to communicate clearly and include the right images in your writing in order to prevent misunderstandings or ambiguity.

- It is appreciated when efforts to achieve gender equity are accompanied by proactive measures to create a physical workplace that is inclusive of all people. Many people believe that gender equality in the workplace encompasses more than just numerical figures; it also includes elements that contribute to an inclusive workplace atmosphere and culture for women and minority groups.
- It is admired when female role models are used to advance women in a company. Reaching out to young people to support underrepresented groups and encourage them to apply to join areas thought to be dominated by others is well received. It is crucial to set the example for prospective followers by having female role models from the industry present and promote such professional careers.
- It may be important to remember that gender parity simply refers to having an equal amount of women and men in a given context when talking about it. In terms of gender equity, this means that parity can also be used to support the inclusion of men in industries where women predominate.
- Organizations are expected to take into account the status of other socially marginalized or minority groups and how human resource initiatives can be used to support a truly inclusive and diverse workforce.

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A Study on Impact of CSR on Women Empowerment

Dr. Harsha Suryawanshi

Assistant Professor,
Shri Shivaji Law College, Parbhani

Abstract:

Even after passing of quarter of 21st century, women empowerment is still a matter of serious concern globally. Women empowerment is not matter of concern of State only, but all components of society must work hand in hand to accomplish the goal. Contribution for women empowerment largely depends on economic resources earmarked for the same and for this, the corporate sector can play pivotal role. The Companies act, 2013 under section 135 makes provision for corporate social responsibility stating constitution of Corporate Social Responsibility Committee to formulate and recommend corporate social responsibility policy for the company. Schedule VII under section 135 enumerates causes for which company shall be liable to spend CSR fund comprising poverty, hunger, illiteracy eradication, environment sustainability, gender equality, indigenous sports, protection of national heritage, etc. Women constitute around half of the human population but at the same time are on first step of vulnerability. Hence, women and girls need special attention for bringing them in main stream of development. In country like India where concept of gender justice is gripping roots, promotion of gender equality through CSR is great booster dose.

Key words: CSR, gender, women, empowerment

Introduction:

Corporate Social Responsibility (CSR) is a recent trend in India introduced legally in India in 2011, proposed Bill of the Companies Act, 2013. The objective of CSR is to recognize and draw share from corporate sector for the society in terms of money/finance. The legitimate expectation from the corporate sector to contribute to socially backward classes is need of the day. Transformation of State from laissez faire to welfare State has entrusted the State with multiple and diverse responsibilities towards people. In a State like India where poverty and illiteracy are prominent, the State is more accountable than others. Hence, the State must engage all possible stakeholders in discharging its burden of welfare State which is a herculean task. One such stakeholder is the corporate sector that can commendably contribute financially. The State by making legislative provisions can engage the stakeholders and to this end the Companies Act, 2013 through section 135 makes it necessary to earmark and spend part of their profit for social cause comprising various facets such as eradication of poverty, illiteracy, gender equality, environment sustainability, etc. One of the SDGs of UN is to achieve gender equality and to empower girls and women. Gender inequalities are still deep rooted in every society. Women suffer from lack of access to decent work and face occupational segregation and gender wage gaps. In many situations they are denied access to basic education and health care and are victims of violence and discrimination. They are under-represented in political and economic decision-making processes.³ CSR can play pivotal role in eradication of gender discrimination and empowerment of girls and women.

Aims and Objectives of Study:

Present research work aims to study the impact of CSR on women empowerment in Maharashtra and has following objectives-

- i. To study impact of present provisions of CSR under the Companies Act, 2013 on gender equality.
- ii. To study or search uncovered areas through CSR with respect to gender equality.
- iii. To study barriers for utilization of CSR funds for gender equality.
- iv. To study scope of gender equality under CSR provisions of the Companies Act, 2013 in Maharashtra.

³<https://sdgs.un.org/topics/gender-equality-and-womens-empowerment> accessed on 14/05/2024

Hypothesis:

Hypothesis is an assumption that is statement of expectation or prediction that will be tested by research. It is pre-determination of researcher on proposed research topic and for present research work, the researcher has formulated following hypothesis-

- i. Amount spent on gender equality and empowerment of girls and women needs to be increased.
- ii. Areas of gender equality and empowerment of girls and women need to be widened.

Methodology:

The researcher largely has considered data from reference books, data maintained by Ministry of Corporate Affairs, journals, online resources. The researcher bases its research on secondary data and has undertaken doctrinal research methodology. The researcher has also studied legislative provisions for CSR and gender equality.

Literature Review:

Mauricio Andres and others(2019) unveils historical literature on corporate social responsibility. Yuan Chang (2024) explains that gender diversity in board of directors has positive and wide impact on gender equality through CSR. Letizia Carrera (2022) explains leveraging role of CSR on solidarity and social trust between companies and territorial communities. V. Kasturi (2015) demonstrates effective use of CSR by Hindustan Unilever under the name Shakti. Seema Sharma (2009) studies travel of CSR in India post liberalization from philanthropy-based model to multi-stakeholder requiring satisfaction of stakeholders and ignoring them could jeopardize the company's prospects in the community and concludes that future of CSR is bright in India. Eva Velasco Balmaseda and others (2023) concludes that although gender issues are receiving increasing attention and are on the business agenda, there is no significant increase in gender equality standards.

Corporate Social Responsibility-An Overview

CSR is a strategy undertaken by companies to not just grow profits but also take an active and positive social role in the world around them⁴. CSR is a self-regulating business model that helps a company by socially accountable to itself, its stakeholders and the public⁵. CSR is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives (Triple-Bottom Line Approach) while at the same time addressing the expectations of shareholders and stakeholders.

In corporation, four stakeholders contribute in its functioning, firstly the landlord that is the State, secondly, its financier, thirdly, labour and lastly, the entrepreneur. In return, the State as landlord receives revenue from the company, financier or banker receives interest on its investment, labour receives wages for investment of his labour while entrepreneur receives profit for taking risk of running the corporation by bringing all the stakeholders together. Besides, investors of company receive dividend from company as return of their investment. However, consumers and those who are not consumers directly, but associated with profit of company are far away from benefits from the corporation. CSR is one such form of institution that takes care of its responsibility towards such people or causes and thus, CSR also expects to bear responsibility of those components of society who are not directly connected with the corporation.

One such major component of society is women who constitute around half of the population of the society but are neglected in every sphere of life, domestically, economically, politically, religiously, educationally, and socially too. Women empowerment and gender equality components need to be focused by all States and it can be well achieved through CSR. To engage the corporate sector in discharging its social responsibility, legislative provisions have been made through the Companies Act, 2013. Section 135 endows responsibility on eligible companies to constitute CSR Committees in its company that shall be responsible for drafting policy for CSR and its execution.

⁴[https://www.techtarget.com/searchcio/definition/corporate-social-responsibility-CSR#:~:text=Corporate%20social%20responsibility%20\(CSR\)%20is,the%20related%20term%20corporate%20citizenship](https://www.techtarget.com/searchcio/definition/corporate-social-responsibility-CSR#:~:text=Corporate%20social%20responsibility%20(CSR)%20is,the%20related%20term%20corporate%20citizenship) accessed on 11th May 2024

⁵<https://www.investopedia.com/terms/c/corp-social-responsibility.asp> accessed on 11th May 2024

Schedule VII of the Companies Act, 2013 describes causes for which the companies can spend CSR funds and one of such cause is gender equality and women empowerment.

Gender Equality and Women Empowerment-

Gender equality refers to equal rights responsibilities and opportunities of women and men and girls and boys and does not mean that women and men will become the same but that women's and men's rights responsibilities and opportunities will not depend on whether they are born female or male. Gender equality implies that the interest and priorities of both women and men are taken into consideration, there by recognising the diversity of different groups of women and men. Gender equality is not a women's issue but should concern and fully engage men as well as women. Equality between women and men is seen both as a human right issue and as a precondition for and indicator of sustainable people centre development.⁶

Gender discrimination is not new to the society including developed countries especially when it is artificial. It needs to be healed as gender discrimination paralyses half of the population of the society and ultimately also affects productivity. Similarly, gender discrimination also results in exploitation of women in as well as out of the four walls, at home as well as at workplace. Thus, it violates human rights of women and is major human rights violation issue.

In view of these circumstances, Un has enumerated 'Gender Equality' as Sustainable Development Goal 5.

Gender equality is not only a fundamental human right but a necessary foundation for a peaceful prosperous and sustainable world. There has been progress over the last decades but the world is not on track to achieve gender equality by 2030. Sexual violence and exploitation, the unequal division of unpaid care and domestic work and discrimination in public office all remain huge barriers.⁷ SDG-5 expects following targets to be achieved by 2030,

5.1 End all forms of discrimination against all women and girls everywhere

5.2 Eliminate all forms of violence against all women and girls in the public and private spheres including trafficking and sexual and other types of exploitation.

5.3 Eliminate all harmful practices such as child, early and forced marriage and female genital mutilation.

5.4 Recognise and value unpaid care and domestic work through the provision of public services infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life

5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in a covenant with the program of action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences⁸

Almost all these targets find place in CSR policy making.

Problems Before SDG 5-

The Sustainable Development Goal Report of 2023 throws light on the achievements of the goal and hurdles faced. It also discusses estimated time span required for achievement of these goals.

⁶https://eige.europa.eu/publications-resources/thesaurus/terms/1059?language_content_entity=en accessed on 11th May 2024

⁷<https://www.un.org/sustainabledevelopment/gender-equality/> accessed on 14th May 2024

⁸Supra

At the current rate it will take an estimated 300 years to end child marriage, 286 years to close gaps in legal protection and remove discriminately loss 140 years for women to be represented equally in positions of power and leadership in the birthplace and 47 years to achieve equal representation in National parliament.⁹

CSR and Women Empowerment-

SDG 5 aims to achieve gender equality and empower all women and girls. Gender equality is a fundamental human right and is essential for achieving sustainable development. However, gender-based discrimination and violence against women are prevalent in many parts of the world, including India. Corporate philanthropy can play a vital role in achieving SDG 5 target by 5 ways-¹⁰

1. Supporting women's empowerment programsthat aim to promote gender equality by providing women with the necessary skills knowledge and resources to participate in decision making processes and lead successful lives.
2. Promoting women's health and wellbeing-Women's health and wellbeing are critical in achieving gender equality. However, women in India face numerous challenges including limited access to healthcare, high maternal mortality rates and violence against women. Corporate women's health and wellbeing by providing funding and resources to organisations that promote women's health and wellbeing. The program can include awareness campaigns, hills camps and training for healthcare professionals.
3. Supporting women's entrepreneurship

Women's entrepreneurship can play crucial role in promoting gender equality and women's economic employment. However, women entrepreneurs in India face numerous challenges including limited access to finance technology and markets. Corporate philanthropy can support women's entrepreneurship by providing funding training and mentorship to women entrepreneur

4. Supporting women's education

Education is critical in promoting gender equality and empowering women. Corporate philanthropy can support women's education by providing funding and resources to organisations that promote girl's education. These programs can include scholarships, school infrastructure development, and teacher training

5. Supporting women safety and security

Women safety and security are critical in achieving gender equality. Corporate philanthropy can support women safety and security by providing funding and resources to organisations that promote women safety and security. The programs can include awareness campaigns self-defence training and legal support.

Areas of Gender Equality Uncovered by CSR-

CSR policy focuses on women's health, reproductive rights, financing SHGs, girl's education, safety of women, etc. These areas does not include political rights of women and does not take into account higher education of girl students.

Political participation of women in India is quite low and according to Inter-Parliamentary Union (IPU) women make up to 14.44% of the 17thLoksabha.Political representation ensures listening to the issues of women and taking decisions on it. Inadequate representation surely affects decision making and ultimately becomes hurdle in women empowerment.

CSR policies primarily focus on education of girls up to schooling education. However, higher education which is quite costly remains ignored. Higher education, if included in CSR focuses on professional education or entrepreneurship skills. This ultimately hampers facilities in higher education institutions.

⁹ Supra

¹⁰<https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf> accessed on 10th May 2024

Conclusion-

Women empowerment through gender equality can achieve SDG 5 set out by the UN and proactive role can be played by CSR in the same. Arena of gender equality and women empowerment through CSR can be enhanced by including political participation of women and funding for higher education. Political participation can be enhanced by awareness programmes in that regard. CSR funding for higher education of girl students can achieve economic capabilities of women through respectable employments of female students. It can be achieved by promoting participation of higher educational institutions.

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A Study Of Causes And Effects Of Employee Turnover In Faculties Of Higher Educational Institutions With Referance To Sdg In India.

Prof. Patil Kalyani Raghvendra

Dayanand Commerce College, Latur, Maharashtra.

Abstract:

This research paper Focus on SDG 8 “Decent Work and Economic Growth” which have one of the aim to is ‘to promote policies to support job creations and growing enterprises; providing employment; decent work with equal pay ; promote youth employment, education and training; safe work environment etc. Goals of SDG 8 can be critically analyzed in higher education sector, which one is major contributing sector in Indian economy but facing various problems and tries to solve with this goal’s various aspects. Education sector have two major component i.e. teaching faculties and non-teaching staff. This research paper focus on causes and effects of employee turnover of teaching staff in higher educational institutions. It studies why teaching staff have intentions to change the job frequently.

Key words: Employee turnover, Faculties ,SDG-8, Higher education institutions.

Introduction:

In the present era world is facing many more challenges for survivance. Like Nation tries to build strength , Any state for effective utilization of resources, An industries for maximization of sale and production as well as an individual for better survivance of life ,increase standard of living and attain the expected growth in all aspects of life. For this wide purpose United Nation members in the year 2015 created 17 Sustainable Development Goals whivh Highlights the connections between Enviornmental,Social and economic aspects, with the aim of providing sustainability upto 2030.Recently , Education sector also suffers from various problems like absence of skilled employee , lack of efficiency in human resource , absence of prescribed qualification for higher education sector , tendancy of frequently job changing etc. In present era higher education institutions have a specific parameters for providing employment, like Qualification criteria, research work, experience, level of knowledge etc.are critically analysed. An individual have to fulfill these parameters for sustainability and due to the absence of fulfillment there is a chance of loosing the job also the educational institutions also fails to provide decent working condition which leads to , high rate of employee turnover.

Employee turnover means ‘Total number of employees who voluntarily leaves the job over a period of time’. Teaching staff members have various causes of changing job. Higher employee turnover rate adversely affects on the colleges, for this colleges have to adopt various retention strategies.

Literature Review:

1. Intenational journal of research in finance & management 2022 ; A research paper on ‘Conceptual analysis of employee turnover intentions’: This research paper reveals various causes , intention in professors job changing fact in higher education.
2. Employee turnover intentions in education institution of North Karnataka, Omkar Nagesh Deshpande : this research paper focus on various strategies of employee turnover as well as various reasons of employee turnover.
3. The influences impacting staff turnover in higher education, Obed figuezoa- Journal of management and sustainability : this research paper focus on retention strategies of higher educational institutions , also various challenges faced by employee turnover
4. Criterion for performance appraisal and comparison in higher educational institutions of Delhi- Ph.d thesis – Suman shokeen: this thesis reveals the method of appraisal which can encourage development in institution . also helps to reduce the rate of employee turnover.

Objectives of study:

1. To study causes of changing job intentions in higher education institution
2. To study the effects of employee turnover on higher education institution
3. To study the retention strategies of higher education institution.

Research Methodology:

Study of this research paper is based on Secondary data collected from various synopsis, research articles, Books, journals.

Employee turnover analysis:**➤ Causes of Employee Turnover Analysis :**

There are various causes of employee turnover which can be as:

- i. Leaching staff in higher education institution is highly qualified with Ph.d/ NET/SET, beside having higher qualification there is dissatisfaction in present job, because of absence decent workplace, lack of ethical practices, healthy working environment.
- ii. Faculties become eligible for grabbing new opportunities which provide higher satisfaction as compared to present job.
- iii. Financial satisfaction is core reason which leads higher turnover rate. As compared to working hours, workload assigned monetary returns are very less, specially non grant employees suffer from this cause.
- iv. As monetary returns are very scarce of non grant faculties, it becomes very difficult to attain better standard of living, as a result faculties may have intention to change the job. On the other hand granted faculties may get higher grade pay with promotion may change the present job.
- v. Work place environment also have a higher impact, unhealthy environment does not support for growth, job satisfaction.
- vi. Present job fails to attain expected growth rate, leads to turnover intentions

➤ Effects of employee turnover on higher education institutions:

By studying various causes of turnover, educational institutions also suffer from various adverse effects, as:

- i. As it is education sector, employee is considered as a mediator between students and education system, if faculty continuously changes the job performance of students become very poor, which is not a good sign for colleges.
- ii. Higher education institutions have to bear the higher cost for new recruitment like expenses of Advertisement, interview, training, salary, other monetary incentives. Any higher education institution does not frequently bear these expenses.
- iii. As experience of faculties increases in the same institution he/she attains the higher level of efficiency due to turnover psychology institution loses its efficient staff which may not get by hiring new employees which have a very bad impact.
- iv. Student and teacher have their own frequency of communication and teaching which gets disturbed which results in lower performance of students.
- v. Institutions or colleges have to conduct various other strategies for maintaining a decent workplace environment which also have high cost for better sustainability.

➤ Employee Retention Strategies:

It is true that high employee turnover rate is not affordable to every college and ultimately management tries to reduce rate by applying following strategies:

- i. Now a day's colleges adopting high pay strategies as the experience increases pay scale.
- ii. Colleges offering flexible work arrangements, which support maximum output of faculties and high performance appraisal.
- iii. Colleges arrange orientation, refresher courses, seminar workshops for effective stress management and psychological wellbeing.
- iv. Every educational institution must recognize contribution of faculties in development of institution and adopt motivational strategies for increase performance in future.
- v. Every educational institution is promoting to research work also make reimbursement of research expenses.

- vi. Time to time holidays ,types of leaves , working hours, duties of faculties should be mentioned in policy and should be followed time to time
- vii. Improve ethical practices in institute.

Findings :

From above analysis following facts can be considered:

1. Employee is heart of organization , they should hold, retained and motivated properly which require proper retention strategies to be implemented.
2. There are various clauses like dissatisfaction, greater opportunities, low income , low grooming high experience but lower grade pay are the important causes leads to employee turnover tendencies.
3. As various causes , it affects adversely to the organization which may result into high cost of holding employee, also colleges / institution are not able to sustain in present era if there is high turnover rate.
4. For facing competition it should have decent work place and ethical practices also should have grievances forum for faculties which helps to reduce employee turnover rate.

Conclusion:

As per SDG 8.6 there should be some requirement to reduce employee turnover rate which have to be inclusive of proper training, decent workplace which is not a usual practice in educational institution. Also 8.1 focus on economic development of every employee leads to higher output . In education sector as per SDG 8.5 there should be equal pay scale and decent work for women and men.

Every educational institution should follow the SDG its various component which help to reduce employee turnover rate and provide better working environment , which may reduce waste of resources and brings prosperity. Improve working environment which will bring bright educational future in India.

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4. Research paper on employee turnover by Mr.Omkar Nagesh Deshpande <https://www.researchgate.net/publication/363595729> EMPLOYEE TURNOVER INTENTIONS IN EDUCATION INSTITUTIONS OF NORTH KARNATAKA
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A Study On Promotional Strategies Of Bank Employees

¹Miss. Pooja D. Bhosale, ²Dr. Arun B. Dhalgade

Assistant Professor, Dayanand College of Commerce, Latur.

²Principal, Shivneri Mahavidyalaya, Tq. ShirurAnantapal, Dist: Latur.

Abstract: - The concept of Promotional Strategies is connected with the method used to give promotion and transfer to the employees with increased salary and status. It deals with determination of appropriate method to select right person at right job so that employees can feel satisfied and productive. The prime objective of this research work is to study the satisfaction level of employees or their happiness towards the method or strategies used to promote them and the effect on productivity of employees after given promotion to them or others in banks. This study is focused on bank employees in private and public sectors who work on contractual or permanent basis. This study is conducted to find out remedies to do increase marketing of employees of banks and giving them more clear view about the opinion of employees towards promotional system in banks.

Key Words: - performance appraisal, Strategies of promotion, job satisfaction job.

Introduction

Strategies used in the organisation for promotion of employees is directly connected with the succession planning in the organisation. Human Resources Management is the most considerable part of all kind of business when it comes to bank we easily focus on the infrastructure and services provided by banks but the people who provides services should be promoted according to their skill. Promotion they get impacted on the people who are not got promoted and the people who are not even considered for promotion so the method used to arrange performance appraisal should be relevant. The success of bank is dependent upon Human Resource they have in their bank and the motivation they get to do their work. Imposing work on employees is one part and employees doing work by themselves with happiness is another thing and self motivated employees is real gift for any business organisation. Self motivation comes from their need as we studied in Herzberg's motivation theory, motivating factors are the factors which give employees self motivation to work E.g. Achievement, recognition, growth opportunities are the factors which keep them motivated and promotion of employees creates greed in their mind for getting known by head and all the co-workers in the bank.

Promotion is the best form of recognizing and rewarding the employees for better performance. When employees get promoted by taking into account their performance they get motivated to do their job with satisfaction but if the promotion they get is not appropriate to their efforts they automatically push towards demotivation. Sometimes demotivation or wrong method or strategies used for Promotion can turn our employees into unproductive employees and this will harm bank's profit level also. It is the most important duty of employer to do necessary steps to conduct performance appraisal in proper way so that appropriate person will be promoted and if necessary able person will be considered for demotion and then they will get training. The aim of this study is to determine the happiness level of employees with strategies used for promotion of HR and to know the connection between productivity of employees and strategies used to promote them. If necessary remedies will be considered to change strategies of employees.

Key Concept /Definition

- Edwin B. Flippo, "A promotion involves a change from one job to another that is better in terms of status and responsibilities."
- Scott & Spriegel, "A promotion is the transfer of an employee to a job that pays more money or that enjoys some better status."
- In the words of Paul Pigors and Charles Myers, "Promotion is an advancement of an employee to a better job, better in terms of greater responsibilities, more prestige or status, greater skill and specially increased rate of pay or salary".
- Thus promotion is a term which covers a change and calls for greater responsibilities, and usually involves higher pay and better terms and conditions of service and, therefore, a higher status or rank.

- Promotion, in the words of Dr. L. D. White, “means an appointment from a given position to a more difficult type of work and greater responsibility accompanied by change of title and usually an increase in pay.” Real promotion means rising to a higher post carrying a higher grade

Review of Literature

Flipo (in Hasibuan, 2018: 108) states that promotion is a move from one position to another that has a higher status and responsibility. Usually move to a higher position includes an increase in salary / other wages, although this is not always the case. According to Sikula (in Hasibuan, 2018:108), technically a promotion is a move in one position to another that involves both wages and status increases. According to Ardana et. Al (in I Gede Purnawan Adi et. Al., 2016) states there are basics in job promotions include seniority, job performance, loyalty level, and honesty.

Gupta (2012) defined promotion as the advancement of the employee from low job responsibilities to take higher responsibilities of more status in an organisation with an increased salary. The promotions are regarded as rewards for effort and an expression of appreciation from the organisation that the individual is an asset to the team. These attributes are perceived to be self- fulfilling, an achievement and a career advancement. However, the concept of the public service is that promotion in public sectors should depend on a budget established for accomplishing the process of promoting employees and the vacancy posts should be advertised so as to have enough potential applicants. Unfortunately, that is not the case in Namibia as most employees in the public sector claim that the promotion is based on who you know and not what you know. In other words, it is believed that in order to be promoted one needs to invest in interpersonal relationships (politics) with the right circle of people than putting in the work to benefit the organisation or company.

According to Sondang (2008), the promotional terms are as follows:

- Experience. With more experience expected higher ability, more ideas and so on.
- Level of education. There are also companies that require minimal education to be promoted in certain positions. The reason is that with higher education is expected to think better.
- Loyalty. With high loyalty can be expected, among others, greater responsibility.
- Honesty. For the promotion of certain positions may be a matter of honesty. For example for the cashier position in general terms of honesty is a major condition that must be considered.
- Responsible. Sometimes it is often necessary for a company to have a substantial responsibility, so the issue of responsibility is a key requirement for promotion.
- The cleverness of getting along. For example, a position for a salesman is very important to determine the cleverness of associating as a condition of promotion of officers.
- Work performance. In general, every company always includes conditions for performance.
- Initiative and creative. For terms of promotion of positions of certain positions, perhaps the requirement of the level of initiative and creative is a condition that must be considered. This is because for the position is very necessary initiative and creativity.

Research Scope

This study is conducted to analyse the methods and strategies used to promote the bank employees. Private and public sectors banks are covered to study different strategies to retain employees in the banks by giving them promotion. How performance appraisal system considers each and every employee will be studied to do proper analysis of their promotion. Marketing of employees is another important part of any organisation but to know the bank's implementation about marketing system in employees this study is conducted and obtained the happiness and satisfaction level of employees towards strategies used in banks to upgrade them

We all know about the promotion of product in banks and these are popular concepts but promotion of employees is also prominent part of success of Business. Because if strategies are traditional and not updated with current situation, the base of promotion for employees will remain lengthy and unsatisfactory. After all training them is also

based on performance appraisal and performance appraisal directly helps head of banks to promote or demote the employees. The study will bring this topic on focus.

Object of the research

1. To know the strategies which are used to promote employees are appropriate or not.
2. To study the state of their quality family life.
3. To understand impact of promotional Strategies on profit level.
4. To get information about satisfaction level of employees about promotions.

Research Methodology:-

The information obtained from private and public sector bank's employees situated in Latur district and surrounding areas. Population of research is bank employees work on permanent and contractual basis with the number of employees as many as 50 employees. This sampling uses simple random method.

To accomplish this study data is collected by primary and secondary data source. A structured questionnaire is used to collect the responses from the employees of the bank in the city.

- Primary Data – Filled up questionnaire from 50 respondents.
- Secondary data – Research papers, internet based data of working people, books and thoughts of thinkers in HRM, Newspaper article are used.

Hypothesis of the study:-

1. Bank employees are happy with promotional strategies. (H0)

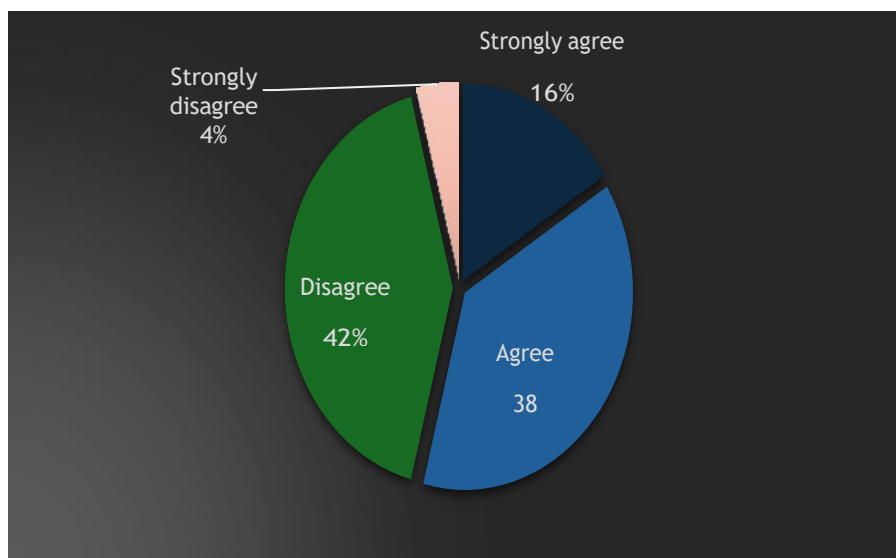
According to only 12% respondents the state of happiness is very good therefore the hypothesis is rejected

2. Promotional strategies affect on productivity of employees.(H1)

50 % respondents have stated that their productivity is affected by promotional strategies hence this hypothesis is accepted

Data Analysis and Interpretation

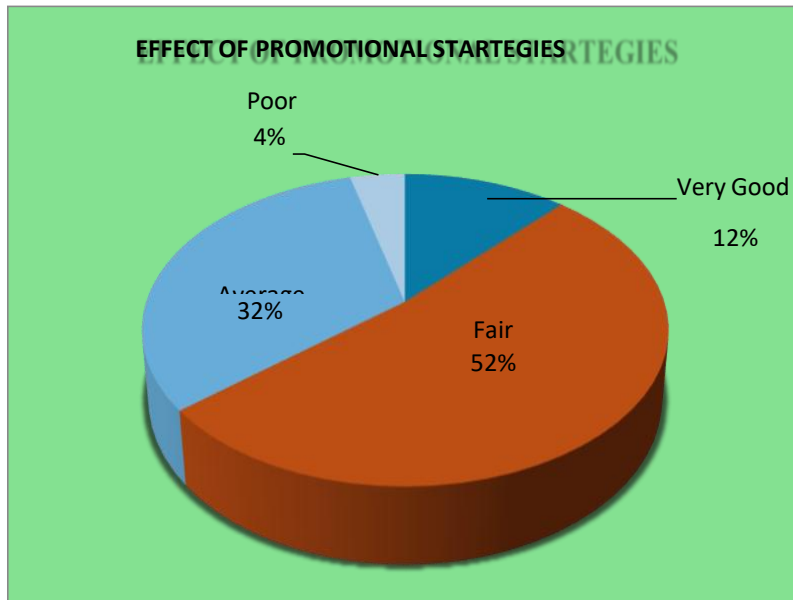
Graph 1:- Promotional Strategies are satisfactory.



Only 16% of the respondents have stated that they are happy with used strategies at the same time 42% of the respondents have stated that disagree with the statement. 38% of them say they are agree but 4% of the total are

strongly disagree.

Graph 2:- Opinion about the strategies used to promote them.



Only 12% of the employees working in banks have stated that their Strategies of promotion is very good at the same time 32% of them have straight way mentioned that the strategies of their promotion is average in nature.

Graph -3 Productivity get affected because of promotion.



19 % of the employees working in banks have accepted that they always affect due to promotion. According to 45% of employees some time they affect from promotion whereas only 19% respondents have reacted in a positive mode.

Table 1:- Income level of employees affected by promotional strategies in positive manner.

Sr. No	Particulars	No of Respondents (in %)
1	Strongly Agree	26
2	Agree	36
3	Disagree	20

4	Strongly Disagree	18
Total		100

Table-2 method used in performance appraisal is appropriate.

Sr. No	Particulars	No of Respondents (in %)
1	Strongly Agree	29
2	Agree	39
3	Disagree	28
4	Strongly Disagree	4
Total		100

Finding & Concussions

1. Strategies have used are very traditional and suitable for today’s working situation.
2. Promoting employees directly affect their productivity.
3. Where employees are happy with method of strategies that department grow faster. Maximum employees are not satisfied with methods used to promote them
4. There is direct link between promotional strategies and productivity of employees

Suggestions:-

1. Marketing of human resource should be encouraged in banks.
2. Methods should be updated with market situation.
3. Banks should promote contract based jobs for employees to attract fresher.
4. Higher authority should accept suggestions of employees.
5. Provide good working conditions and facilities according to promotions.
6. Higher authority must check on circumstances of promotions.
7. Performance appraisal should be done appropriately and regularly without partiality.
8. Employees should be aware about performance appraisal so that they could focus on their work to get promoted
9. Training must be provided immediately after performance appraisal to make employees ready for next performance appraisal and promotion.

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Job Satisfaction of Senior College Teachers and It'S Impact on Worklife

¹Dr. Pawar Pandurang Tukaram, ²Mr. Mundada Premsagar Santoshkumar

¹Research Supervisor, ShivajiMahavidalaya, Renapur.

²Research Scholar, ShivajiMahavidalaya, Renapur.

➤ **Introduction:**

Satisfaction is the thing for which each and every person is working. Many times we consider satisfaction in material facts but there is another side of coin, several people find their satisfaction in immaterial facts. Work is the way to find our own satisfaction of Life. Empowerment of Nation depends on the education of its people. Only education has the power to transform the normal population into qualitative Human resource. In today's era, Human resource development is time-honored as a foremost factor that explains the degree of difference performance in economic and social aspects of the country. The developing country and educationally empowering country like India, higher education on a mass and widespread scale provides the basic structure on which we can raise the future structure of the entire national development. In this regard, Technical Education plays a fundamental role in human resource development of the Nation by creating vocational manpower, increasing industrial productivity and improving the quality of life. Skilled Education covers courses and programmes in management, engineering, technology, architecture, pharmacy, town planning, applied arts and crafts, hotel management and catering technology. India, the World's largest democracy has shown a tremendous growth of its techno-economic ability, over the last 64 years after Independence. Sustaining an economic growth of 7 to 8% during the last 10 years, attaining self reliance in strategic sectors and in key areas including food security, making Indian economics of the world and above all making India proud by meeting the requirement of specialized and technical manpower.

Job should be satisfying, which is the source of employees' satisfaction. If the job can't satisfy the employee, such unsatisfied employee can't give effective results. Therefore, at least in the interest of desired performance, the entrepreneurs should be careful enough about job satisfaction. As gentle point of view is that, human resource should not be considered as just a force to accomplish maximum possible productivity but their satisfaction and welfare are also the main issues. Only men are not for the organization but organization is also for men. Today investment in human resource is considered as 'human capital investment'. There are also good returns on such capital investment. Today, focus is being diverted from material, machines and money towards human resource. Human must be satisfied with the nature and operation of the job assigned. The concept of satisfaction is closely relates with life ideology. In the various researches many rich people are found unsatisfied whereas many poor people are found satisfied. It all depends upon attitude towards the fulfillment of needs. Resources for fulfillment of needs are to be increased or needs to be minimized and controlled. The entrepreneur must take all possible efforts to make the humans satisfied through assignment of duties. Another important factor in job satisfaction is employees' proper orientation in relation to the satisfaction. Thirst and greed for satisfaction will not end; employee should be wise enough to define their satisfaction and to develop their satisfied nature within them. Success of the business is ultimately depends upon human resource contribution and only satisfied human resource can give object oriented performance. So, job satisfaction to employees should be recognized as important aspect for the accomplishment of all desired results.

➤ **Limitation of the Study**

- The present study is limited to Latur city only and has reflected the thinking of respondents of the said area and which may be different from the thinking of the other city.
- Response from only senior college teachers has been taken which may vary from the other classes of teachers.
- Duration of last 10years has been decided for secondary data collection; therefore change in time period may vary the findings.
- Convenience sampling method has been followed for primary data collection; if complete survey method is adopted for the study and findings may vary.

➤ **Objectives of Study:**

- To know about the job satisfaction levels of senior college teachers
- To understand the factors which influence the job satisfaction of senior college teachers?
- To identify the impact of job satisfaction on their performance
- To identify the factors which improves the satisfaction level of senior college teachers?

➤ **Research Methodology:**

This research has tried to collect most of the related information with tools like Primary and secondary collection of data. Primary data is original, collected by researcher through structured questionnaire for the first time for any investigation and used for statistical analysis. The primary data collection is made by personally visiting the private sector employees working in Latur city.

Collection of secondary data is a purposive gathering of information relevant to the subject matter of the study from the units under investigation. Secondary data are means data collected by other persons. It is mostly published in newspapers, periodicals Journals and authentic websites etc. Secondary data has been collected from the websites, annual reports.

➤ **Scope of Study:**

The Scope of the study is restricted to the Latur City only. In this study researcher has evaluated the job satisfaction level among the senior college teachers in Latur city and the impact of their job satisfaction level on work. The findings of the study and conclusions are drawn on the basis of information collected by using questionnaire and personal communication with 200 respondents.

Periodical Scope:-

For this research study, the data has been collected from the past 10 years for the Secondary data, and 5 years for the primary data.

Geographical Scope:-

The data for this research is collected from Latur city. The researcher taken into consideration selected senior colleges for the study.

Operational Scope:

The study concentrates on perceptions and views of senior college teachers regarding job satisfaction and their impact on performance. The operational scope of the study includes mainly teaching staff of the selected senior college affiliated to Swami RamanandTeerthMarathwada University, Nanded.

➤ **Main body/ Explanation:**

The primary data was collected from 20 colleges affiliated to the SRTMU, Nanded. 200 questionnaires were collected from the concern teachers to know their job satisfaction level. Collected data has been presented in tabular and graphical form.

1. **Stream of the respondents**

Sr. No.	Stream	No. of Respondents	(%)
1	Commerce	46	23.0%
2	Science	38	19.0%
3	Arts	42	21.0%
4	Law	38	19.0%
5	Other	36	18.0%
Total		200	100%

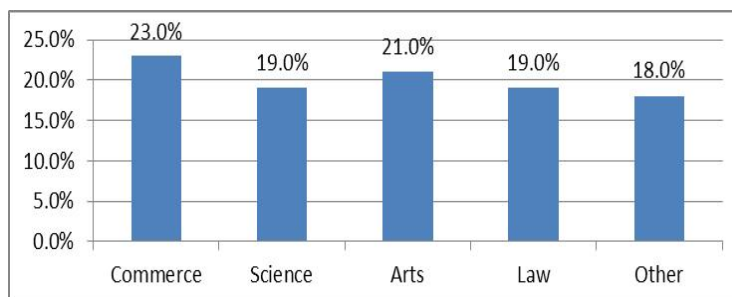


Table No. 01 shows the information about various stream of teachers from Latur city, total 200 responded were asked about their stream out of 200. 46 (23%) of respondents were belongs to Commerce stream 42 (21%) of respondents were from Arts stream, 38 (19%) respondents belongs to Science and Law stream, 36 (18%) from Other (Pharmacy, Architecture etc.) all from Latur city.

2. **Nature of Job**

Sr. No.	Nature of Job	No. of Respondents	Percentage
1	Aided	43	21.5%
2	Unaided/Contract	68	34.0%
5	CHB	89	44.5%
Total		200	100%

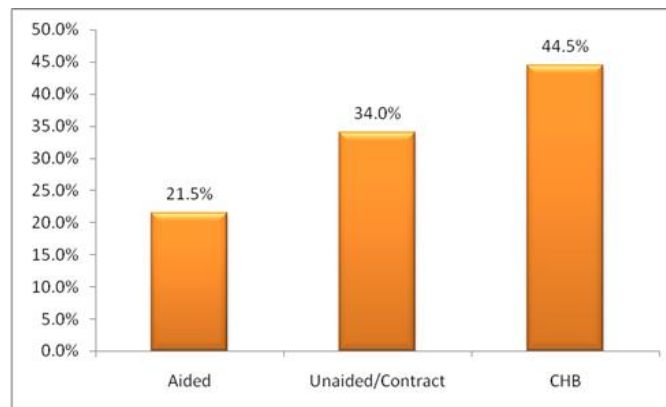


Table No. 2 shows the information about nature of job. Out of 200 respondents 89 respondents (44.5%) were CHB (Clock Hour Basis), 68 respondents (34%) were unaided/contract basis and only 43 respondents (21.5%) were aided.

3. **Monthly Income of the respondents**

Sr. No.	Monthly Income	No. of Respondents	Percentage
1	Below Rs. 10000	62	31%
2	Rs. 10001 to 20000	60	30%
3	Rs. 20001 to 40000	26	13%
4	Above Rs. 40000	52	26%
Total		200	100%

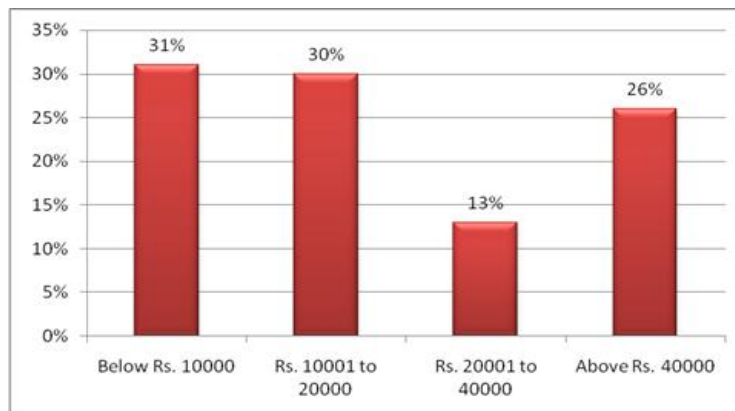


Table No.3 shows the information about the monthly income of the respondents. Out of the total 200 respondents, 62 respondents (31%) were answered with the option as ‘Below Rs. 10,000/-’, 60 respondents (30%) were replied with option ‘Rs. 10,001/- to Rs.20000/-’, 52 respondents (26%) were answered with the option as ‘above Rs.40,000/-’ and only 26 respondents (13%) were given answer as ‘Rs.20,001/- to Rs.40,000/-’ to the question about their monthly income.

4. Current Level of Job Satisfaction

Sr. No.	Level of Job Satisfaction	No. of Respondents	Percentage
1	Considerable Improvement	47	23.5%
2	Partial Improvement	37	18.5%
3	No Change	78	39.0%
4	Decline More	38	19.0%
Total		200	100%

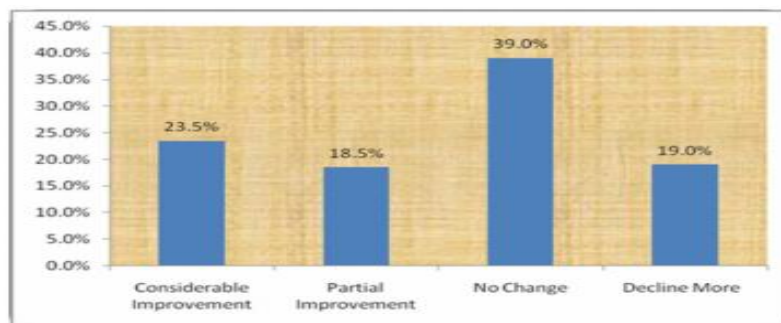


Table No.4 shows the information about the current level of job satisfaction of the respondents. Out of the total 200 respondents, 78 respondents (39%) were answered with the option as no change in level of job satisfaction, 47 respondents (23.5%) were replied that there is considerable improvement, 38 respondents (19%) were answered that the level of satisfaction decline more and only 37 respondents (18.5%) were answered that there is partial improvement is level of job satisfaction.

5. Senior Authority Take Sincere Attempts to Reduce Dissatisfaction

Sr. No.	Particulars	No. of Respondents	Percentage
1	Yes	113	56.5%
2	No	87	43.5%
Total		200	100%

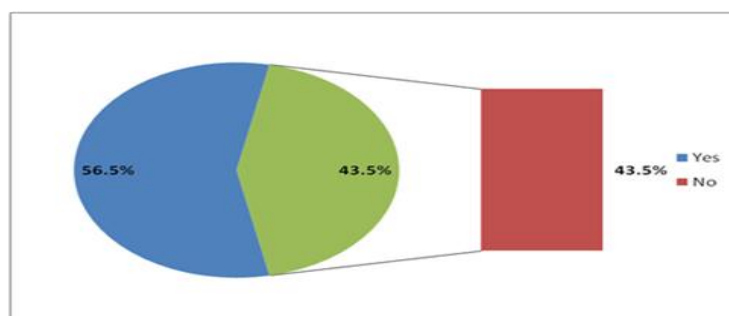


Table No.5 shows the information about the sincere attempts of the senior authority to reduce dissatisfaction. Out of the total 200 respondents, 113 respondents (56.5%) were answered yes as senior authority takes sincere attempts to reduce dissatisfaction of junior colleagues, 87 respondents (43.5%) were replied no as senior authority takes sincere attempts to reduce dissatisfaction of junior colleagues.

6. Institutional Encouragement to Improve Work Quality

Sr. No.	Particulars	No. of Respondents	Percentage
1	Always	87	43.5%
2	Sometime	47	23.5%
3	Few time	61	30.5%
4	Never	5	2.5%
Total		200	100%

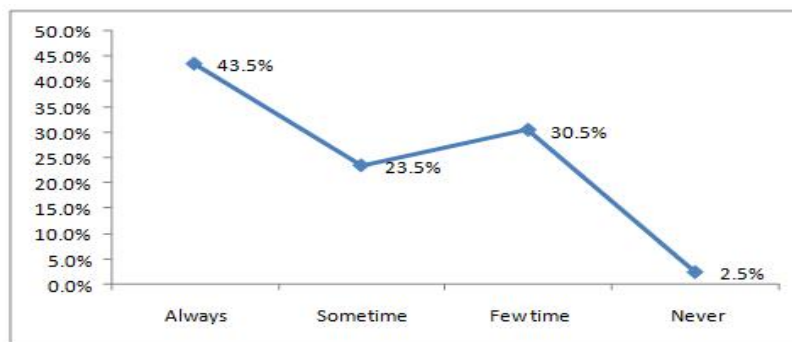


Table No. 06 shows the information about the encouragement made by institution helps to improve work quality of the respondents. Out of the total 200 respondents, 87 respondents (43.5%) were answered that institutional encouragement was always made to improve quality of work, 61 respondents (30.5%) were replied that few time it helps to improve, 47 respondents (23.5%) were answered that sometime it helps to improve quality of work and only 05 respondents (2.5%) were answered that encouragement made by institution never helps to improve quality of work.

7. Factors Affecting Job Satisfaction

Sr. No.	Factors	No. of Respondents	Percentage
1	Remuneration	78	39.0%
2	Job Security	54	27.0%
3	Promotion	27	13.5%
4	Work Environment	26	13.0%
5	Others	15	7.5%
Total		200	100%

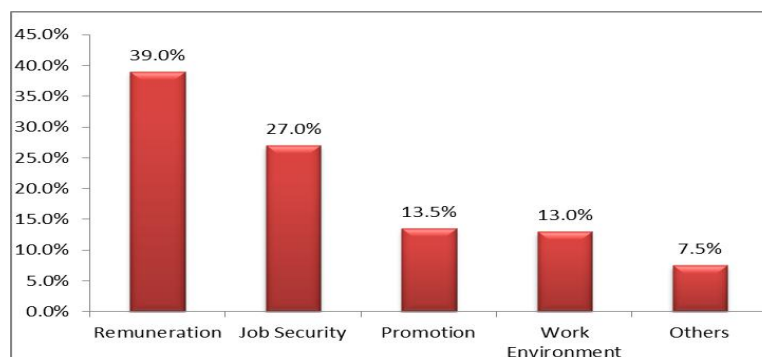


Table No. 07 shows the information about the factors affecting job satisfaction of the respondents. Out of the total 200 respondents, 78 respondents (39%) were answered that remuneration is the factor gives more affect on job satisfaction, 54 respondents (27%) were replied that job security also affect job satisfaction, 27 respondents (13.5%) were answered that the promotion scheme also affect on job satisfaction, 26 respondents (13%) were answered that the work environment affect on job satisfaction and 15 respondents (7.5%) were answered that any other factors like employee welfare scheme, infrastructure facility, etc affect on job satisfaction.

8. Regular Promotion Affects on Job Satisfaction

Sr. No.	Particulars	No. of Respondents	Percentage
1	Completely	96	48.0%
2	Upto Great Extent	49	24.5%
3	Partial	32	16.0%
4	Can't Say	23	11.5%
Total		200	100%

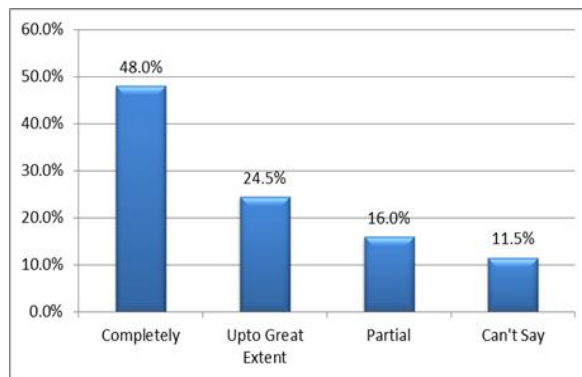


Table No. 08 shows the information about regular promotion affects on job satisfaction. A promotion is an intrinsic motivation which helps to improve the performance of employee. Hence to get this information about promotion scheme some questions were being asked to the respondents. Out of which following responses have been received. 96 respondents (48%) answered that regular promotion scheme affects completely on job satisfaction, 49 respondents (24.5%) answered that it affects up to great extent on job satisfaction, 32 respondents (16%) answered it affects partially on job satisfaction and only 23 respondents (11.5%) cannot say about this.

➤ **Findings:**

- The job satisfaction level of teachers from different colleges is different from each other.
- A study consists of college teachers from different disciplines like commerce, science, arts, law computer science, pharmacy etc.
- The cordial and smooth relationship among the teachers is high in most of the colleges which is a positive symbol of job satisfaction.
- As per study, the teachers are dissatisfied with the job and working environment.
- 44.5% of the respondents are completely satisfied with their level of satisfaction with their job.
- Stressful interpersonal relation with colleague disturbs job satisfaction.
- Performance of the teachers is depending upon job satisfaction.
- Nature of job gives great impact on work efficiency.

➤ **Conclusion of the study:**

This study mainly focused on the satisfaction level of college teacher of selected colleges. From this study it has been found that teachers are satisfied in some areas like work environment, cordial relationship with colleagues but at the same time dissatisfied in other areas like salary, promotion scheme, recognition of work, etc.

Job satisfaction among teachers is ultimately impacting on student's growth and development because a satisfied teacher can provide productive knowledge to the students. This study concludes that for accomplishment of institutional objective, there is need of satisfied workforce. Therefore, job satisfaction of teacher is the urge of the time. Significantly, job satisfaction and performance is very important to the continuing progress of educational institutes. Hence, Job satisfaction is the degree to which one feels good about job.

➤ **Suggestions of the study:**

- Proper efforts should be taken by the management committees or colleges by introducing new schemes or by modification of the existing policies in the security of job, salary regularisation, and extra benefits to the college teachers. College teachers are the human resource i.e. the asset of the college so that they need to be satisfied.
- There should be a provision for better medical facilities for the health care of teachers with their family members. Provision for accommodation facility, health care must be provided so that teachers will be more satisfied with the job.
- Many colleges are already launched certain quality improvement programme for their teachers. But it is necessary to add on certain things which are necessary to add on certain things which are necessary for development.
- Salary hike is one of the criteria which affects over the satisfaction level of teachers. Proper payment hike should be given on regular basis to teachers.
- Recognition of work, proper delegation of authorities and motivation are the essential management functions. Therefore, efficient employees should be recognized and motivated for further development.
- The salary structure of granted and non-granted institutions should be same and equitable. The scale of dissatisfaction and frustration of non-grant teachers is more as compared to granted teachers.
- The unwanted stress level among the teacher should have to be reduced. If the college authorities are creating positive environment among the teachers in a friendly manner then the unwanted stress will be managed.

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The Role Of Dcc Bank In Agricultural Development With Special Reference To The Latur District

¹Dr. Shivprasad Dongre, ²Mr. Rahul Shinde

¹(Research Guide)

² (Research Scholar)

ABSTRACT

India is following the footprints of democratic, socialist and welfare state. Since from independence, the Indian Government has been striving hard through her efforts to support the agriculture & rural development with the help of national & state schemes that brings visible improvement in rural & semi urban areas. So, it clearly states that many responsibilities fall on the Latur DCC bank shoulder in order to provide finance among the rural people and brings them on the path of horizon of inclusive development and keep them intact in that position for longer period of time. As we are witnessed that the Latur DCC bank is reaching out the last section of the people through the Self-Help Groups (SHGs) scheme initiated by NABARD especially for financially weak group of women & rendering the effective services that helps to uplift the deprived section of the people so far. The Self-Help Groups (SHGs) are now working with the help of 121 network branches of bank throughout the Latur District.

Keywords: SHGs, NABARD, Schemes etc.

INTRODUCTION

India is a land of farmers nearly about 70 percent of Indian population depends upon agriculture sector directly or indirectly so that India needs to pay special heed to agriculture sector from the grassroot level. Certainly, such heeds may be in the form of continuous flow of credit for different purposes including farming sector, because section of the people in India are still economically poor and backward since from the long time. In the longer run of time it will assist to transform the village into self-reliant themselves by ensuring the credit flow towards the ground level economy. We need to step up the action plan and ensure to provide as much as credit in an organize manner and try to take concrete action to strengthen the existing cooperative banks further in better coordinated manner. As we are known about the fact that District Central Cooperative banks assisting and guiding the primary societies at village level.

This research significantly making inroads into banking operations with reference to the lending aspects towards Agriculture development by District Central Co-operative bank at Latur District level, number of people are still engaged in the primary as well as allied activities rather than much of the Industrial activities.

IMPORTANCE OF STUDY

As far as concern about the funding, the Latur DCC Bank is having the different sources of funds either in the form of Internal or External sources such as the share capital, reserves and other funds, deposits, borrowings from government, NABARD, Maharashtra State Cooperative Bank and commercial banks. The performance of the any bank that depends upon the utilisation of funds in effective & efficacious manner that it shows the proper management being in placed. So, it is an attempt to understand & analyse the funds being utilised by the Latur District Central Cooperative banks in the development of Latur district & farmers in particular. Generally, funds are being channelised from apex bank to lower level of Primary Agricultural Credit societies (PACS) that helps to attainment of the rural development objectives.

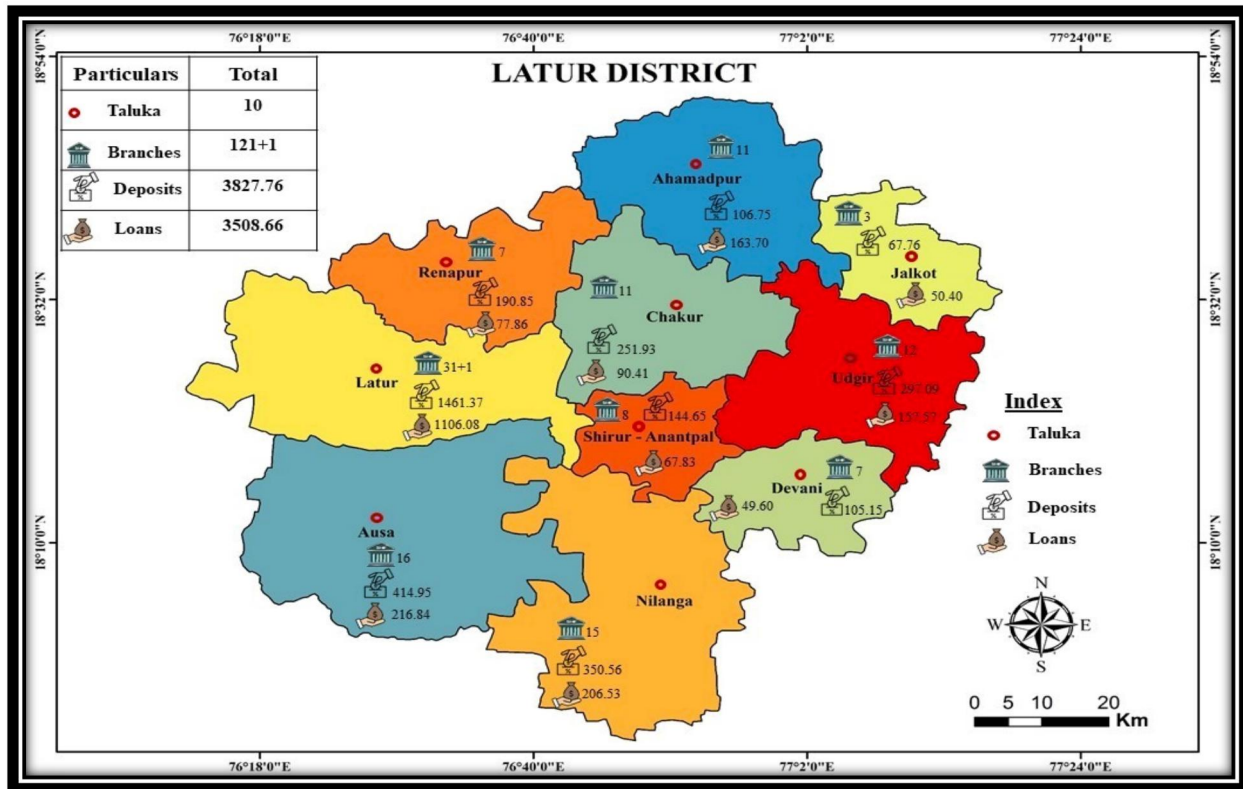
STATEMENT OF THE PROBLEM

It seems that the role of Latur DCC Bank in the area of agricultural development in Latur District is still remain underexplored & enough to understood the effectiveness, deeply contributions & its impact among on the wider section of people. Also, with the help of this research study it aims to take the cognizance of Latur DCC bank roles & its challenges in the agricultural landscape of Latur District.

STUDY AREA:

In a research study, study area refers to considered as geographical area for analysis & discussion. As we are discussing the Latur District Central Co-operative (LDCC) Bank that comprise the Latur District in the state of Maharashtra, India.

Geography: Today, the Latur is considered as district which is located or lies in the south-eastern part of the Maharashtra. Basically, most its people are dependent on the agricultural activities so its economy is largely considered anAgro-based economies which is totally based on agriculture sector & its allied activities.



REVIEW OF LITERATURE

REVIEW OF BOOKS

1) *Goel (2006)*

The titled of his book “Co-operative Legislation- Trends and Dimensions”, he stated that in the world, the Indian co-operative movement would be considered one of the largest cooperative movements. This co-operative structured was based on the Raiffeisen model & Rochdale principles. The author role highlighted the role of National Co-operative Development Corporation (NCDC) & consider as premier financial institution in India for promoting sustainable development. He also brought into the co-operative scenario & administrative structure of framework. In his one of the chapters, he stressed upon Cooperative legislation, evolution & growth of cooperative law such as 1904 act & 1912 act, recommendation of various commissions & committees, along with the author advocated for the rationality of various legislation that could push cooperative movement in direction, Multi-State Co-operative Societies Act, etc.

REVIEW OF PH.D. THESIS

1. *Agarwal (2008)* The Author written a book titled on the, “Modem Banking of India”, had highlighted & explained the aspects that fall in the banking system since its inception such as the evolution of Indian banking system over the years, classification or types of banks, rules & regulations being done by the RBI for banks, concept of an

universal banking system, retail banking, pricing of deposits, deposit schemes, appraisal of Small and Medium Enterprises, Non-Performing Assets (NPAs), Basel norms for banks, E-banking, cyber security & law etc.

2. *Sandhu (2011)* He undertook a study titled on the, “Banking & Rural Development: Promises & its Performance” and he tried his best to establish and give due importance to the credit needs of an agriculture & non-agricultural sector as well as rural sector. This book highlighted the phases or history of Commercial Banking system in India since from its inception, credit system towards rural development, presence of agriculture-based industry for the development of rural economy.

REVIEW OF RESEARCH ARTICLES

1. *Ganesan. N. (2009)* The researcher made an attempt a study on “Data Envelopment Analysis of State & District Co-operative Banks in India - Exploratory results”. While carrying out research few samples size was taken i.e., 30 State Co-operative Banks (SCBs) & 20 District Central Co-operative Banks (DCCBs) in India were considered for conclusive results. With the help of direct empirical method, the researcher analysed the performance of State Co-operative Banks (SCBs) & District Central Co-operative Banks (DCCBs). Their study highlighted the self-efficiency & performance of SCBs and DCCBs in terms of technical efficiency.

OBJECTIVES OF THE STUDY

- 1) To study the performance of their Lending aspects.
- 2) To analyse the performance status of District Central co-operative bank of Latur District.

HYPOTHESIS

H1: The Latur District Co-operative Central (DCC) bank is played crucial role in enhancing the various funds in overall Agricultural & rural development of Latur District.

H2: The Latur DCC Bank has offered the satisfactory Lending practices i.e., short term loans to the agricultural development.

RESEARCH METHODOLOGY & DATA COLLECTION

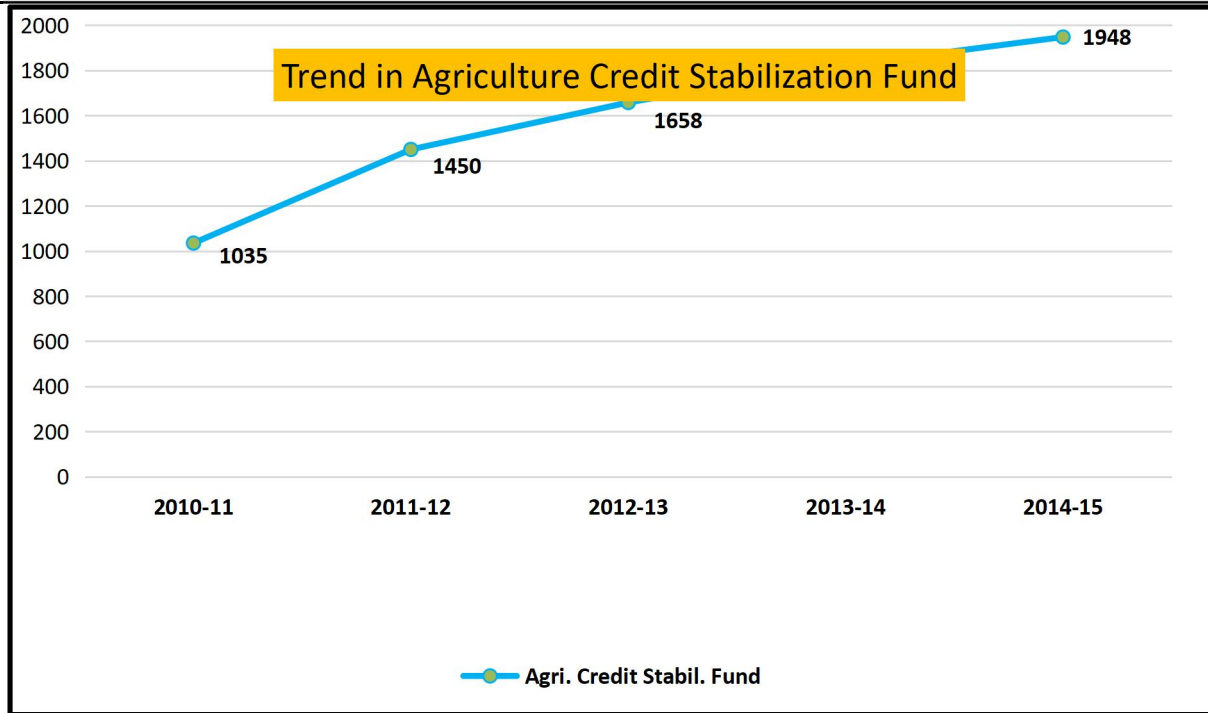
In order to carry out comprehensive study of Latur DCC bank in the development of primary sector, the researcher has conducted thoroughly research based on the secondary sources that helps to understand the insights of performance regarding the Latur DCC bank particularly with respect to agriculture sector & in general development of Latur District & its talukas.

DATA ANALYSIS & INTERPRETATION OF LATUR DCC BANK

Analysis of Hypothesis Testing

VARIABLE: AGRICULTURE CREDIT STABILIZATION FUND

Year		2010-11	2011-12	2012-13	2013-14	2014-15
No. of Offices with H.O. (In Numbers)		113	113	113	113	113
Reserve & Other Funds	Statutory Reserve Funds	2753	3562	3872	4169	4401
	Agriculture Credit Stabilisation Fund	1035	1450	1658	1823	1948
	Other Reserve	15141	16663	24576	18361	18043
	Total Reserve Funds	18929	21675	30106	24353	24392



All these financial indicators lead to positive performance & create the capital formation & able to create more money in the local economy & certainly it will start to make a ripple effect on other parameters also for. Ex. Diversifying the loans & advances for the Agricultural sector. Also, the Latur DCC bank were able to maintain the reserve of Agriculture

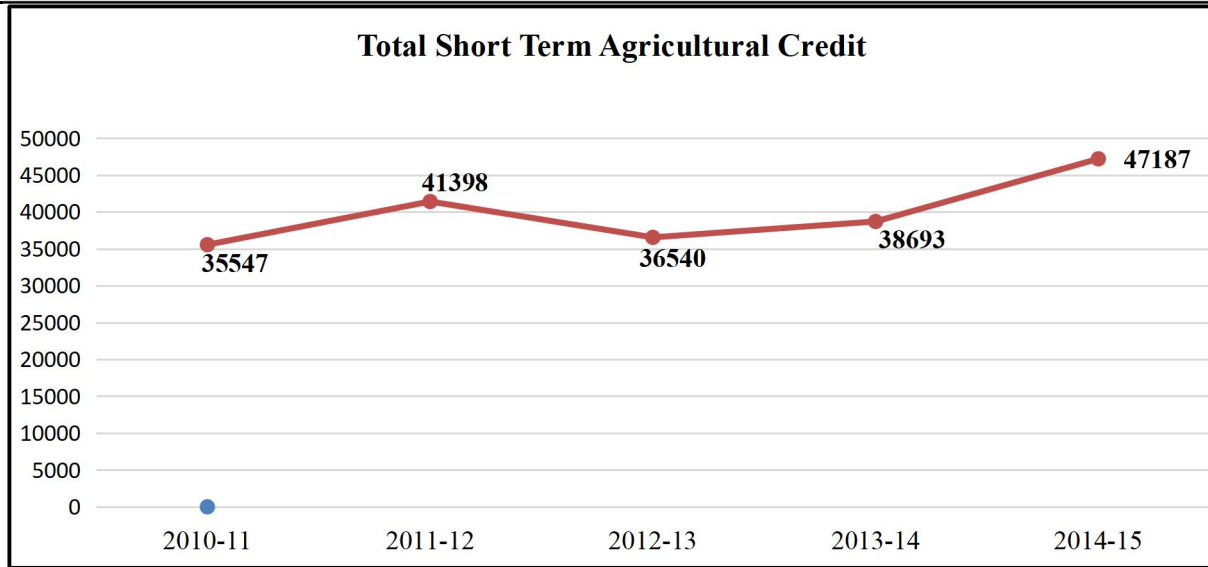
Credit Stabilization Fund which is showing an uptrend manner & almost increased to double with respect to the base year of 2010-11 & in the near future it can be utilised for various agricultural purposes. So, with this interpretation it supports the stated hypothesis & alternate hypothesis is accepted.

H1: *The Latur District Co-operative Central (DCC) bank is playing a crucial role in enhancing the various funds in overall Agricultural & rural development of Latur District*

H2: The Latur DCC Bank has offered the satisfactory Lending practices i.e., short term loans to the agricultural development.

(As on 31st March) (Amount in Lakhs)

Year	2010-11	2011-12	2012-13	2013-14	2014-15
Seasonal Agricultural Activities	35547	41398	36540	38693	47187
Marketing of Crops	0	0	0	0	0
Supply & Distribution	0	0	0	0	0
Total Short Term Agricultural Credit	35547	41398	36540	38693	47187



On the basis of above given table & graph, we can easily infer a conclusion that the Latur DCC bank continuously providing short term loan from 35547 lakhs to 47187 Lakhs for the year of 2010-11 to 2014-15 lakhs respectively which was grown over the years & that benefits a lot to the farmers specially for Seasonal Agricultural Activities for less than one year i.e. for Kharif & Rabbi crops along with the bank able to carry out loan facilities to other allied sector such as silk industries at 0% rate of interest, drip irrigation, sprinkler irrigation, harvester etc. Hence, with this interpretation it supports the stated hypothesis & alternative hypothesis is accepted.

H2: The Latur DCC Bank has offered the satisfactory Lending practices i.e., short term loans to the agricultural development.

FINDINGS

As we can gauge the performance of the Latur District Cooperative Central (DCC) bank, on various financial indicators such as number of bank branches or offices, loans & advances, agriculture credit stabilization fund, total reserve funds, are trending upward direction in positive manner during the study research period. It has been observed that due to initiating of various programs conceived by the Reserve Bank of India (RBI) & NABARD & the same introduced by the Latur District Cooperative Central (DCC) bank for the agricultural & rural growth & development of Latur districts such as Interest Subsidy Scheme, Personal Accident Insurance Scheme (PAIS), NABARD's Farmers' Club Program, National Agricultural Insurance Scheme (NAIS), etc. It seems that total short-term agricultural credit has increased over the years from 2010-2011 to 2014-2015 i.e., 35547 lakhs to 47187 lakhs respectively.

SUGGESTIONS:

The Latur District Cooperative Central (DCC) bank needs to undertake further expansion of bank branches in proportion to the rural population which it helps to meet the credit needs & requirement of common people. The Latur District Cooperative Central (DCC) bank should in place a strict norm or provision of punishment for the intentionally wilful defaulters. Hence, it might help to deal with the unexpected defaulter in stringent manner & action that leads to help increase in the loan recovery percentage. The Latur District Cooperative Central (DCC) bank should come up with the different attractive schemes, plans, programs & policy at attractive rate of interest for the development of agriculture, allied sector, rural artisans, self-house groups (SHGs) etc. at par with the other banks such as private banks.

Also, such banks set their priorities from their perspectives for themselves while lending of amount. So, the dominance of political parties should get reduce to some an extent rather than eliminating from the structure of District Cooperative Central bank.

CONCLUSION

As per directive given by the Reserve Bank of India (RBI) & National Bank for Agriculture & Rural Development (NABARD), they given emphasis on the continuous monitoring supposed to be done in hierarchical manner & ensure that every bank branches complying the regulatory requirements for ex. Capital to Risk (Weighted) Assets Ratio (CRAR) as prescribed by the apex bank from to time. As the time unfolds with the passing years the Latur DCC bank should strive hard to have community engagement & intact continuous policy decisions that could help to bring further improvement in the financial practices & that all will works in the interest of the people at wider level. But still, it can manage with the proactive measures & that leads to help them to improve the assets quality for longer duration of time.

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Financial Inclusion In India: A Study On Progress And Challenges

Mr. Pawar Rajesh Vyankat

Research Scholar
Shivaji Mahavidyalaya Udgir

Abstract

India is considered to be the country with the largest rural population in the world and is associated with agriculture. Compared to developed countries, India has more population below the poverty line, so the rate of poverty is also higher. We know that if any country wants to increase its economic growth and reduce poverty, the poor and disadvantaged sections of the society should have access to banking services at reasonable rates. Financial inclusion is considered an important indicator of the development and well-being of society globally. Financial inclusion means making financial services available to everyone at an affordable cost. Financial inclusion aims to provide banking and financial services to all people in a transparent and fair manner at affordable rates. Globally, this concept has been adopted by all developed and underdeveloped countries. Recent initiatives taken by the present Government of India have led to some significant developments in this regard. Pradhan Mantri Jan Dhan Yojana is helping to bring about financial inclusion in the country. However, India lags behind the developed countries in terms of financial inclusion. This paper covers present status of financial inclusion in India, important initiatives by RBI and the Government for financial inclusion and challenges to financial inclusion in India.

Keywords: Financial Inclusion, Poverty Line, Economic Growth, Developed Countries

1. Introduction:

In a developing country like India, financial inclusion is a critical part of the development process. Banks play an important role in the economic development of the country. However, bank services have been beneficial for some sections. Even today the rural population and economically weak society of India remain away from the financial services of banks. Financial inclusion wants everybody in the society to be involved and participate in financial management judiciously. Many poor households in India do not have any access to financial services in the country. They are not aware of banks and their functions. Even if they are aware of banks, many of the poor people do not have the access to get services from banks.

Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost (The Committee on Financial Inclusion, Chairman: Dr. C. Rangarajan). The essence of financial inclusion is to ensure delivery of financial services, like - bank accounts for savings and transactional purposes, low cost credit for productive, personal and other purposes, financial advisory services, insurance facilities (life and non-life) etc. In order to achieve a comprehensive financial inclusion, a slew of initiatives have been taken by Government of India, RBI and NABARD. A number of initiatives were undertaken, like nationalization of State Bank of India in 1955, commercial banks in 1969 and 1980; setting up of Regional Rural Banks; encouraging urban and rural cooperative banks; and instituting priority sector lending scheme. Since July 1982, National Bank for Agriculture and Rural Development (NABARD) has also made significant efforts to increase FI. The situation has marginally improved since 2008, with the introduction of business correspondents (BCs), provision of no-frill accounts, and easing of know-your-customer (KYC) norms, and support extended to self-help groups (SHGs) and other microfinance institutions (MFIs). Some of the important schemes by government include; Kisan Credit Cards (KCC) Pradhan Mantri Jan Dhan Yojna, Pradhan Mantri Suraksha Bima Yojana (PMSBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Atal Pension Yojana, Stand Up india, Pradhan Mantri Mudra Yojana (PMMY) and so on.

Need for Financial Inclusion

Financial inclusion reduces poverty and inequality. It also provides opportunities for marginalized and low-income individuals to access formal financial services such as savings, credit and insurance. It offers potential for increasing banking business by bringing more and more customers to the Bank. It enhances the number of Bankable Customers and boosts the growth of Banking Business. Also, it bridges the Urban - Rural Divide. Financial inclusion through innovative lending models and online platforms can provide much-needed funding for

entrepreneurs to grow their businesses. Increased financial inclusion leads to higher levels of savings, investment, and entrepreneurship, fostering economic growth and stability in both local communities and national economies.

2. Objectives of the Study

1. To know the present status of Financial Inclusion in India.
2. To study the important initiatives by RBI and Government for Financial Inclusion
3. To identify challenges to Financial Inclusion in India

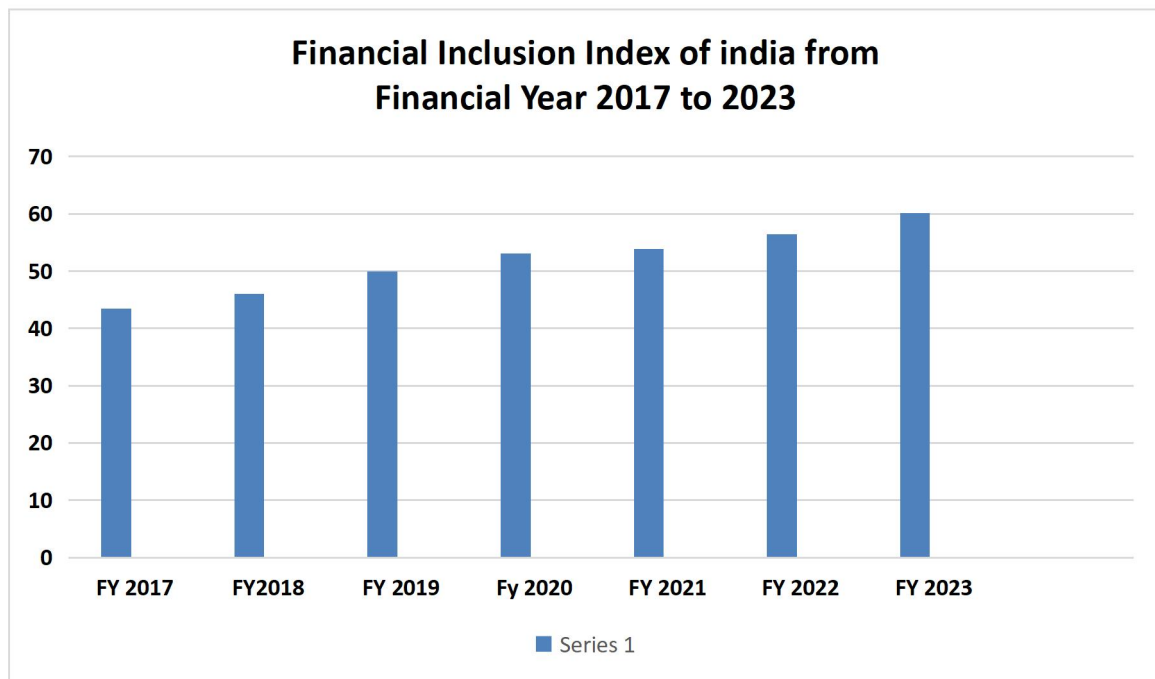
3. Research Methodology

The research study is of Descriptive type. Secondary data includes data collected from various sources, published as well as unpublished research work, books, magazines, government reports, brochures, journals, periodicals, research papers presented in various conferences, internet websites newspapers etc.

4. Research Analysis

4.1 Present Status of Financial Inclusion in India

The Financial Inclusion Index is a comprehensive index released by RBI to assess the level of financial inclusion across the nation. Its include level of availability, accessibility and affordability (3 A's) of financial products and services for general population of India.



Source: Statista Research Department

Explanation: As of fiscal year 2023, the financial inclusion index was 60.1, according the reserve bank of India. It rose from 43.4 in 2017 to its current state, indicating improved financial inclusion. The financial inclusion index measures the extent of access to and usage of formal financial service, including banking insurance investment pension and postal sectors.

4.2 Important Initiatives taken by RBI and Government for Financial Inclusion

The motto of Financial Inclusion is from Jan Dhan to Jan Suraksha. Following were some of the initiatives taken by the RBI and GOI for promoting Financial Inclusion in the country-

1. **Priority Sector Lending:** It is an important role given by the Reserve Bank of India (RBI) to the banks for providing a specified portion of the bank lending to few specific sectors like agriculture or small scale

industries. This is essentially meant for an all round development of the economy as opposed to focusing only on the financial sector.

2. **No Frills Account:** No Frills Account is a basic Banking account. Such account requires either nil minimum balance or very low minimum balance. But all the existing No Frills Accounts opened were converted into Basic Savings Bank Deposit Account (BSBDA) in compliance with the guidelines issued by RBI in 2012.
3. **Business Correspondents (BC) System:** Business Correspondents are Bank Representatives. They personally go to the area allotted to them and carry out banking. These Correspondents help villagers to open bank accounts and perform banking transactions. They carry a mobile device and get commission from bank for every new account opened, every transaction made via them, every loan-application processed etc.
4. **Relaxation on know-your-customer (KYC) norms:** 1. Documents required for opening bank accounts and KYC process has been relaxed and simplified for small accounts. It is now more relaxed to include letters issued by Unique Identification Authority of India containing details of name, address and Aadhaar number.
5. **Simplified branch authorization:** Banks have been mandated to allocate at least 25% of the total branches opened during the year to unbanked rural centres. RBI's permission process for banks to expand branches has been simplified.
6. **The concept of differential banks:** The RBI introduced the concept of "Payment Banks" and "small banks" to attract serious players and push financial inclusion. It allowed corporate houses, including telecom players and retail chains, to set up payment banks, and also gave them the option of forming joint ventures with commercial banks.
7. **Pradhan Mantri Jan Dhan Yojana (PMJDY):** Hon'ble Prime Minister announced Pradhan Mantri Jan Dhan Yojana as the National Mission on Financial Inclusion in his Independence Day address on 15th August 2014, to ensure comprehensive financial inclusion of all the households in the country by providing universal access to banking facilities. The main features of this scheme are:

The slogan of the scheme is "Mera Khata – Bhagya Vidhaata". The scheme provided Rs. 50, 000 overdraft facilities for Aadhar – linked accounts and Rupay Debit Card for all account holders. It also provides Accident Insurance Cover up to Rs. 1,00,000/-.

8. **Pradhan Mantri Suraksha Bima Yojana (PMSBY):** The main features of this scheme is:
 - This yojana provides Personal Accident Insurance.
 - Age group 18 – 70 years.
 - Risk coverage – ₹2 lakh for accidental death and ₹1 lakh for partial disability
 - Sum assured: 2,00,000/- while premium: Rs 12 per annum.
9. **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY):** The main features of this scheme are:
 - This yojana provides Life Insurance.
 - Age group 18 - 50 years.
 - Sum assured: 2,00,000/- while premium: Rs. 330 per annum.
10. **Atal Pension Yojana (APY):** The Atal Pension Yojana (APY) was launched on 09.05.2015 to create a universal social security system for all Indians, especially the poor, the under-privileged and the workers in the unorganised sector. The main features of this scheme are:
 - This scheme provides Pension.
 - Age group 18 - 40 years.
 - Fixed pension: Rs 1000/- to Rs. 5000/- per month after the age of 60 years.
11. **Pradhan Mantri Mudra Yojana (PMMY):** The scheme was launched on 8th April, 2015. Under the scheme a loan of upto ₹50,000 is given under sub-scheme 'Shishu'; between ₹50,000 to ₹5.0 Lakhs under sub-scheme 'Kishore'; and between ₹5.0 Lakhs to ₹10.0 Lakhs under sub-scheme 'Tarun'. Loans taken do not require collaterals. These measures are aimed at increasing the confidence of young, educated or skilled workers. They can expand their business.
12. **General-purpose Credit Card (GCC):** With a view to helping the poor and the disadvantaged with access to easy credit, banks have been asked to consider introduction of a general purpose credit card facility up to Rs 25,000 at their rural and semi-urban branches. The objective of the scheme is to provide hassle-free credit to bank's customers.
13. **Stand-Up India Scheme:** Government of India launched the Stand-Up India scheme on 5th April, 2016. The scheme facilitates bank loans between ₹10 lakh and ₹1 crore to at least one Scheduled Caste (SC)/ Scheduled Tribe (ST) borrower and at least one woman borrower per bank branch for setting up greenfield enterprises. Stand-Up India scheme caters to promoting entrepreneurship amongst women, SC & ST category.

14. **Pradhan Mantri Vaya Vandana Yojana (PMVVY):** The ‘Pradhan Mantri Vaya Vandana Yojana (PMVVY) has been launched by the Government to protect elderly persons aged 60 years and above against a future fall in their interest income due to uncertain market conditions, as also to provide social security during old age.

4.3 Challenges to Financial Inclusion in India

1. **Gender Gap:** Access to credit is often limited for women who do not have, or cannot hold title to assets such as land and property or must seek male guarantees to borrow. It was found that states having a relatively higher share of rural population and a higher share of female population generally have a comparatively lower level of financial inclusion. This is attributed to socio-economic factors, including the availability of mobile handset and internet data facility being higher among men than women.
2. **Terms and conditions:** Banks lay down many Terms and conditions for the access of financial services such as minimum balance, geographic place, minimum transactions etc. resulting in less consumer interest for services.
3. **Lack of financial literacy** - The rural households do not have adequate financial literacy resulting in lack of awareness of many financial services provided by financial institutions.
4. **Profitable area:** Commercial banks prefer profitable areas for operations. This restricts the access for people living in remote areas.
5. **Attractiveness of the product:** Both the financial services/products (savings accounts, credit products, payment services and insurance) and how their availability is marketed are crucial in financial inclusion.
6. **Low Risk profile consumer:** Banks generally provide banking services to low-risk customers such as middle-aged affluent customers who have financial stability and good business.
7. **Digital Divide:** The most common barriers to adoption of digital technologies that can promote financial inclusion. Digital banking cannot be used effectively by uneducated and women.
8. **Dormant PMJDY Bank Account:** For instance, the Jan Dhan scheme has resulted in the opening of many dormant accounts which never saw actual banking transactions.
9. **Informal and Cash-Dominated Economy:** India is the heavily dominated cash economy, this poses a challenge for digital payment adoption. The combination of a huge informal sector along with a high dependence on cash mode of transaction poses an impediment to digital financial inclusion.
10. **Lack of Credit Penetration:** One of the main barriers to providing credit to low-income households and informal businesses is the lack of information available to formal borrowers to determine their creditworthiness. Also they do not know about various loan schemes of banks.

5. Recommendations

1. **Spreading Financial Literacy:** The financial literacy rate is lower in Indian adults than in other developed nations. RBI and the Government should strive to promote financial literacy. For this, financial literacy camps should be organized and financial literacy centers should be set up in all rural branches by appointing retired bank employees.
2. **Reviving Banking Correspondent Model:** Given the infeasibility of locating branches in every nook and corner of the country, bank correspondents are used to reach out to prospective clients. Thus, there is a need to create better monetary incentives for banking correspondents as well as to provide them better training.
3. **Promote Digital banking:** Due to the COVID-19, the importance of digital banking has increased. Every person should be encouraged to use digital banking.

6. Conclusion

A nation can develop economically and socially if its weaker sections become economically independent. In today's digital era, inclusive growth is possible by achieving the goal of financial inclusion. Increasing digital literacy will enable the rural population to avail bank services. Due to the digital revolution, today every person is carrying the bank in his pocket i.e. in his mobile phone. India continues to progress in the FI index. Though barriers in financial services should be removed so that citizens can avail more financial services. Financial inclusion has the potential to extend the benefits of economic development to the poor if adequate measures are taken to overcome existing problems. Since the launch of the Financial Inclusion Scheme, the progress of financial inclusion has been positive.

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A Study On The Impact Of Influencer Marketing On Consumer'S Purchasing Behaviour

Ms. Ravneet Sethi

Asstt Professor, Rayat Bahra University

Abstract

In recent years, a new digital marketing tool is the social media influencer marketing that has become a rapidly growing industry, and for good reason. These are those individuals, who shape consumers perceptions regarding a brand or product through photos, videos and other updates on social media platforms. Through Google Form, a Questionnaire was made and used Quota sampling technique, bearing size of sample of 76 for the data collection thereof. This research paper is an attempt to identify the effect of various attributes of social media influencers on their credibility and eventually on purchase intention of consumers. It's a powerful way to reach and engage with consumers, increase brand awareness and can be incredibly effective at boosting sales. Influencer marketing strategies are now considered an important module of effective marketing tactics. The global influencer marketing market size has more than doubled in value since 2019 and expected this market value to continue growing, highlighting the growing position and success of influencer marketing in the business world. Also, the buying intention of clients is directly affected by an influencer's reliability and trustworthiness. Influencer marketing is currently undergoing its topmost effectiveness. Businesses across numerous rulers are utilizing the significant impact that influencers have on bull's eye audiences.

Keywords : *Social Media ,Influencer marketing, credibility, purchase intention, bull's eye audiences.*

INTRODUCTION

Influencer marketing involves marketing products and services on social platforms through influential people on the platform, popularly known as Influencers. Influencers can be Nano, Micro, Macro, and Mega depending on the number of their followers and average engagement on their pages. The consumers growing belief of the activity of promoting and selling strategies makes it motivating for companies to encourage and appeal them. More dealers/venders are taking advantage of influencer marketing to endorse their businesses and products on social media platforms. Influencer marketing is choosing and motivating social media influencers, widely popular among individuals of all ages especially youngsters to promote a company's offer by engaging their followers.

Becoming an influencer is directly related to them becoming a consistent source for their supporters and an opinionated who has thousands of people approving them. This is the key thing that captivates businesses to use influencers to market themselves online. They try to get along with an influencer's key spectators through the influencer and with the help of some smartly made marketing material, they try to drive sales and consideration towards their product. Influencers may have a large following and superstar status, but their reputation stems from a different source than celebrities. Celebrities differ from influencers due to their success in mandated or recognized surroundings. As the epidemic hit the world like a wrecking ball, a lot of public took to social media to express themselves through various content on Facebook, Instagram, TikTok, YouTube, and more. More and more businesses have dropped all their other marketing plans to capitalize in Influencer marketing, which as of today is an industry worth billions of dollars. According to the information provided, influencer marketing is considered a rapidly expanding strategy for gaining new online clients and is viewed as a promising prospect. Nevertheless, it is imperative to further investigate the matter of influencers, their impact, and their ability to shape opinions within specific generational groups.

This research paper will look exclusively into the impact of influencer marketing on consumers and their purchase behavior as well as any considerable impact it has had on consumers during the pandemic and social media. Some Important Limitations are : Inadequate sample size, Insufficient helpful responses from the survey, Limited access to data due to limited research on this topic, Lack of certain information or sources for information taken from social, Variable data as consumer opinions can change over times.

Some Advantages are : Selective and numbered survey subjects, Popular apps chosen to gather more data, Very specifically chosen objectives, Focus on all forms of influencer marketing, Focus on its effects during the

pandemic , Survey responses from consumers that have been impacted

Literature Review

Influencer Marketing is a mixture of old and new marketing tools and has an idea of celebrity endorsement and places it into a modern-day content-driven marketing campaign. In influencer marketing, the results of the campaign are collaborations between brands and influencers. Influence marketing is the expansion of publicity messages through influential people, opinion leaders.

Influencer marketing based on social-networking has become an important factor in consumer purchasing decisions. The research results shows that the observation of the credibility of the influencer serves as an important criterion determining the purchase attitude, and the attitude towards advertising; and further also contributes to the creation of assumptions that are associated with the influencer and can positively or negatively influence consumer behavior.

In recent times influencer marketing has seen tremendous growth as a way of marketing as more and more brands have chosen influencer marketing over traditional means of advertising. Influencer marketing has been a key tool for smaller businesses as well as for a bigger brands.

This research paper lives deeper into how, as a pandemic struck world moved online, influencer marketing got a major hold and grew to vast levels on various social media stages. It will also dig into how brands and businesses have seen absolute profits and growth in sales and visibility due to influencer marketing. Brands have definitely taken a risk by shifting from old-style marketing to an influencer based marketing.

Over time brands have documented much more input in terms of sales, interest, feedback and profits that have created more rock solid influencer marketing strategies in the marketing sector.

The individuals have built around what they are passionate about and are a lot more likely to only promote products they have thoroughly vetted as they'll lose otherwise. Not only do people prefer to hear from influencers; they actually block advertisement. One of the important reason that why influencer marketing is gaining steam, is also because of ad blocking.

Influencer marketing content plays a vital role in shaping buying behaviour as being more trustworthy, well presented and attractive in nature. Consumers are more likely to trust noble references, as they're generally considered more trustworthy than claims in brand ads, and in this respect, social media influencers can be very powerful.

The aim of influencer marketing into scientific contribution is the systematization of knowledge about the position and roles of influencers as opinion leaders in the social media environment in order to identify their typology, influence factors and the intensity of their impact on consumer decision making process, based on the comparison of knowledge from the results of global research studies and the quantitative online research study processed by authors. The findings of the survey showed that the promotion of some products through influencers may be more advantageous than others. Influencers will have the greatest impact when buying clothes, shoes, cosmetics and, surprisingly, services. Meanwhile, people rely heavily on other factors to buy food, jewelry and electronics, but it is not excluded that influencer marketing could affect them as well. In respect to this paper, a more specific approach to the idea of consumer and purchase behavior is taken.

Further, this paper deals specifically with how massive rise of influencer marketing's during the pandemic has impacted purchase habits of the consumers. With an increase in influencers, there is definitely as increase in the variety of marketing content from these influencers, but get aware of a brand or business and their work.

Influencers are able to establish trust with their community of followers because they are viewed as experts. In fact, rely on an influencer's expertise when weighing the value of their endorsements. Expertise on the internet isn't anything new, but influencers have turned their expertise into a way to impact consumer buying behavior. People like people. People trust people. People trust people more than they trust brands and more than they trust marketers.

Influencers can be entertaining and offer new and exciting ways of sharing a brand's messages and further discovering personalities, products, methods of application, tricks and tips that they are eating up. It's a relationship, not a one way sales channel that brands and agencies have been accustomed to in the past. Many Instagram-users

who follow influencers do not mind that promotion and thus influencing is happening. The impact will relay on the influencer marketing agencies since TikTok over the time forged very strong partnerships with the marketing agencies to put the pedal to the medal with TikTok influencer campaigns.

A majority of marketers believe that influencer marketing attracts higher-quality customers to their business and all possible because the social media users tend to be more affluent and more likely to recommend products to family and friends. Blogs and Facebook are by far the most effective outlets for influencer marketing, dwarfing YouTube, Instagram, and Twitter.

It's further pertinent to mention that those "influenced consumers" are all of different age groups, and on average 55 percent of those consumers who discovered new products, services, and brands through social media influencers. Those numbers are higher than the average digital consumer behavior and, for brands in search of reviews that give their products credibility and lead to purchases, significant.

Research Findings

Research methodology and methodical study commences to the facts of principles, the study is to forecast the effectiveness of influencer marketing among the students.

- **Research Design** The study will analyse the acceptance of effectiveness of influencer marketing among the students this debates the method used in meeting the necessary information and technique for collection of analysis of data collected
- **Area of Study** The study is under taken in Hyderabad city
- **Sample Size** Sample size measures the number of individual samples measured used in a survey.
- **Data Collection** Primary data was collected from many respondents using a structured questionnaire. Secondary data for his study was also collected through internet, and journal on related topic.
- **Sample Technique** The sampling techniques used for the project is convenience sampling technique suitability sampling is a type of nonprobability sampling technique that releases data collection from population associates who are available to take part in the study A total sample size of 50 consumers of all age groups were surveyed to understand the influence of influencer marketing on their purchase decisions and its impact during the pandemic especially.

The survey participants consisted of young people from ages 13-30 who are all avid social media users and a consumer of many social media trends. The survey produced the following results:

- **Social media platforms -users spend more time:**

A majority of people from this sample size of 50 picked Twitter and Instagram as social media platforms. YouTube held a middle-ground. Twitter and Instagram also have a high number of users and coming in contact with influencer marketing content frequently. TikTok also has a hard grip on influencer marketing.

- **Niches of influencers users follow the most:**

As per the survey results: Fashion, Food, Beauty, Travel, and Gaming Influencers were some of the most popular niches of influencers users follow on social media. Fashion and Beauty as well as Gaming and Food have emerged as really popular forms of content online and have seen a considerable growth in the number of influencers who make content in this position. Due to the pandemic and a severe hit on the travel industry, Travel influencers are not the top chosen place but are still mildly popular.

- **Options provided to the users who see influencers incorporating the brand/product for marketing purposes:**

- Made a review video/post
- Mentioned the brand/product in their regular videos/stories/posts
- Made specific content about the product and the brand
- Shared the brand's content on their page and urged their followers to check them out

➤ **Influencer marketing content for check out a brand or buy a product:**

Yes, to this question which speaks volumes of how impactful and appealing influencer marketing can be at times. A lot of users in this survey who said Yes believe that products/brands promoted by influencers seem useful, genuine, tested out, high quality, trustworthy, appealing, convincing and are available at a good deal.

A handful of survey participants said No to the question with a justification that since influencers are paid to promote, they do it to earn and often don't use the products they promote themselves. Users have also mentioned self-research and word of mouth as a better option to make a purchase decision.

➤ **Influencer marketing is more effective than traditional marketing and has been more impactful especially during the pandemic:**

Part of the survey agrees that influencer marketing is more effective and impactful than traditional marketing. Especially citing the pandemic as a booster for this marketing and believe that influencers become "friends" with their supporters, and incorporating advertisements smoothly making them seem more conclusive.

Some other users mention that influencer marketing is more effective than traditional marketing because people are more likely to engage with product, because consumers tend to follow influencers similar to their taste and body shape. Consumers also feel it is more impactful because it reaches a large audience, builds relations between fans-influencers-brands, and feels more personal.

Some users held a middle-ground view about this where they believe that target audience, product, brand, influencer, and their content are variables that determine influencer marketing's success which can at times be less effective than traditional techniques and sometimes more effective.

And a few consumers simply refuse to believe that influencer marketing is more impactful than traditional marketing. They refer influencer marketing as a temporary form of marketing that gained traction during the pandemic and will die down as the pandemic dies down. It is effective but for a limited number of people and still poses gaps that are filled by traditional marketing strategies.

DISCUSSIONS AND RECOMMENDATIONS

- The survey participants belong to the age bracket of around 18-25 years. Most of the female respondents are well-informed about influencer marketing due to their recurrent communications with influencers inside their buyer system.
- The customers will often purchase fashion and cosmetic products. Thus, businesses must promote and manufacture high-quality goods in order to encourage customers to make a purchase.
- As a result of the rapid development of social media, young people are broadcasting knowledge on a daily and minute-to-minute basis in order to influence youngsters by issuing regular updates on the goods and services they deliver.
- The organizations that are involved in business are indebted to address the problems that are related with their company, and they must also select a well-known and stylish influencer to serve as their brand ambassador.
- In addition to the value of influencer marketing, the teenagers placed a significant amount of importance on the quality of the product when making their purchase decision. As a result of the accessibility of social networking and e-commerce sites, they will inspect the quality of information connected to the website in addition to the advice of expert facts.

Conclusion:

The survey findings to get a consumer view on influencer marketing have produced mixed results with more disposition towards the positives than negatives. More than half of the contributors believe that influencer marketing has had a noteworthy impact on their purchase decisions and their complete lookout on what type of marketing proves them to buy a product or engage with a brand.

A lot of clients who are also enthusiastic social media users agree to being visible to influencer marketing content every day and hence being an unintended target of various announcements all over social media. A lot of them have

at some point checked out the brands and products stated in these influencer announcements which have either caused in a purchase or a thought for a acquisition in the future.

Most consumers agree that through influencers, the consumers follow, and come across this content from influencers. This proves that consumers made aware of brands and products and has resulted in a real purchase even through indirect influencer marketing.

Internet trends have shown that during the pandemic. There has been considerable growth in the number of users who consume influencer marketing on a daily and the number of users who go through the four stages of the AIDA model as they approach a purchase/not purchase stage of decision making.

Consumers also think that influencer marketing is the best type of marketing to get to their heart and mind and place a product in it and further believe the way these are marketed by influencers through funny videos, heartwarming videos and more really makes the marketing 10 times more conclusive but also sincere.

In conclusion, we can say that influencer marketing grasps bottomless grounds for consumers' purchase results and has at least 7/10 times made a consumer buy a product or consider buying one. It has facilitated consumers get aware of many brands, products, and options of products to buy from while also giving them incentives in the form of discounts and deals. It has helped many consumers learn about market trends and things to buy and from where helping them make a sound decision when they decide to put in their money and energy into making a purchase. For many, it has become an ultimate recommendation source that they trust immensely and cross-check with before making a purchase. And for many, it is idolization turned into a parallel expression of relativity with the influencer they take a product/brand recommendation from. Either way in recent times it has become a more concrete phenomenon and has shown major impacts on consumers, all ages and tastes, and their purchase decisions and behaviors.

It is safe to conclude that influencer marketing holds an upper hand in the market when it comes to influencing their target groups effectively and turning it into a one-time or a regular purchase and engagement pattern.

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Social Entrepreneurship and Community Development

Dr. Pachore Rohini N.

M.Com, M. Phil, NET (JRF), Ph.D.

Assistant Professor

B. Y.K. College of commerce, Nasik

Abstract

Entrepreneurship is not a new reality in India. Focusing on the job market is a tool for business development, and the focus is now on the job market trying to solve major problems in society to promote community development. Social development faces many challenges that hinder social development. The emergence of social entrepreneurship as a positive force for social change holds the hope of solving important problems such as lack of government support, lack of financial aid, environmental change, pocket work, control of the rich and businessmen. Volunteers work to address issues such as skills shortage, poverty, unemployment, illiteracy, climate change, health problems, insecurity, etc. health and financial problems. This article explains who social entrepreneurs are and their role in achieving social development. The article concludes with some suggestions that can improve understanding of the role of social entrepreneurs in Community development.

1. Introduction

Community entrepreneurship is the concept of using local resources to produce more needed goods and services; It is generally believed that economic development should give more importance to social economic strategies so that local people can develop their own resources by using local resources.¹

Social entrepreneurs are agents of change. The main purpose of a business enterprise is to achieve the two goals of creating social benefit while generating sustainable income. Be aware of cultural, environmental or business needs and play a major role in the target audience. Entrepreneurship in society should use business strategies to ensure sustainable resource use to ensure financial stability and constantly seek new ways to work for this purpose. Social entrepreneurs are defined as investors who are not concerned with profit or immediate profit. Entrepreneurship in society provides essential elements for developing life skills such as creativity, imagination and collaboration, which are essential for lifelong learning. Social entrepreneurship can provide employment, personal satisfaction and solve social problems. Many social entrepreneurs report that their solutions are most effective outside of information and communications technology (ICT). Participatory and human-centered design methods have proven useful in developing social entrepreneurship services.

Social development generally relates to measures taken by stakeholders to influence the solution of various problems in society. Problems include poverty; Research shows that better social development strategies, as well as donations and aid, are needed to solve social problems and needs. The existence of such an environment largely depends on plans that support rural entrepreneurship. The adequacy of this process depends on the model used for the business. An important strategy for managing economic development in different regions is entrepreneurship and entrepreneurship in society. Entrepreneurship plays an important role in creating success. The business sector has control over financial development, employment, local organizations and this is just the tip of the iceberg.

Social entrepreneurship therefore refers to the identification of social problems and the use of business models to create and manage social enterprises to achieve social change in society. More importantly, it can view “problems” as “opportunities,” then proactively propose solutions to those problems and ensure customers are willing to pay to solve those problems. Fundamentally, social entrepreneurship creates wealth for all people, contributes to social services, promotes environmental sustainability and builds social capital. Social entrepreneurs, on the other hand, seek to lead society by creating solutions that meet society's needs and engaging in sustainable lifestyles that benefit them and society as a whole. Therefore, it would be correct to say that in preparation for this perspective, people are asked to participate in the process of doing business in society by finding new solutions to social problems. While social entrepreneurship is viewed as a process that involves the recognition of a social problem and solutions to solve that problem, the evaluation of social impact leads to a sustainable business model that addresses social and environmental or social issues.

2. Objectives of the research

The Objectives of the study was to examine the influence of social entrepreneurship strategies on sustainable community development.

1. To know the general concept about social entrepreneurship in India.
2. To concise the role of social entrepreneurship in India.
3. To draw the factors of communities development through social entrepreneurship.

3. Importance of this study

The study is thought to be important for future researchers and other researchers who want to contribute to business and social development. Since social entrepreneurship is a new concept that includes sustainable development goals, any research in this field will encourage future researchers and other researchers in this field.

This research is important for organizations advocating social development. These include the World Bank, NGOs, non-governmental organizations, religious organizations and other development stakeholders such as those implementing Vision 2030. The spirit is purely for social development. Finally, this study is very important for the departments responsible for financial support and other special services. These government institutions should have access to information about the various measures and strategies that can be used to improve social relations.

4. Challenges Entrepreneurs Face in Achieving Effective Social Development²

4.1. Lack of government support: Many social entrepreneurs have not yet established themselves as a legitimate field of work. This recognition brings stress to business people through fiscal and legal incentives, tax audits, administrative burdens, unfair decisions, and other useful and useless things.

4.2. Lack of Financial Support: From a financial perspective, social entrepreneurs reach out to a new business that needs financing to develop, implement and maintain new systems to restore the group's exclusion from the market. The best and brightest want generous salaries and stock options as rewards for their hard work.

4.3. Changing environment: As global opinion changes, government policies also change. Organizations need to be better prepared for the challenges of the 21st century.

4.4. A Out-of-Pocket Expenditure: Out of social benefits and costs associated with various social problems, usually out of the owner's pocket or by borrowing money from lenders. Of course, social entrepreneurs do not work in a profitable business; They identify social problems and try to find effective solutions to these problems. When many traditional businesses find a way to make profits by providing the best solutions to social needs, they will enter the market to compete with similar solutions and technologies, thereby increasing transaction costs and competition and hindering their development.

4.5. Dominance of funders and volunteers: The challenge for entrepreneurs relates to foundations and volunteers striving for social change by supporting innovators. Central and influential people are in a position to participate in this process because they are not influenced by the two forces that control the government and participate in decision-making processes.

4.6. Skills shortage: Social enterprises recognize the need for skilled workers, volunteers, employees and community members to achieve sustainable development in the long term. But social enterprises need training and development because they often employ people who are not good in society. These organizations must strive to meet the needs of all these different groups and still achieve the best results.

5. Social Entrepreneurship and Community Development Components³

5.1 Social Sector: Social sector intervention is an important part of almost all initiatives. All its events, activities, excursions, programs and rooms are directly aimed at the well-being of the people living in the society. It has provided various skills training for women health volunteers, such as capacity building, leadership training, skills development, education and training in health "personal hygiene". These trainings directly or indirectly encourage community members to take risks, raise awareness, and make good decisions instead of bad ones. The use of knowledge and skills to develop or improve decision-making ability is called empowerment.

5.2 Entrepreneurship: Social entrepreneurship is seen as more integrated into the community, usually organized in an organization or in a joint venture that embeds existing businesses and creates jobs directly from schools, schools, open schools, restaurants, farms and schools. stationery, school uniform, clothing, snacks etc. To indirect businesses and services, including sales and purchases, etc. ⁴

5.3 Environmental sector : As social entrepreneurs prioritize social and/or environmental good unlike the conventional for-profit corporations and businesses further, contrasting to the traditional non-for-profit it they follow and apply smart planning to acquire SMART (Specific, Measurable, Attainable, Relevant, Time-bound) objectives with transparency and financial accountability in attention.⁵

6. Conclusion

1. The constant innovation of social entrepreneurship affects the implementation of various social projects.
2. The involvement of various stakeholders and community members at every stage of the project cycle has a significant impact on the implementation of community development plans. The community can participate in many ways. For example, community labor can be used to carry out various projects and community resources such as land and agricultural products can be used.
3. Financial management is the most important practice that affects the effectiveness of many social and community projects in the 21st century. Other factors affecting the implementation of strategies and development plans in society, such as budgeting, cost structure, reporting, accounting and information, analysis, financial evaluation.

7. Recommendations

1. Social entrepreneurs should join the ranks of those who benefit from economic problems in the development society.
2. Community entrepreneurs should publicize their plans to local people through a variety of means, including door-to-door meetings or events in the media.
3. Entrepreneurs in society should see technology and political risk as key opportunities for global revitalization and proactively identify and implement them as people who can think through new disciplines and know their thoughts.
4. Social entrepreneurs should encourage schools to develop courses that will encourage students to engage in social entrepreneurship.

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Perspectives of Social Entrepreneurship in India

Dr Rupa N Gilda.

Faculty, Dayanand College of Commerce, Latur

INTRODUCTION

Entrepreneurship is the core force of economic growth; the economic development which one experiences is just due the prevailing force of entrepreneurship. The entrepreneurship has many other types as well; it is divided on different traits and criteria, one of the criteria being Social. This type of entrepreneurship is very unique in nature and has different blends of components. The main purpose behind social entrepreneurship is involving corporate sector into social betterment by different activities.

The term "social entrepreneurship" has nowadays gained popularity in India and other countries. The idea of generosity has always piqued people's interest. It's an ideal blend of social responsibility and business acumen makes it incredibly alluring and distinctive. Typically, entrepreneurship is associated with economic pursuits, ruthlessly pursuing profits at the expense of social benefits or the wellbeing of society. Social gains have become less visible or even non-existent in the current era of rapid industrialization and economic growth, including in India. However, the rise of social entrepreneurship in India and other countries has made it possible to serve society more meaningfully than ever before while also upholding the spirit of entrepreneurship with its fullest. Economic entrepreneurship focuses on economic need, on the other hands, social entrepreneurship focuses on social needs. Social entrepreneurship has increased its scope and importance in recent years, this paper also includes both areas as well. At last, how social entrepreneurship can change or impact on the social setup in India and other developed nations specifically at the bottom of the pyramid level is also underlined in this research paper.

MEANING AND DEFINITION OF SOCIAL ENTREPRENEURSHIP-

Social entrepreneurship is one of the important tributary of entrepreneurship; it is more than just philanthropy and has deeper and immense impact on social changes/ upliftment in developing nations. Government has started encouraging social entrepreneurship to great extent so that the social inequalities can be handled and an ideal society can be achieved as well. Social entrepreneurship is meant by special sort of initiatives, which is both social work and economic in nature. This definition of social entrepreneurship is clearly puts forward the basic components of social entrepreneurship; they are-

1. It is undertaken by special group of people refereed as social entrepreneurs.
2. It is situation where social problem is identified and solved using entrepreneurial principles.
3. The main purpose stands at bringing social changes, rather than making individual profits.
4. Social entrepreneurship is successful in terms of not the big profits, but the unquantifiable social impacts.
5. The venture established by social entrepreneurs is called as social enterprise and prime focus is on social innovations for prevailing social problems.

“Social entrepreneurship is the process of recognizing and resourcefully pursuing opportunities to create social value for society. Social entrepreneurs are innovative, motivated for resolving social issues, resourceful, and results oriented. They prepare a mind-set after best thinking in both the business and non-profit worlds to develop strategies that maximize their social impact by addressing social inequalities and social problems. These entrepreneurs exist in all kinds of organizations: large and small; new and old; religious and secular; non- profit, for-profit, and hybrid. Such organizations comprise the ‘social sector’”

SOCIAL ENTREPRENEUR

Social entrepreneurs are those entrepreneurs who basically undertake social entrepreneurship. They aim for non-personal profits rather than a profit, the primary objectives of their existence is to serve the society rather than earning profits. They also innovate; their innovation is referred as “Social Innovation” ‘Social entrepreneurs are not content to just give a fish or teach how to fish. They will not rest until they have revolutionized the fishing industry.’

Bill Drayton, CEO, Chair and founder of Ashoka. In simple terms “Social entrepreneurs Identify and relentlessly pursue opportunities to create sustainable solutions to social problems continuously innovate, adapt, and learn act boldly, not constrained by resources currently in hand, and hold them accountable for-

- Achieving their predetermined social impact; along with
- Using resources at their optimum levels, the important thing to note down is that all characteristics' are similar to economic Entrepreneur.

CONTRIBUTION OF SE IN INDIA-

The social entrepreneurship is most applicable in nations which have developmental issues. India being a developing nation has its own social challenges and social developmental issues. Social entrepreneurship can resolve all the social inequalities which are prevailing in India. In recent times, some startups/new ventures has developed keeping social interests in mind and providing sustainable solution to social issues and earning their profits as well.

Following are arguments which cement the needs for social entrepreneurship in India and places like India all over the world. Following are the contribution made by social entrepreneurship in India.

1. Social entrepreneurship focuses on deprived/weak section of society, India has over 27crore people living under such conditions. So social entrepreneurship becomes relevant and it is needed the most for uplifting this section of people.
2. Social entrepreneurship sees social benefits as primary and profits as secondary. This helps in getting great products/services on quite affordable prices.
3. Social entrepreneurship address the social problems, such problems may include illiteracy, girl child abuse, financing, health, potable water etc. Social entrepreneurship helps in meeting these social problems by capitalizing the local resources and applying entrepreneurial principles.
4. Social entrepreneurship also innovates like any other branch of entrepreneurship, but this innovation is slightly different. This innovation is termed as social innovation, as they are focused upon the social problems. The social innovation is nothing but finding out the most innovative and unique solution of social problems.
5. One of the most important needs of social entrepreneurship is towards bottom of the pyramid. This bottom of the pyramid referred to the people who have minimalistic income, but high acceptance for social innovations.

SOCIAL ENTREPRENEURSHIP IN INDIA-

1. In Maharashtra, Zero Miles is building multi-utility drinking water centres to bring people together for community development.
2. Aadhan builds classrooms — and a host of other spaces — from discarded shipping containers.
3. Traditional Indian crafts and artistry can benefit greatly through access to online and urban markets via social enterprises. Ziveli is such a social enterprise, bringing the kauna craft-work of Manipur to the world.
4. Divya Rawat is using mushroom cultivation as a way of curbing migration and providing livelihoods to people in Uttarakhand. This is also helping repopulate many ‘ghost villages’ in the state.
5. In a country where women often have to walk miles to find and collect drinking water for their families, the Water Maker project to produce water from thin air is no less than magical. It is, in the words of one grateful recipient, “khuda ka paani.”

SOCIAL ENTREPRENEURS IN INDIA-

As per the Asian entrepreneurs “Social entrepreneurs are those adventurous, dare devils who drive deep into the pressing problems of society and try to find solutions to them, not by leaving the responsibilities in the reins of the government or business, but by trying to change systems as a whole and persuading societies to take new initiatives. Although basic characteristics and core functions remain the same. Following are the some examples of social entrepreneurs in India, who are working in different domain of social entrepreneurship-

1. Jeroo Billmoria-Jeroo Billmoria is an accomplished social entrepreneur and the founder of several international NGOs. Her pursuits have earned her accolades with Ashoka Innovations for the Public, the Skill Foundation and the Schwab Foundation for Social Entrepreneurship.
2. Ajaita Shah-Business Week ranks her as the most influential leader under 30, working for a tenure of 5 years in SKS Microfinance and Ujjivan Financial Services. Frontier Markets organisation is her brain child. Being a 2012 Echoing Green Fellow is to be of aid to 30 million rural households in the next 3 years.
3. Harish Hande- Founder of SELCO, he has a reputation of installing 120,000 systems in Karnataka, his aim being- making renewable resources the predominant source of energy in rural India. Stressing as an observer of minute details, he later grew into an innovator and a social entrepreneur.
4. Sushmita Ghosh-She deals mainly with craft and restore from rural India, contributing to the present success of Rangasutra (a for-profit venture) and retailing from FabIndia.
5. Trilochan Shastri-Often a simple act of bravery can move mountains. That is the story of this social entrepreneur. He filed a PIL which later turned into a judgement coaxing politicians to confess to their misdeeds. His efforts led to the form of ADR (Associations for Democratic Reform) responsible for scrutinising the elections every 5 years.

BASIC TRAITS/CHARACTERISTICS OF SOCIAL ENTREPRENEURSHIP-

The social entrepreneurship has basic traits of looking for ways to dealing with social issues/problems in more innovative and entrepreneurial manner. Social entrepreneurship begins with identification of social problem/shortcoming then it moves to systematically analyzing the identified problem, considering all the possible aspects.

Following are the traits of social entrepreneurship, which are commonly existing in social entrepreneurship-

1. Social entrepreneurship has risk taking capacity like any other branch of entrepreneurship, it takes risks and uncertainties in setting up a social entrepreneurs.
2. Social entrepreneurship has vision and foresights as well, it sees the problems and finds the solution like nobody can imagine about.
3. Social entrepreneurship provides leadership and direction to people who are working in social enterprise for achieving a common goal.
4. The biggest and probably the unique feature of entrepreneurship is creativity, which also exists in social entrepreneurship as well. Social entrepreneurship looks for creative solutions for social problems.

ROLES AND RESPONSIBILITIES OF SOCIAL ENTREPRENEURS TOWARDS INDIA SOCIETY-

As mentioned earlier as well, India and similar societies provide best grounds for social entrepreneurship to prevail and grow to its best. The roles and responsibilities of social entrepreneurs are given as under with reference to India society-

1. Social entrepreneurs have the capacity to influence the society by their unique product/service aimed at the social upliftment.

2. Social entrepreneurs in India face certain problems related with mindset of people who do not want to change their way of doing things.
3. Social entrepreneurship depends upon social innovations; the challenge is to create such innovations which can resolve the social problem completely by using minimum resources.
4. Social entrepreneurs have the role to reach at the remotest corner of country for targeting the social sections, which are deprived to basic facilities. The responsibility of social entrepreneurs is to reach such people and serve them positively.
5. Social entrepreneurs are supposed to provide employment as well with their unique approach.

CHALLENGES FACED BY SOCIAL ENTREPRENEURSHIP IN INDIA-

Social entrepreneurship, like any other branch of social entrepreneurship also faces challenges. All the challenges are either controllable or non-controllable, but all the challenges are manageable. Some of the prominent challenges faced by social entrepreneurship in India are given below-

1. Confusion with social work- Social entrepreneurship is mostly in India is confused with social work, hence it is unable to make a mark as an individual entity in India. This is starting of challenge for social entrepreneurship.
2. The problem of creativity- The next problem which is faced by social entrepreneurship is lack of creativity regarding thinking great ideas for betterment of society and earning profits as well.
3. Arranging finance- One of the challenges for entrepreneurship in India remains lack of financial sources.
4. Shortage of talented/dedicated workforce- This is a very unique challenge faced by social entrepreneurship exclusively. Since the prime objective of social entrepreneurship is to get social gains/benefits rather than personal gains/benefits. Under these condition it is very hard to get people to work for the firm.
5. Setting and communicating value objectively- The important challenge of social entrepreneurship is to setting and communicating values clearly.

MEASURES TO FACE CHALLENGES EFFECTIVELY-

There is no doubt that social entrepreneurship is subject to many challenges and these challenges are growing with time and dynamics of society. There are few steps/measures which can be practiced to face the prevailing challenges of social entrepreneurship in India-

1. Proper training and development institutions- Government must open some specialized councils and institutions for systematic development of social entrepreneurship. Some of the institutions are working in the area of economic entrepreneurship; some must be opened for social entrepreneurship as well.
2. Inclusion of social entrepreneurship in course syllabus- One of the most effective way of disseminating awareness towards social entrepreneurship is to include a paper/subject on the same at higher education level.
3. Creation of mass awareness- Steps should be taken to make the mass aware towards the social entrepreneurship, so that people do not get confused between social entrepreneurship and social work. Media, social media, other vehicles can be deployed for the same.
4. Providing infrastructure and basic facilities- Government and other stake holders must work on the basic facilities to the social entrepreneurship.
5. Social entrepreneurship development programmes- Like entrepreneurship development programmes, social entrepreneurship programmes must be organized time to time to help social entrepreneurship.

CONCLUSION AND FINDINGS OF THE STUDY-

Social entrepreneurship can change the face of society in India, there have been many such examples and projects which run under the banner of social entrepreneurship and proved to be life altering for people of that vicinity. In India especially social entrepreneurship has better prospects as the social problems are at full swing here. Social entrepreneurship is a unique combination of entrepreneurial traits and philanthropy. In social entrepreneurship products and services are designed to make maximum social impact along with making considerable profits for the firm. The study has the following findings-

1. Social entrepreneurship is a best combination of social service and entrepreneurial skills to look for social problems.
2. Social entrepreneurship has the capacity to socially innovate. These innovations are the exact and creative answer to social issues/problems which are prevailing in India.

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Covid-19 Effects On Gender Gaps In Employment And Domestic Work In India

Mr. Suryawanshi Saheb Shrirang, Dr Satish Kundalwar

Research Scholar
Shivaji College Renapur

Abstract

This paper examines the first effects of Covid-19-induced lockdown on employment and household work. Drawing on national level panel data from the CMIE's consumer pyramid household survey (CPHS), we surveyed approximately 40,000 individuals in April 2020 (during the strict lockdown) and examined their employment statuses over the past year. Overall, employment decreased significantly after the lockdown, with no change compared to pre-lockdown time periods. This employment decrease was not gender neutral, with more men losing employment than women in absolute terms. However, conditional on being employed prior to lockdown, women were about 20% less likely to be employed compared to men who were employed prior to lockdown. India has one of the most unequal gender distribution of household work in the world. Comparing hours of domestic work before and after lockdown, we find that hours of domestic work for men increased during lockdown. The difference in average domestic work hours between men and women narrowed in the first months of the lockdown, and in most states, the gender gap narrowed as a result of a shift in hours worked by men. Men continue to work more hours than women, but the proportion of men working 0.5 hours to 4 hours per day increased after the lockdown.

1. Introduction

In order to contain Covid-19, India imposed one of the world's most stringent lockdowns. As per the Stringency Index of the University of Oxford, India reached the highest possible level of stringency on 25th March, 2020 (index value = 100). This meant a near-total shutdown of all economic activities. What are the labour market consequences of this lockdown? The first order effects of the lockdown are evident in the massive rise in total unemployment. But is the lockdown a great leveler? Are the labour implications gender neutral? How did the lockdown affect hours spent on housework? I have discussed the gender specific effects on recessions on jobs. Losses in previous post but they are not necessarily linked. For example previous US recession (2007-09) saw more job losses for men than women. Estimated suggest that during the covid-19 outbreak, women are at a higher risk of job loss than men globally. According to a Citibank study, 220 million women work in industries that may be vulnerable to job cuts.

Current survey reports in the United States show that 1.4 million people lost their jobs in March, but women were hit harder than men: the unemployment rate increased by 0.9 percent, compared to 0.7 percent for men. However, it is believed that this time, women are more likely to lose their jobs as businesses face long-term closures or the threat of possible permanent closure (Alan et al, 2020). Restaurants, hotels, large commercial premises such as malls and department stores, entertainment centers at one end and domestic helpers such as maids, nannies, cleaners etc. are the main employers of women. What could be the interpretation of a similar image regarding India? It is evident that while educational disparities between males and females decreased considerably from 2004 to 2017-2018, the gap in employment opportunities increased. For the past decade, the female labor force participation rate (FLFPR) in India has been stubbornly low and is declining rapidly. Will layoffs and recession lead to a growth in the gender gap in labor participation and employment, making it more significant than men's? Does social identity play a more significant role in determining the impact of pandemic lockdowns on already vulnerable groups?

Another factor that affects women's labor force participation is their overwhelming involvement in housekeeping and housekeeper activities. All over the world, women spend more time than men on domestic tasks, including caregiving. Analyzing the evidence from other countries during previous epidemics (H1N1, Ebola) shows that household responsibilities have increased e.g. the effect of school closings was dissimilar for men and women. With the rise in childcare demands, the proportion of women working less frequently or withholding paid work was reduced. There is earlier evidence from other parts of the world about hours spent on homework. A survey of 2,200 adults conducted in April 2020 shows that while both fathers and mothers are doing more housework during the lockdown than before, the burden is not shared equally. It is important to examine the evidence on this issue from a large developing country where gender norms for the distribution of household chores are very unequal.

This paper examines changes in both employment patterns and hours spent on housework using data from the Consumer Pyramids Household Survey (CPHS) database of the Center for Monitoring the Indian Economy (CMIE), a private data provider that collects weekly data on the national economy level as of January 2016. It is a longitudinal dataset covering 174,405 households (approximately 10,900 households per week and 43,600 households per month). Each household is checked three times a year. Because data from the national sample survey is only available for 2017-2018. Per year, CMIE CPHS data is currently the only source at the national level for real-time estimates of employment changes, especially if we want to assess the immediate effects of a national shutdown. Started in the last week of March 2020.

2. Developments in Employment and Unemployment

The paper examines four longitudinal data sets that are nationally representative and highly frequent, involving a sample of over 43,000 individuals. Due to significant and growing gender gaps in labor force participation and employment, the absolute number of employed men is higher than the absolute number of women who lost their jobs in the first month of the lockout. Although pre-lockout employment was the strongest predictor of post-lockout employment, its effect differed for men and women. Women who were employed prior to entering the workforce experienced a reduction of approximately 20 percentage points in the post-employment period.

Recalling recent employment trends can assist in comprehending job losses. Figure 1 from CMIE shows employment and unemployment rates for rural and urban India between January 2016 and April although there is some monthly variation, the data suggests that the post-lockdown employment decline is not a seasonal phenomenon that occurred on the same day as the shutdown. We can see that from March 2020 to April 2020, the rural and urban unemployment rate increased due to the cessation of real economic activity, and the employment rate decreased, unlike before March 2020.

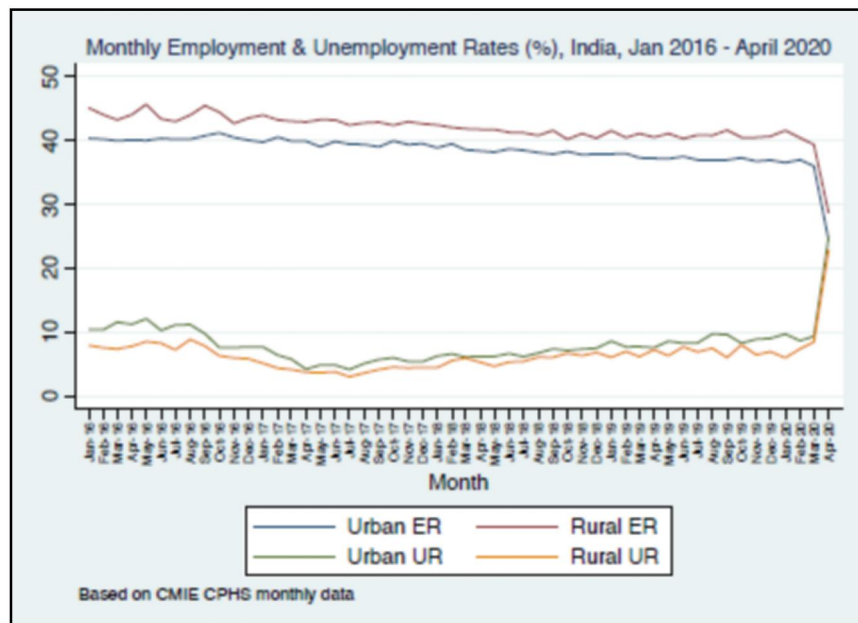


Figure 1

March 2019-2020 saw an average employment rate exceeding 403 million. A 30% decrease from the previous month's number, total employment decreased by over 120 million in April 2020. The number dropped to around 282 million. In other words, in April 2020, employment was 70 percent of last year's employment. In March 2019-20, the average male employment was 360 million and the female rate was 43 million, indicating significant gender differences in the job market. As of April 2020, these numbers have dropped to 256 million (256,029,085) males and 26 million (26,174,719) females. In other words, the decrease in the employment of men was 104 million (104,492,155), while that of women was 17 million (17,074,607). The first month of the lockdown in India resulted in a loss of more men than expected, which is contrary to the global norm.

However, gender dimensions of job losses must be considered in light of existing differences. One simple way to do this would be to take the ratio (absolute numbers) of April 2020 employment to the average employment of the previous year (March 2019 to March 2020). Figure 2 shows this ratio for different groups. We can see that the ratio is 0.61 for women and 0.71 for men, which means that in April 2020, women's employment before the shutdown was 61 percent of the annual average, while men's employment was 71 percent. The employment decline of women has been more significant than pre-closure levels.

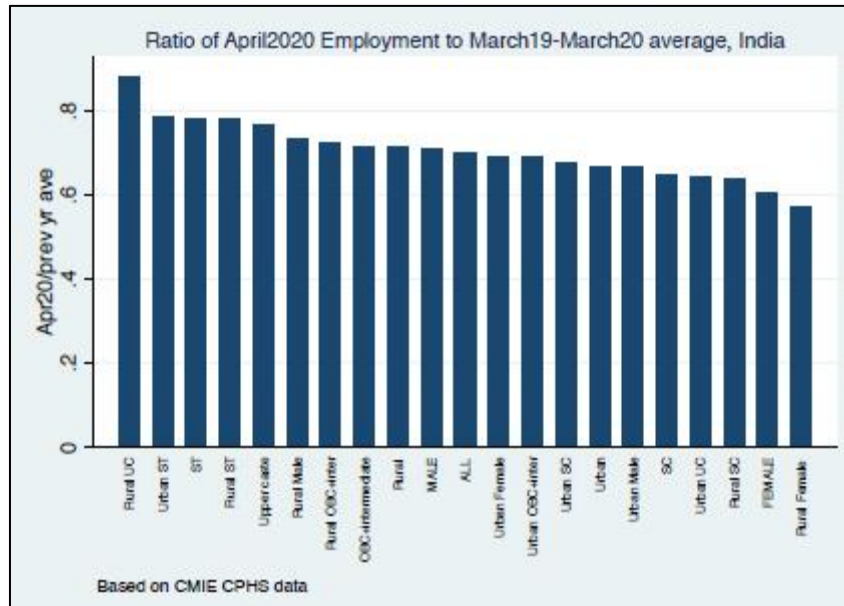


Figure 2

3. Rural-Urban Differences

The decline was greater in urban areas (33 percent) compared to rural areas (29 percent), i.e. the April 2020 employment figures are 67 and 71 percent of the previous year's average employment (March 2019 - March 2020). In rural areas. This is expected because the fully closed sectors included manufacturing and services, which are mostly urban. What is surprising is why the gap between urban and rural job losses is not greater, since the CMIE sample is disproportionately urban. Figure 2 shows that rural women's employment decreased the most, as it was 57 percent of the previous year's average. The percentage for rural men was 73 percent, while the percentages for urban women and urban men were 69% and 67 percent respectively. Since 2004-2005, the decline in women's LFPR has been linked to the decrease in rural women. The shutdown of economic activity caused by the pandemic shows a similar pattern.

The figures in Figure 2 demonstrate the rural-urban divide, which is more or less significant, before and during the return migration of internal migrants from cities to villages. In April 2020, as uncertainty grew about the continuation of the restriction, as it was unclear when (if) economic activity would resume, migrants began their long journey back home in extremely dangerous and precarious conditions, often walking hundreds of kilometers. Several did not make it back and died on the way. But the change must be taken into account when interpreting April 2020 data: The overall rural/urban pattern of workers across different areas at the time is shown by how they worked. A more recent study would uncover a distinct rural-urban distribution of workers that mirrors the trend of reverse migration.

4. Lockdown Effect on Employment

After a one-day "janata curfew" on 22 March 2020, India imposed a strict nationwide curfew on 25 March 2020, shutting down almost all economic activity except essential services. The confinement gradually eased; however, economic activity came to an almost complete halt during April. This section presents estimates of factors affecting post-termination employment. The employment situation may be affected by the closure, particularly if there were no comparable changes during the pre-pandemic period, as it is a panel of identical individuals.

4.1. Data:

The latest CPHS unit-level data (wave 19) covers January-April 2020, and some households are surveyed on a monthly basis. This allows us to identify people who were investigated in April 2020, i.e. during the closing. The previous wave (the 18th wave), which took place in September-December 2019, makes it possible to identify the status of these persons before their arrest. Most of those who answered the survey in April 2020 were last surveyed in December 2019. The status of the April 2020 sample is also available to view in the future. Waves 16 and 17 give us four data points of people surveyed during the shutdown: April 2019, August 2019, December 2019, and April 2020. Although the post-shutdown situation in April 2020 was highly volatile and uncertain. CMIE's quick transition to face-to-face telephone interviews helped them maintain their sample size.

The possibility of building a pre-lockdown and post-lockdown panel periods with available data for the 18th and 19th waves was considered. However, comparing the employment status of individuals over a longer period shows what the effects are closure stronger because we can show that the change in employment occurs only after closure; there are no differences in the average employment of earlier waves. Most of the variables in the dataset are standard and I used them in their original form. The following variables were necessary to be consolidated.

There are four employment situations in the CMIE data. One is the simple category of "employees", which refers to people who are employed at the time of the survey. People who are willing to work without a job, also known as unemployed, are included in the second category. The third category is "unemployed, wanting and looking for work" and the fourth "unemployed, wanting and not looking for work". The last two categories include the involuntary unemployed, i.e. they are unemployed and ready to work, some of whom are actively looking for work and some of whom are not actively looking at the time spent in the survey. I combined the last two categories into a composite category "unemployed". So my employment statuses are "Employed", "Unemployed" and "Out of the Labor Force (OLF)" (the latter being involuntarily unemployed in raw CMIE data).

The information includes detailed industry (38 categories) and occupational classification (21 categories). Because of the wide variation among these several categories, I have combined the industry categories into four broad categories and the professional categories into nine broad categories. While the reclassification provides more detail, it also maintains the necessary level of detail to understand the impact of the limit on population groups. I changed the variable "age in years" into two age group categories: "younger" (15-35 years) and "older". (over 35). Additionally, I developed a variable that represents the female head of the household category (fem.), which is dummy and returns 1 for females and 0 for males. The variables are described as supplementary figures. Educational information is classified according to the last completed class (classifier). I recoded this variable to zero as "no education," 1 year for 1st grade, and 12 years for 12th grade. Since undergraduate studies in India is a 3-year course, students have received 15 years of education and post-graduate studies. 17 years. Doctorates received 22 years of education. I modified the coding to produce a binary variable named "ed_low" that has 0 otherwise and 1 as its value if education is 10 years or less.

Although the lockdown was equally strict everywhere, the severity of Covid-19 infections was not uniform across the country. As of April 2020, the eight states where the disease has spread are: Maharashtra, Gujarat, Tamil Nadu, West Bengal, Andhra Pradesh, Rajasthan, Uttar Pradesh and Telangana (not listed in order). I created a binary variable called "high covid" that took the value 1 if the person was in one of these states. During the survey, when we talk about migration, we are referring to those states where one is currently living.

4.2 Statistical Tools:

Figure 3 shows the trends by gender and month for the main variable of interest, employment status, calculated from 16 to 19 months. Based on single-level data for the waves. We see that for the three waves before April 2020, the gender gap in average employment was large but stable, with average employment for men at 67 percent and average employment for women around 9 percent. In April 2020, the employment of men and women fell to 46 percent and the employment of women to 5 percent, i.e. 20 percentage points for men and four percentage points for women. Table 1 presents the means and standard deviations of key demographic and labor statistics for the December 2019 sample, i.e., the immediate pre-closure wave. Among the sample, there are 47 percent of females, 53 percent men, 13 percent with women as their primary caregiver, 45 percent youth and 54 percent elders. The remaining percentages are for UC, OBC and middle castes like SC and ST, while 25 percent is SC or ST. This group has annuity rates of around 92% due to family circumstances. 90 percent of the sample is Hindu, about 7

percent Muslim, 2 percent Sikh, and 1 percent Christian. The sample consists of 37 percent in rural areas and 63 percent from urban areas. Compared to other national surveys, the urban sector is overrepresented in the CMIE sample.

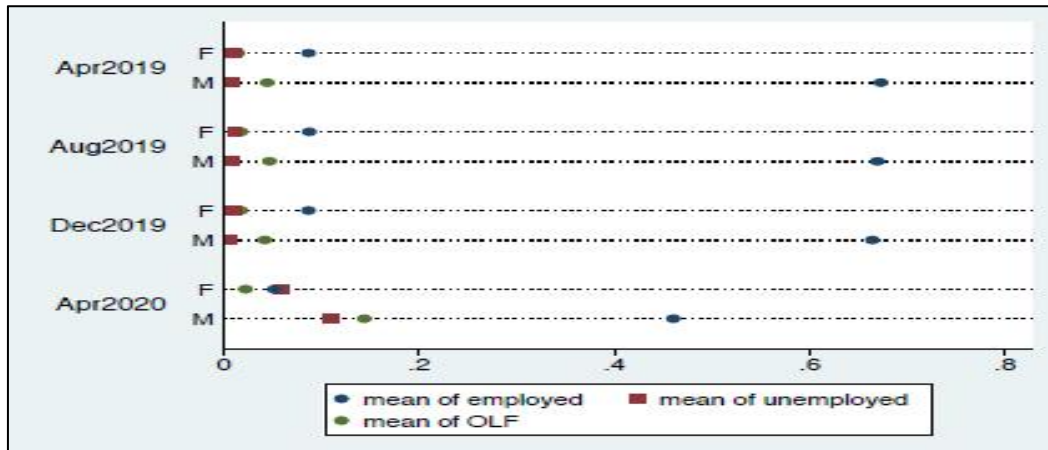


Figure 3

Regarding the classification of industries and occupations, we see that about 23 percent of the people were engaged in agriculture; about 2 percent in domestic production; in the secondary sector (manufacturing, construction and processing) 26 percent and in the service sector 49 percent. The occupational match shows that 55 percent of the sample was not employed or OLF employees (retired, elderly, housewives or students). 14 percent were self-employed or entrepreneurs; 5 percent of employees; 2 percent white-collar workers; 2.3 percent agricultural workers; less than 1 percent small farmers; 0.2 percent large farmers (called organized farmers in the data); 19 percent small businessmen and 0.1 percent managers or legislators.

5. Lockdown and the gender division of hours spent on domestic work

The division of housekeeping and domestic work, including nursing, is the most discriminatory in South Asia and Middle East and North Africa (MENA) regions. This is particularly evident in Pakistan and India. Although these areas are at opposite ends of the spectrum, women generally spend more time on housekeeping than men. With this pandemic, scientists worldwide are questioning whether the isolation and social distance that were necessary for everyone to stay at home led to the division. Will household tasks be transferred to the widely used "Labour at Home" (WFH) for gender equality? Since the pandemic is still ongoing and countries should also enter and exit restrictions when finding a vaccine, a final answer to this question cannot be given until we decisively pass the pandemic and have data for the entire period. However, an analysis of the early evidence for this issue is important and interesting.

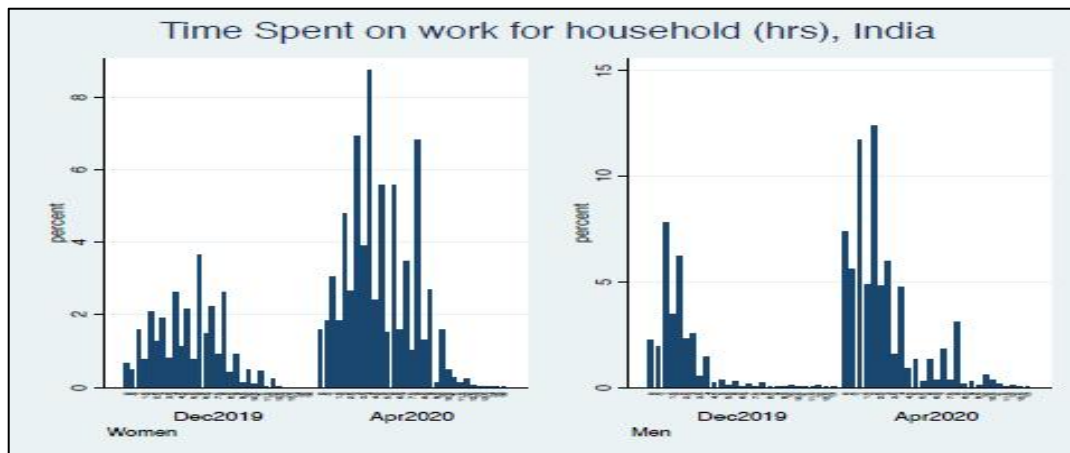


Figure 4

In the CHPS data, each half hour is a question of time spent on household chores, starting from zero. The breakdown of women and men before and after the closure is shown in Figure 4. As a result of the closure, urban households, especially the middle class, had to survive without a necessary part of the household for daily life. Most Indians. From Figure 4, we can see that this has led to an increase in the hours spent on household chores for women and men compared to December 2019. However, the distribution of men is still rightly skewed. Additionally, while the share of men working 0.5-4 hours per day increased in April 2020 compared to December 2019, the share of men working zero hours also increased.

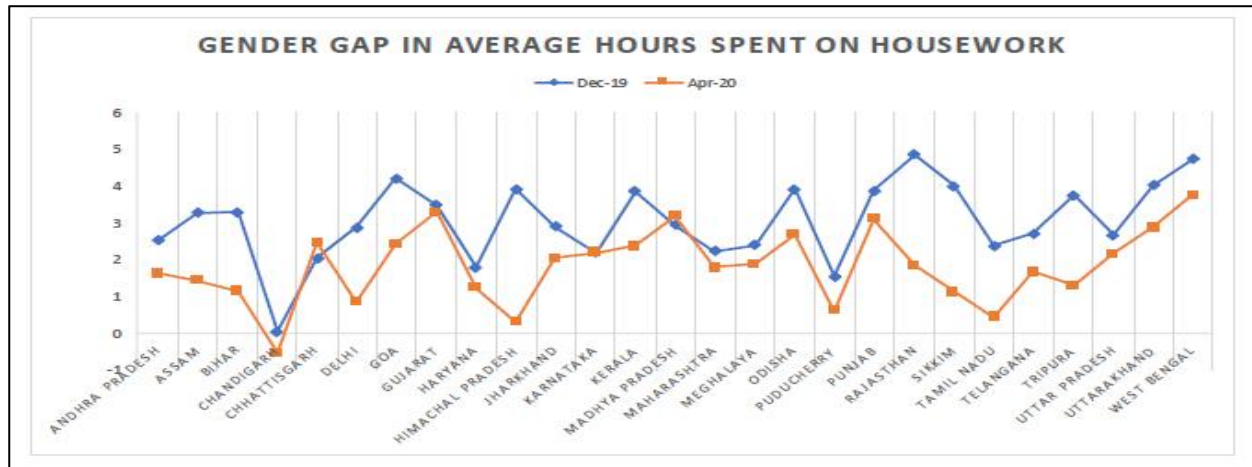


Figure 5

The linear regression of hours spent on homework using a gender dummy, followed by observing the interaction between month and gender (with individual fixed effects) and standard errors at the state level is shown in Figure 5. Click on the images for more information. That the average gender gap narrowed by about an hour. According to the figure 5, the gender gap in average hours worked by women (women working - men) by state and month decreased in most states between December 2019 and April. As we noted above, with the changes and closures related to the pandemic, it is too early to say whether these changes will be temporary or more or less permanent. However, this change seems promising, considering the very unequal gender norms. This analysis should be repeated when the data for May 2020 and subsequent months is available.

6. Conclusion:

The Covid-19 pandemic has highlighted existing inequalities, with vulnerable groups being disproportionately affected by blockades and economic shutdowns. India, home to a large population, is also experiencing these disparities. Data from 40,000 households shows the impact of the shutdown, with a focus on employment rates in April 2020 compared to December 2019. The pandemic has exposed fault lines globally, affecting vulnerable groups more severely. The gender gaps in labour force participation rates and employment widened during the lockdown, with more men losing employment than women. Pre-lockdown employment was a strong predictor of post-lockdown employment, but its impact varied between men and women. Women who were employed before the lockdown were 20 percentage points less likely to be employed after. India has one of the most unequal gender divisions in household work globally, with women spending significantly more time than men on household chores and family enterprises. A government Time Use Survey conducted in 1998-1999 revealed these disparities, showing men focusing more on income-earning activities and personal care, while women dedicated more time to unpaid household work.

This study examines changes in domestic work hours before and after lockdown. Both men and women saw a decrease in the gender gap in hours spent on housework during the first month of lockdown, with most states showing a decline in the gap. There was a shift in male distribution of hours, with more men doing 0.5 to 4 hours of housework per day post-lockdown. This shift in male hours is attributed to the lockdown's impact on domestic work distribution.

Increased involvement in domestic work may impact women's labor force participation, but historical evidence shows that severe shocks can shift social norms, affecting the gendered division of works. Post-World War II,

female labor force participation increased in OECD countries, coinciding with a more equal division of domestic responsibilities. During the current pandemic, alone et al (2020) suggest that new work norms like working from home and fathers participating in childcare could lead to more equal distribution of household labor. However, in the case of India, longer-term evidence is needed to observe any lasting changes, as shifts in gender norms take time to unfold. A month-long lockdown is not sufficient proof of sustained changes in domestic labor patterns. Women in India have been disproportionately affected by job losses during the Covid-19 pandemic, with many being forced into risky, hazardous, and stigmatized jobs. The frontline health workers in the country, including ASHA, ANM, and Anganwadi workers, are all women, further highlighting the gender disparity in the workforce. India's economy was already struggling before the pandemic, with growth rates declining each year since 2016. The lockdown is expected to worsen the situation, potentially leading to a deep recession and widespread job losses. This has left many women facing the difficult choice between unemployment and jobs that put their health and safety at risk.

The CMIE released data showing 21 million jobs were added in May 2020, but the unemployment rate remained high at 23.5 percent in April. To sustain job growth, strong policies are needed to support employment and boost demand. Without intervention, job losses may increase, worsening the employment crisis. This paper emphasizes the need to address pre-existing inequalities along gender and caste lines to prevent further reinforcement of disadvantage. Recognition and action on specific areas of disadvantage are essential to prevent exacerbating inequality in the labor market.

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Opportunity Of Public Private Partnerships In State Bus Transport System – A Study In West Bengal

Santosh Kumar Das

Assistant Professor in Commerce
Harimohan Ghose College,
Kolkata, West Bengal

Abstract

Buses are vital mode of transport for most people in West Bengal. In fact some remote villages' areas of West Bengal are served by a single bus only throughout the day. In West Bengal buses ply both in cities and villages. However, bus transport systems in many districts have not been able to keep pace with the rapid and substantial increases in travel demand. Moreover, bus transport operators in west Bengal face huge financial losses. The Government transport operators are usually dependent on Government subsidy which need not be available all the time. In this present scenario, tackling the problem of financial crisis appears to be the biggest challenge for bus transport operators in West Bengal. Public Private Partnerships (PPPs) have been critical and have relieved the government stress of investments in infrastructure by bringing in economic development with improved efficiencies cost optimizations and cost-effectiveness in bus operations and maintenance. In this study discuss the four PPPs structures for the procurement, operation, and management of an urban bus transport system are Cost-Plus Contract (CPC), Gross-Cost Contract (GCC), Net-Cost Contract (NCC) & Licensing Contract (LC).

Over the previous financial years, the West Bengal government has been constantly reducing the subsidy payouts to the three transport corporations — namely the West Bengal Transport Corporation (WBTC), South Bengal State Transport Corporation (SBSTC) and North Bengal State Transport Corporation (NBSTC). In 2017-18, the annual subsidy bill towards these three organisations was Rs 830 crore. But this bill has been coming down and in the 2019-20 financial year, it is expected to go down below the Rs 700 crore level. STUs in West Bengal are totally depended on government subsidy but it cannot be the proper solution to run an organization so they need to be self dependent. To make themselves financially sound first of all they need to maximize revenue. Finally, for the sustainability and surviving of the STUs in West Bengal, public private partnership (PPP) may be a good option.

Key words: State Transport Undertakings, bus transport, public private partnership (PPP)

INTRODUCTION

Buses are vital mode of transport for most people in West Bengal. In fact some remote villages' areas of West Bengal are served by a single bus only throughout the day. In West Bengal buses ply both in cities and villages. However, bus transport systems in many districts have not been able to keep pace with the rapid and substantial increases in travel demand. The Government transport operators are usually dependent on Government subsidy. Moreover, bus transport operators in west Bengal face huge financial losses. When financial losses increase, first maintenance, then service reliability and finally operating capacity disappear. In this present scenario, tackling the problem of financial crisis appears to be the biggest challenge for bus transport operators in West Bengal. Public Private Partnerships (PPPs) have been critical and have relieved the government stress of investments in infrastructure by bringing in economic development with improved efficiencies cost optimizations and cost-effectiveness in bus operations and maintenance.

OBJECTIVES OF THE STUDY

The objectives of the study are:

To analyze the four PPPs structures for the procurement, operation, and management of an bus transport system are Cost-Plus Contract (CPC), Gross-Cost Contract (GCC), Net-Cost Contract (NCC) & Licensing Contract (LC).

To examine the scope of private equity or public-private partnerships (PPP) in State Bus Transport System in West Bengal.

METHODOLOGY AND DATABASE

The study is based on secondary data and the data have been collected from different articles, journal, books and websites of different STUs and database maintained by Government authorities.

Simple tables and charts have been used to interpret the data.

Scope of Private Equity or Public Private Partnership Model

- PUBLIC OWNED AND OPERATED – Public sector plans, owns, operates and manages bus services.

E.g.: Bangalore(BMTC), Chennai(MTC),Chandigarh(CTU),West Bengal(SBSTC)(NBSTC)(WBTC)

- PRIVATE OWNED AND OPERATED – Private sector owns and operates buses as per the permit and manages bus services. E.g.: Kolkata, West Bengal
- PUBLIC PRIVATE PARTNERSHIPS (PPPs)

Cost Plus Contract, Pune (Pune Municipal Corporation and Pimpri Chinchwad Municipal Corporation have merged their respective bus transport authorities into a special purpose vehicle know as Pune Mahanagar Parivahan Mahamandal Limited [PMPML]). Cost Plus Contract, Jaipur (Jaipur City Transport Limited (JCTSL) plans to operate a Bus Rapid Transit System on a buy- own- operate and maintain (BOOM) basis). Gross-cost contract - Aurangabad (ASCDCL) Net Cost Contract, The Indore Municipal Corporation has formed a Special Purpose Vehicle (SPV) i.e. Indore City Transport Service Limited (ICTSL) for the purpose of providing city bus transport services in the city. Licensing contract - West Bengal (SBSTC) (NBSTC)

	Cost-Plus Contract		Gross-cost contract		Net-Cost Contract		Licensing contract	
Item	Private Operator	Transport Authority	Private Operator	Transport Authority	Private Operator	Transport Authority	Private Operator	Transport Authority
Primary task	Procurement of buses and skilled staff to operate and maintain the buses	Fare setting, route planning, and management of transport infrastructure like bus stops and terminals	Procurement of buses and skilled staff to operate and maintain the buses	Fare setting, route planning, and management of transport infrastructure like bus stops and terminals	Procurement of buses and skilled staff to operate and maintain the buses, supervise operations and Fare collection	Fare setting, route planning, and management of other transport infrastructure like bus stops and terminals	Procurement of skilled staff to operate and maintain the buses and supervise operations Collection of fares	Procurement of buses, setting of fares, route planning, and management of other transport infrastructure like bus stops and terminals
	Procurement of permits	Performance and quality monitoring and regulation	Procurement of permits	Performance and quality monitoring and regulation	Procurement of permits and consumables	Monitoring of operating and performance standards of the bus fleet	Procurement of permits	Monitoring of operating and performance standards of the bus fleet
	Procurement of diesel, spares, engine oil, and other consumables for running of buses	Collection of all revenues such as tickets, seasonal tickets, advertising revenues	Procurement of diesel, spares, engine oil, and other consumables for running of buses	Collection of all revenues such as tickets, seasonal tickets, advertising revenues	Procurement of consumables like diesel, spares, and engine oil for the operation of the buses	Collection of revenue from advertisements	Procurement of consumables like diesel, spares, and engine oil for the operation of the buses	Collection of revenue from advertisements

Roles and Responsibilities of the Private Operator and the Bus Transport Authority under a Cost-Plus Contract, Gross-cost contract, Net-Cost Contract & Licensing contract:

Item	Cost-Plus Contract		Gross-cost contract		Net-Cost Contract		Licensing contract	
	Private Operator	Transport Authority	Private Operator	Transport Authority	Private Operator	Transport Authority	Private Operator	Transport Authority
Fares and payments	Receipt of a per-kilometer charge based on operating expenses incurred	Fare setting and collection	Receipt of a fixed amount based on per-kilometer or per-hour bus operation	Fare setting and collection	Collection of passenger fares Payment to bus transport authority or urban local body (ULB) based on a per-kilometer royalty or fixed monthly charge Receipt of share in advertisement and pass revenues from bus transport authority or ULB	Receipt of share in advertisement and pass revenues from bus transport authority or ULB	Payment of a per-kilometer royalty or fixed charge to the bus transport authority or ULB	Setting passenger fares Collection of advertisement revenue
Operating expense	Spares, minor major repairs Fuel & any other operation and maintenance expense Bus registration	Not applicable	Spares, minor major repairs Fuel & any other operation and maintenance expense Bus registration	Not applicable	Spares, minor major repairs Fuel & any other operation and maintenance expense Bus registration	Not applicable	Spares, minor major repairs Fuel & any other operation and maintenance expense Bus registration	Not applicable
Capital expense	Capital expenditure for the procurement of buses	Not applicable	Capital expenditure for the procurement of buses	Not applicable	Capital expenditure for the procurement of buses	Not applicable	Part of the capital expenditure for bus procurement	Part of the capital expenditure for bus procurement
Asset ownership	Takes over the assets at the end of the contract	Buses are run in the name of the bus transport authority or urban local body.	Takes over the assets at the end of the contract	Buses are run in the name of the bus transport authority or ULB.	Takes over assets at the end of the concession period	Buses are run in the name of the bus transport authority or urban local body.	No ownership	Takes over assets at the end of the concession period

Opportunity of Private Equity or Public Private Partnership Model for Sustainability of the STUs in West Bengal

PPP allows the public sector to derive benefits from the efficiencies and effectiveness of operational procedures. This is possible because of the following reasons:

For the Public Sector

- 1. Innovation** - Public Private Partnerships make it possible for the government to bring in the efficiencies and private know-how into operations of government services.
- 2. Sharing of Responsibilities & Risks** - The responsibilities and risks in the running of the services are ultimately transferred to the entity most suited and equipped to deal with them. Thus there is value added in the service delivery process.
- 3. Expenditure** - The private operator invests in the service using his own funds and thereby frees up government funds to be used to address more important and critical issues of public policy.

For the Private Sector

PPP allows the private sector, opportunities for profit. The private operator is able to bring in his innovative approach and know-how to ensure savings and thereby ensuring more profit.

For the Public Consumers

The public gets access to better quality services as the expertise of both the private sector and government entities is combined. While ensuring better services, the government will also protect the interests of the customer so that public policy goals are not compromised.

In this present scenario, tackling the problem of financial crisis appears to be the biggest challenge for bus transport operators in West Bengal. Recently West Bengal is also experimenting such PPP model in various sectors like shipping, railways and healthcare. So, PPP model may be a suitable alternative for the STUs in West Bengal for their long term sustainability and for providing better services to the state.

- SBSTC has a fleet of around 890 buses, 3,000 employees, including 2,100 contractual workers. The 900 permanent employees work in offices and ticket booking counters. Drivers, conductors, maintenance and cleaning staff are engaged on contract from private agencies.
- NBSTC has a fleet of around 600 buses in over 350 routes.

In 2017-18, the annual subsidy bill towards these three organisations was Rs 830 crore, 2018-19 subsidy bill was Rs 745 crore. But this bill has been coming down and in the 2019-20 financial year, it is expected to go down below the Rs 700 crore level.

NBSTC BUSES Memo no: - Date: NIT No: NBSTC/BHP-DV-TEN/001/2022-23 Date 03.03.2023

NORTH BENGAL STATE TRANSPORT CORPORATION BERHAMPORE Division NOTICE INVITING PRE-QUALIFICATION CUM TENDER (TWO COVER SYSTEM) FOR ENGAGEMENT OF FULL FRANCHISEE AGENT FOR OPERATION OF NBSTC BUSES Memo no: - Date: NIT No: NBSTC/BHP-DV-TEN/001/2022-23 Date 03.03.2023 North Bengal State Transport Corporation (NBSTC– herein after referred to as ‘The Corporation’ in some cases) intends to engage Full Franchisee Agent (s) capable to operate and maintain buses and to sell tickets on board by collecting fare at approved rates from the passengers through their own mechanism against advance payment of Monthly Guaranteed Revenue to NBSTC.

NBSTC Details of bus services put on tender:				
Sl	Name of the service	Operating Depot	Vehicle No.(s)	Reserve price of basic monthly Franchise Fees per bus in Rs (before charging GST)

1	KOLKATA – GITGRAM	BERHAMPORE	WB-63-A-5388	33000
2	KOLKATA – BARUA	BERHAMPORE	WB-63-A-5412	33000
3	LALGOLA – DIGHA VIA	BERHAMPORE	WB-63-A-5381	24000
	KOLKATA		WB-63-A-5383	
4	BERAHAMPORE – RAMPURHAT	BERHAMPORE	WB-63-A-5384	22000
	VIA SHERPUR, BISHNUPUR			
5	SURI - PURULIA	SURI	WB-63-A-2357	25000
6	SURI - ASANSOL	SURI	WB-63-A-2358	25000
7	SURI – KRISHNANAGAR VIA	SURI	WB-63-A-0386	22000
	KATWA			
8	ULTADANGA - PANCHTHUPI	ULTADANGA	WB-63-A-5369	22000
			WB-63-A-5413	
9	ULTAANGA - DHULIAN	ULTADANGA	WB-63-A-7049	24000
			WB-63-A-0303	
10	ULTADANGA – KARIMPUR VIA	ULTADANGA	WB-63-A-0322	25000
	KRISHNANAGAR			
11	ULTADANGA – SUSHUNIA PAHAR	ULTADANGA	WB-63-A-3512	25000
	VIA BURDWAN, DURGAPUR			
12	ULTADANGA – CHATRA VIA	ULTADANGA	WB-63-A-2372	25000
	DANKUNI			
13	ULTADANGA – DIGHA VIA	ULTADANGA	WB-63-A-5378	25000
	AIRPORT, BELGHORIA EXP WAY			
14	RANAGHAT - DALKHOLA	ULTADANGA	WB-53-A-2360	25000
			WB-63-A-7325	

SBSTC tender documents for sellection of bus franchisee operator for operation of bus services on franchises basis No. DTO- 110/SBSTC/23 DATED 22/02/2023

South Bengal State Transport Corporation (SBSTC) A premier Government Bus Service Operator in West Bengal, is contemplating to engage franchisee for operation of Non-AC buses in 26(Twenty six) routes in several districts of West Bengal.

SBSTC Details of bus services put on tender (Non Ac Buses)						
Sl	Name of the Route	Operating Depot	Vehicle No.(s)	Registration Number	Category of bus Standard JnNURM/ Standard Conventional/ JnNURM Midi	Reserve price per bus per month (excluding GST)
1	Asansol - Katwa via Bolpur	Asansol	2	WB3983715 WB3983717	Standard	20000
2	Kolkata - Indua	Belghoria	1	WB39A9993	Standard	20000
3	Arambag- Purulia	Arambag	2	WB3984708 WB39A3579	Standard	20000
4	Durgapur - Krinanagar	Durgapur	2	WB3984204 WB3983722	Standard	20000
5	Falta - kolkata via Bakrahat	Falta	2	WB39B1251 WB39B2068	Midi	14000
6	Howrah - Sealdah	Howrah	2	WB39B2083 WB39B0829	Midi	14000
7	Gorbeta - kolkata	Howrah	1	WB39A3059	Standard	20000
8	Kolkata - Basirhat via Barasat	Belghoria	1	WB39B0240	Standard	20000
9	Kolkata - Basirhat via Malancha	Howrah	1	WB39B0244	Standard	20000
10	Kolkata - Raibahat	Howrah	1	WB39B0246	Standard	20000
11	Digha- Khatra via Kharapur, Medinipur	Digha	2	WB39B0236 WB39B0239	Standard	20000
12	Kolkata - Datan	Howrah	1	WB39B0237	Standard	20000
13	Kolkata - Gopiganj	Belghoria	1	WB39B0252	Standard	20000
14	Kolkata - Sonachura	Howrah	1	WB39B0243	Standard	20000
15	Kolkata - Sonamukhi	Howrah	1	WB39A9515	Standard	20000
16	Kolkata - Samsundar via Jamalpur	Arambag	1	WB39A1634	Standard	20000
17	Asansol - Ranibandh	Asansol	1	WB39B0239	Standard	20000
18	Medinipur - Mohar	Medinipur	1	WB39A9566	Standard	20000
19	Bankura - Jhilimili	Bankura	1	WB39A3527	Standard	20000
20	Durgapur - Jhilimili	Durgapur	1	WB39B8296	Standard	20001
21	Medinipur - Kharagpur	Medinipur	1	WB39B0827	Midi	14000
22	Bankura - Khatra	Bankura	1	WB39B1022	Midi	14000

23	Burdwan - Durgapur	Burdwan	1	WB39B0819	Midi	14000
24	Durgapur - Burdwan	Durgapur	1	WB39B0810	Midi	14000
25	Suri - Kushmore	Suri	1	WB39B1245	Midi	14000
26	Jhargram - Medinipur Via Dherua	Jhargram	1	WB39B1241	Midi	14001

Tender is invited from bonafied, reputed and experienced Bus Operators having experience in Non AC buses operation.

Conclusion

In the current scenario the above said STUs in West Bengal are totally depended on government subsidy but it cannot be the proper solution to run an organization so they need to be self-dependent. To make themselves financially sound first of all they need to maximize revenue.

Finally, for the sustainability and surviving of the STUs in West Bengal, public private partnership (PPP) may be a good option.

Recommendations

The following measures can be taken to overcome the situation:

In this present scenario, tackling the problem of financial crisis appears to be the biggest challenge for bus transport operators in West Bengal. Recently West Bengal is also experimenting such PPP model in various sectors like shipping, railways and healthcare. So, PPP model may be a suitable alternative for the STUs in West Bengal for their long term sustainability and for providing better services to the state. Adopt PPP Model to enhance resources utilization which will again add to revenue earning capacity. Appropriate utilization of Human resources and other assets like land and idle buses.

Unused land can be given in lease. The Government may consider creating a regulator to regulate fares and services on uneconomical routes besides addressing the grievances of the commuters. Some routes can be customized. Pick up facility can be offered to daily commuter, for e.g. Railway station to office, IT sectors to Railway station and Air port etc. during morning and evening hours. Maintain proper time table to attract passengers.

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Big Data Analytics Capability And Decision-Making

Swami S.V.

Head, Department of Computer Application, Dayanand College of Commerce, Latur

Abstract

Big data analytics (BDA) is a groundbreaking method for making informed decisions within organizations, which can bring about significant transformations and support the circular economy (CE). However, existing research on BDA capability has not given enough attention to understanding the crucial role of data-driven insights in supporting decision-making and, consequently, improving CE performance. We propose that firms enhance the quality of decision-making through data-driven insights, business intelligence and analytics (BI&A), and BDA capability. In this study, we conducted an empirical investigation to examine the relationship between BDA capability and CE performance, as well as the mediating role of data-driven insights in this relationship. We collected data from 109 manufacturing firms in the Czech Republic and utilized partial least squares structural equation modeling to analyze the data. The findings indicate that BDA capability and BI&A are positively correlated with decision-making quality. This correlation is even stronger when manufacturers make use of data-driven insights. The results demonstrate that BDA capability significantly influences decision-making quality in organizations, and data-driven insights do not act as a mediator in this relationship. Furthermore, BI&A is associated with decision-making quality through the utilization of data-driven insights. These findings provide valuable insights for managers, serving as a guide for developing data-driven insights within the CE framework in organizations.

Introduction:

BDA has become a crucial element in decision-making processes within the circular economy, attracting attention from both scholars and industry professionals (Gupta et al., 2019). The term BDA encompasses vast data sets and sophisticated analytical tools that necessitate advanced technologies for storage, management, analysis, and visualization (Chen et al., 2012). While current research has primarily focused on the impact of BDA on organizational performance and innovation competency (Ghasemaghaei and Calic, 2019; Gunasekaran et al., 2017; Wamba et al., 2017), there remains a gap in understanding how manufacturers can enhance their product and process knowledge through data-driven insights to optimize resource utilization (Gupta et al., 2019).

This study contributes to the emerging body of research on BDA capability and the CE (Gupta et al., 2019) by investigating the impact of internal data analytics on data-driven insights and decision-making quality in organizations. These factors, in turn, influence CE performance. Specifically, this study focuses on the relevance of BDA capability in enhancing CE performance in manufacturing firms from an emerging country perspective. The research question addressed is the extent to which BDA capability is relevant for improving CE performance. The study aims to explore the roles of a manufacturer's BDA capability in enhancing decision-making quality and CE performance. This study differs from previous research on the relationship between BDA capability and firm performance in several important ways. Firstly, prior research emphasizes the importance of dynamic capabilities perspective for performance outcomes (Dubey et al., 2019; Mikalef et al., 2019). This study contributes to the literature by demonstrating that the knowledge-based view (KBV) also plays a significant role in enhancing decision-making quality. The findings suggest that decision-makers need to rely on data analytics to keep up with the evolving knowledge creation needs of organizations in order to improve decision-making quality and achieve CE outcomes (Alavi and Leidner, 2001). Secondly, this study responds to the call made by Ghasemaghaei (2019) and extends previous research by examining data-driven insights as a mediator between BDA capability and decision-making quality. While previous research has considered data-driven decision-making as a predictor of environmental performance (Dubey et al., 2019), and BDA capability as antecedents of decision-making quality (Shamim et al., 2019), limited studies have empirically explored the relationship between decision-making quality and CE outcomes. Lastly, the existing literature has a limited understanding of how decision-making quality can be improved (Janssen et al., 2017). This study suggests that firms with better decision-making quality can enhance their CE performance.

Leveraging Digital Capabilities to Foster a Circular Economy:

The concept of a digital-enabled Circular Economy is gaining traction as a means to enhance resource utilization, efficiency, and productivity within organizations. The rising concerns over resource scarcity are driving manufacturing companies to adopt Circular Economy practices in order to meet both local and global sustainability goals by leveraging digital technologies effectively (Alhawari et al., 2021). It is becoming increasingly evident that businesses need to tackle the challenges of resource scarcity and dematerialization in their products.

Development of Hypotheses based on Theoretical Framework:

BDA plays a crucial role in influencing the decision-making process of organizations and can have a positive impact on CE performance. For instance, according to Lehrer et al. (2018), BDA enhances the chances of achieving innovation performance. Likewise, Wamba et al. (2017) discovered a favorable correlation between BDA and organizational performance. A significant portion of the literature on decision-making focuses on organizational learning. Consistent with the perspective of Alavi and Leidner (2001), knowledge resources are intricate and challenging to manage.

Sample and data collection:

Within this research, a survey technique was employed to gather information via a well-organized questionnaire. The target population of this study consists of data-driven manufacturing companies in the Czech Republic. The European Commission is rolling out fresh regulations related to the Circular Economy Package, and it is imperative for member states to incorporate these guidelines into their policies (Vilamová et al., 2019). Consequently, the Czech government has endorsed a new Waste Management Plan in compliance with the Circular Economy Package.

Reliability and validity:

The reliability and validity of all the constructs were assessed through testing. The findings reveal that Cronbach's alpha coefficient for all the constructs exceeded 0.7, indicating high construct reliability. In order to evaluate the discriminant validity, the approach proposed by Fornell and Larcker (1981) was employed. To establish convergent validity, it is necessary for the factor loadings of the construct to surpass 0.65, while the average variance extracted (AVE) and composite reliability (CR) should both exceed 0.5. Additionally, the AVE should be lower than the CR.

Discussion:

The impact of Business Intelligence and Analytics (BI&A) and Big Data Analytics (BDA) on Customer Experience (CE) performance was investigated in this research. The study focused on 109 manufacturing firms in the Czech Republic and analyzed how these capabilities improve data-driven insights and decision-making quality. The results indicate a positive relationship between both BI&A and BDA capabilities and CE performance. These findings align with the research conducted by Kristoffersen et al. (2020). Additionally, it was found that BDA capabilities have a stronger influence on CE performance compared to BI&A, as the latter heavily relies on data-driven insights to enhance CE performance.

Conclusion:

The primary objective of this research was to analyze the influence of BDA capability on CE performance and evaluate the decision-making proficiency of manufacturing companies in the Czech Republic. This country is known for its extensive utilization of big data by firms. The outcomes of our study emphasize the favorable impact of BDA and BI&A on data-driven insights and decision-making, ultimately resulting in improved CE performance. Notably, BI&A emerges as a more significant predictor of data-driven insights, while BDA proves to be a stronger predictor of decision-making quality. These findings shed light on the importance of these factors in achieving desirable outcomes.

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Job Satisfaction As A Driver For Sustainable Development In Higher Educational Institutes

Dr. Laxmikant Nandkishor Soni

Asst. Prof., Dayanand College of Commerce, Latur

Abstract:

Satisfaction is a universal desire that drives every individual. While many associate satisfactions with material possessions, there is also a significant portion of people who find fulfillment in intangible aspects. Employment serves as a means to discover personal satisfaction in life. The progress of a nation relies on the education of its citizens. Education alone possesses the power to transform the general population into a high-quality human resource. In the present era, the development of human resources is widely recognized as a crucial factor that determines a country's performance in economic and social domains. In a developing nation like India, where education is advancing, widespread higher education forms the foundation for future national development. Technical education, in particular, plays a pivotal role in nurturing the nation's human resources by producing skilled professionals, enhancing industrial productivity, and improving overall quality of life. Technical education encompasses various fields such as engineering, technology, management, architecture, town planning, pharmacy, applied arts and crafts, hotel management, and catering technology. India, the world's largest democracy, has exhibited remarkable growth in its techno-economic capabilities over the past 64 years since gaining independence. It has sustained an economic growth rate of 7 to 8% in the last decade, achieved self-reliance in strategic sectors, ensured food security, and established itself as a global economic player. Moreover, India has made significant contributions by providing specialized and technical manpower to advanced nations for outsourcing, as well as qualified and skilled professionals to manage businesses, knowledge industries, and research centers both domestically and internationally. Human resources are of utmost important in achieving the sustainable goals imagined by the Nation. Hence this study highlighted the major factors which are required to acquire sustainable goals through job satisfaction.

Keywords: Job Satisfaction, Sustainable goals, Democracy and Human capabilities.

Introduction:

The noblest profession in the world is that of a teacher. Nowadays, many individuals are occupied with business matters and carry out their designated tasks. Why do they engage in these jobs? Certainly, to earn money! Why is money to be earned? Money is to be earned in order to lead a happy life. This implies that a job and money are not the ultimate goals but merely the means to achieve the ultimate goal, which is a happy life. Therefore, the job or work is expected to contribute to their happy life and should be a primary source of their happiness and contentment. What is contentment? It can be defined as the "state of pleasant feelings or perceptions." If the job itself becomes the cause of contentment, then this can be referred to as job satisfaction.

Satisfaction is essentially a subjective notion that differs from individual to individual. Being a cognitive phenomenon, it cannot be universally applied to all individuals based on predetermined assumptions. Consequently, the sources of satisfaction vary from person to person. Another crucial aspect of satisfaction is that it may not necessarily stem from external objects, but rather depends on individual personality traits. An object that brings satisfaction to one person may not have the same effect on another. In fact, it is not uncommon for individuals to experience completely contrasting emotions.

Job satisfaction is crucial for employee performance. If employees are not satisfied with their job, they will not be able to deliver satisfactory results. Entrepreneurs should prioritize job satisfaction to ensure desired performance. Human resources should not be viewed solely as a means to maximize productivity, but also as individuals whose satisfaction and well-being matter. Investing in HR is now seen as investing in human capital, which yields good returns. It is essential to focus on the satisfaction of employees, as they play a significant role in the success of the organization. Satisfaction is closely linked to one's life ideology, and it is important to strike a balance between increasing resources for needs fulfillment and minimizing and controlling needs. Entrepreneurs should make every effort to ensure that employees are satisfied with their duties. Proper orientation of employees is also crucial for job satisfaction. Employees must be able to define their satisfaction and cultivate a sense of contentment within them.

Ultimately, the success of a business depends on the contribution of its human resources, and only satisfied employees can deliver results. Therefore, recognizing job satisfaction as a key factor in achieving desired outcomes is essential.

Human resource management is a distinct area of expertise within the business realm that aims to create initiatives, guidelines, and initiatives to enhance the contentment of employees while aligning with the goals and objectives of the organization. The attitudes of employees hold significant value to management as they shape the conduct of individuals within the company. It is widely believed that "A contented employee is a productive employee." A contented workforce fosters a conducive environment within the organization, enabling optimal performance.

Organizations attract individuals with various motives, such as the desire for financial stability, career advancement, and fulfillment of social and emotional needs. These needs vary among individuals and change over time. It is crucial for management to acknowledge this fundamental aspect and create suitable opportunities and work environments that cater to these needs. Job satisfaction encompasses multiple aspects, including contentment with the nature of work, compensation and acknowledgment, and harmonious relationships with supervisors and colleagues. Each dimension plays a role in shaping an individual's overall perception of job satisfaction, although different individuals may have distinct interpretations of what constitutes their "job". There are three important dimensions to job-satisfaction:

- The level of job satisfaction is frequently influenced by the extent to which outcomes meet or surpass expectations.
- Individuals' effective orientations towards their work roles are crucial for success in the workplace.
- Job satisfaction pertains to an individual's attitude towards their job, which is something that can be deduced but not visually observed.

Review of literature:

- **Rudy Karsan Kevin Kruse (2011)** made a study on "We: How to Increase Performance and Profits through Full Engagement". We live in a new world where work and life are blended as opposed to balanced, and feelings of financial security and entitlement are a thing of the past. Job satisfaction is at a record low, a crisis with far-reaching impact. For businesses, a disengaged workforce means lower levels of productivity and service, and ultimately lower growth and profits. For individuals, our emotions at work spill over to the other areas of our lives and take a toll on our health and relationships. In We, Rudy Karsan and Kevin Kruse dig deep to reveal the nature of work in the modern organization and share the secrets for achieving full engagement at work, based on findings from over ten million worker surveys in 150 countries and also on their own experiences leading fast-growth companies. They show the inevitable linkage between the success of the individual and the success of the organization, and how both must come together to succeed. For managers and all professionals, we detail the leadership behaviors that generate emotional buy-in and commitment from team members. Karsan and Kruse highlight the three factors that drive one's level of engagement the most: -Growth: Team members feel they are growing in their careers and learning new things. -Recognition: Team members feel that their ideas and accomplishments are appreciated. -Trust: Team members trust senior leadership and feel confident about the future. We are using case studies from innovative companies, individual stories of personal growth and achievement, and actionable steps that will both enhance your own engagement at work and transform your approach to leadership.

Objectives of the study:

- To know the factors influencing job satisfaction
- To understand how Job satisfaction works as a Driver for Sustainable development in Higher Educational Institutes

Research Methodology:

Research Methodology is a systematic process to solve research problems. The objective of research is to find out the solution regarding research problems by using scientific and systematic technique. Data collection for this research study is collected through both the sources i.e. primary and secondary.

FACTORS INFLUENCING JOB SATISFACTION:

There a number of factors that influences one's satisfaction in the job situation. They can be categorized under two broad headings.

(1) Organizational Factors.

(2) Personal Factors.

1) Organizational Factor:

A major amount of time is spent in the work place by all of us. The place where we spend such a lot of time should fulfil our needs to some extent. The factors related to the work place are:

- Reward:

Reward includes all incentives like raise in pay, perks, facilities and promotion. The promotion factor is a major factor in job satisfaction. An employee can only achieve job satisfaction and work better when he knows that he will get his dues and raises in due time.

- Physical Working Condition:

The physical working conditions like availability of necessary furniture, lighting facilities, work hazard also plays a major role in the factor of job satisfaction.

- Cooperation:

Cooperation and attitude of the staff members with the person is also an important factor in the Job satisfaction of the person.

2) Personal Factors:

The second major factors are the personal factors. These are as follows:

- Interest:

Whether the nature of the work is of interest to the employee is a question. Answer of which tells the job satisfaction of the person.

- Personality Traits:

Some jobs are suitable only to a certain type of personalities. For example, a doctor or a sales person Job is such that they are in regular contact with general public. If they are shy in nature or cannot talk much, they will not be able to be successful in that setting which will cause dissatisfaction to them. While choosing for a job one should see that they have those personality traits which are necessary for that job because matching of the personality traits with the job is very necessary.

- Status and Seniority:

It has been found that the higher a person's position within the organization the job satisfaction reported is also high.

- Life Satisfaction:

Whether the job which a person is doing giving the person life satisfaction too? Life satisfaction is a term which is referred to Maslow's hierarchy of need of self-actualization. A person wants to establish or reach a goal in his life and it can be accomplished through the work which one is doing. It is other than the monetary part. For example, taking out publications or conducting researches etc.

TEN WAYS TO MAINTAIN JOB SATISFACTION AND ACHIEVE SUSTAINABLE DEVELOPMENT:

1. Believe - Believe in what you are doing

2. Be Honest - Trust in yourself and in others

3. Don't be afraid - Fear can and will hold you back - Overcome your fears
4. Be objective - Look at the big picture
5. Respect differences - Be non-judgmental
6. Learn from your mistakes - Learning is key
7. Support your co-workers -
8. Be enthusiastic - Enthusiasm is contagious
9. Be results orientated - Performance = potential minus interference
10. Work as part of a team

JOB SATISFACTION WORKS AS A DRIVER FOR SUSTAINABLE DEVELOPMENT IN HIGHER EDUCATIONAL INSTITUTES

Satisfaction is a psychological factor. It cannot be seen and cannot quantify. But its expression in human mind is understandable. When an employee is satisfied with his assigned task and can discharge his function satisfactorily, it is called 'job satisfaction'. Hoppock has brought the term 'job satisfaction' to limelight. After reviewing 32 studies on job satisfaction prior to 1933, he said, 'job satisfaction' is the combination of psychological, physiological and environmental circumstances that cause a person to truthfully say, "I am satisfied with my job". He has laid importance on the factors affecting job satisfaction but does not indicate the nature of job satisfaction. A comprehensive definition of job satisfaction is given by Locke is "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience". It is the result of employee's perception of how well their job provides those things that are viewed as important. Job satisfaction is generally recognized in the organizational behavior field that it is the most important and frequently studied attitude. There are three dimensions of job satisfaction —

- (a) It is an emotional response to a job situation,
- (b) It is often measured by how well outcomes meet or exceed expectations,
- (c) It represents several related attitudes.

Smith, Kendall, and Mulin have suggested that there are five job dimensions.

These are

- (1) The work itself.
- (2) Pay support for work
- (3) Promotion opportunities,
- (4) Supervision
- (5) Co-workers.

There are a number of outcomes of job satisfaction. For example, although the relationship with productivity is not clear, low job satisfaction tends to lead to both turnover and absenteeism, while high job satisfaction often results in fewer on the job accidents and work grievances and less time needed to learn new job-related tasks. Most recently, satisfied workers have been found to exhibit desirable pro social "Citizenship" behaviors and activities.

Job performance refers to the significance of the job to the employee and their proficiency in the essential skills needed for the job, provided they have the autonomy to decide how they carry out their work. Essentially, job performance encompasses the observable actions and behaviors of individuals in their roles that align with the organization's objectives. Extensive literature reviews and research studies have consistently shown a correlation between job satisfaction and performance.

Job satisfaction refers to the emotional state of an individual that reflects their reaction to their job and work environment. The key factors that contribute to job satisfaction are pay, working conditions, promotion opportunities, career development programs, colleagues, supervision, and retirement benefits, among others. These dimensions significantly impact the level of job satisfaction and ultimately affect the performance of employees.

Conclusion:

This study primarily focused on assessing the satisfaction levels of college teachers from various institutions. The findings revealed about teachers experience satisfaction in certain aspects such as the work environment and their relationships with colleagues. However, they also expressed dissatisfaction in areas such as welfare schemes, recognition of their work, and salary increments. The study emphasizes that job satisfaction among teachers ultimately impacts the growth and development of students, as satisfied teachers are able to provide valuable knowledge to their students. It concludes that in order to achieve institutional objectives, it is crucial to have a satisfied workforce. Therefore, ensuring job satisfaction among teachers is of utmost importance. Job satisfaction and performance play a vital role in the continuous progress of educational institutes. Job satisfaction refers to the extent to which individuals feel positive about their job, resulting from their evaluation of their job experience.

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A Study On Level Of Job Satisfaction Among Employees Of Dmart Shopping Malls In Latur

¹*Shrawan Baban Bansode*, ²*Dr. Maroti Kachave*

¹Research Scholar

²Professor

Late. Ramesh Warpudhakar College, Sonpeth

Abstract

A transformation in the purchasing habits of the people across the entire planet had nearly taken the supermarket to the main street. The Indian retail business has emerged as one of the most dynamic and rapidly expanding industries due to the introduction of various new firms in the recent times coupled with rising income levels, increased ambitions, favourable demographics and cheap credit availability. The retail industry produces roughly 10% of the country's Gross Domestic Products (GDP) and around 8% of the jobs and is valued at USD 900 billion as of 2019. The present study focus on degree of job satisfaction among the staff of Dmart shopping malls with regard working environment, welfare metrics and job security in Latur, Maharashtra state. The data is acquired from both primary and secondary sources. The Dmart introduction of its first store in Powai in 2002, D mart as on 31 December 2019, it had 176 locations in 72 cities across over 5.9 million square feet of total retail space, with a total of 7713 permanent workers & 33597 individuals engaged on contractual basis. Employees are happy with working environment, welfare facilities and safety provisions etc.

Key words: Retail, Satisfaction, Customers, Employees, Job and working conditions etc

INTRODUCTION

A transformation in the purchasing habits of the people across the entire planet had nearly taken the supermarket to the main street. This revolution was unrivalled in history of mankind as it had inspired the creation of distribution system that distributes food and other items to the customer in unprecedented volume, variety and quality. It had gone through its natural process of evolution in all sectors from the founding notion of the supermarket and department store to the hypermarket and shopping mall. It was believed that the first authentic department store in the world was opened in Paris in 1852 by Aristide Boucicault and was named Bon Marche. Then, the dept store business was a bare-bones enterprise.

FOUNDERS

DMart is owned and run by Avenue Supermarts Ltd. (ASL) — a corporation formed by Mr. Radhakishan Damani. Mr. Radhakishan Damani is known in the business world as an intelligent investor in the Indian equities market, he has developed a firm that always strives towards establishing a deep grasp of client demands and providing them with the proper goods. A fervent believer in basic business concepts and strong ethical values, Mr. Damani has grown DMart into an efficient, substantial and lucrative retail chain that is well valued by consumers, partners and workers alike.

In Maharashtra Dmart operates in the following cities : Amravati, Aurangabad, Dhule, Ichalkaranji, Jaisingpur, Jalgaon, Jalna, Karad, Kolhapur, Latur, Miraj, Mumbai (MMR), Nagpur, Nanded, Nandurbar, Nashik, Osmanabad, Pune, Ratnagiri, Sangli, Satara, Solapur, Wardha, Yavatmal. In Latur Dmart launches his own store in Feb-2019.

CURRENT SCENARIO OF INDIAN RETAIL MARKET:

Due to the introduction of numerous new companies recently, as well as rising income levels, rising expectations, favourable demographics, and easy access to credit, the Indian retail business has become one of the most active and rapidly expanding industries. As of 2019, the retail industry was valued at USD 900 billion, contributing 10% of the nation's Gross Domestic Product (GDP) and 8% of employment. India is the world's fourth-largest retail market after the United States, China, and Japan. Currently, unorganised retail (mom-and-pop shops and traditional kirana stores) continues to dominate the Indian retail business, accounting for around 88% of the overall retail market, while organised retail is valued at about USD 95 billion and accounts for only 12% of the market in 2019. In 2019, e-commerce sales in India reached roughly USD 24 billion, making up about 25% of the country's

organised market or 3% of all retail sales. India's organised retail sector penetration is far lower than that of other nations, such as the USA, where it is over 85%. The industry has had a CAGR of over 10% from 2013 to 2018, which is nearly double the increase seen from 2008 to 2013. The scale, breadth, and complexity of retailing have changed significantly during the past 20 years. Generally speaking, the retail sector may be divided into two groups: organised and unorganised.

ABOUT THE DMART SHOPPING MALL

A special resolution passed by shareholders at an extraordinary annual meeting held on February 1, 2011, converted Avenue Supermarts from a private company to a public company. Avenue Supermarts was originally founded as Avenue Supermarts Private Limited on May 12, 2000 in Mumbai, Maharashtra as a private limited company under the Companies Act of 1956. On May 3, 2011, the ROC issued a new certificate of incorporation to the business in response to the aforementioned name change. Mr. Radhakishan Damani and his family founded D Mart to meet the expanding demands of the Indian family. D Mart opened its first location in Powai in 2002. As of December 31, 2019, the company operated 176 stores in 72 cities across 11 Indian states, including Maharashtra, Andhra Pradesh, Telangana, Gujarat, Madhya Pradesh, Chhattisgarh, Rajasthan, National Capital Region, Tamil Nadu, Karnataka, Uttar Pradesh, Daman, and Punjab, with a total of 7713 permanent employees and 33597 hired on a contract basis. Avenue Supermarts Ltd. advertises DMart (ASL). The business's main office is in Mumbai. ASL is the brand owner of Dmart, Dmart Minimax, Dmart Premia, D Homes, and other names. D-Mart is a series of one-stop supermarkets that seeks to provide customers with a large selection of essential personal and home goods under one roof. Each D-Mart location carries a variety of household essentials at competitive costs, including food, toiletries, cosmetics, clothing, kitchenware, bed & bath linen, and more. The main goal of the business is to provide clients with high-quality goods at reasonable prices. For the fiscal year that ended in March 2019, the company reported net sales revenue of Rs. 20045 crores and profit after taxes of Rs. 9025 crores, translating to Rs. 14.5 in earnings per share (EPS).

JOB SATISFACTION

Job satisfaction is "an individual's positive emotional reaction to the target environment as a result of the individual's judgement of the extent to which his or her requirements are satisfied by the environment," according to Lofquist and Davis (1991).

The employee's perception of his or her work—whether it is favourable or unfavorable—determines job satisfaction. It conveys a discrepancy between what one expects from their employment and the benefits they receive from it. In a limited sense, these attitudes are connected to the job when certain conditions are present, such as pay, employment supervisors, working conditions, workplace relationships, swift resolution of grievances, and fair treatment by the employer.

REVIEW OF LITERATURE

In his study "Conceptual framework on job stress and job satisfaction among marketing personnel," Dass, D.V.S. (2012) investigated the connection between job stress and job satisfaction. The factors affecting occupational stress that have been looked at in this study include its causes, its remedies, and its management. In her study "Causes for Retail Industry Globalization," Dr. Jagdeeha (2012). This post aims to broaden their reach internationally, boost their bottom line, and advance their reputation and standing in the business. In their 2012 study, Vidushi Handa and Navneet Grover looked at how individuals in India's various socioeconomic levels are becoming more aware of brands and how the urban and semiurban retail marketplaces are expanding significantly.

STATEMENT OF THE PROBLEMS

In a retail shopping mall, employees are crucial to interacting with consumers and boosting the company's revenue. Therefore, one of the most important factors for retail shopping malls is employee happiness. As a result, research on work satisfaction at D-Mart Retail shopping malls in Latur, Maharashtra State, is necessary.

OBJECTIVES OF THE STUDY

1. To evaluate the level of employee satisfaction with their working conditions at D-Mart shopping centers in Latur, Maharashtra State

2. To analyze how satisfied employees are with job security and welfare policies at D-Mart shopping centers in Latur.

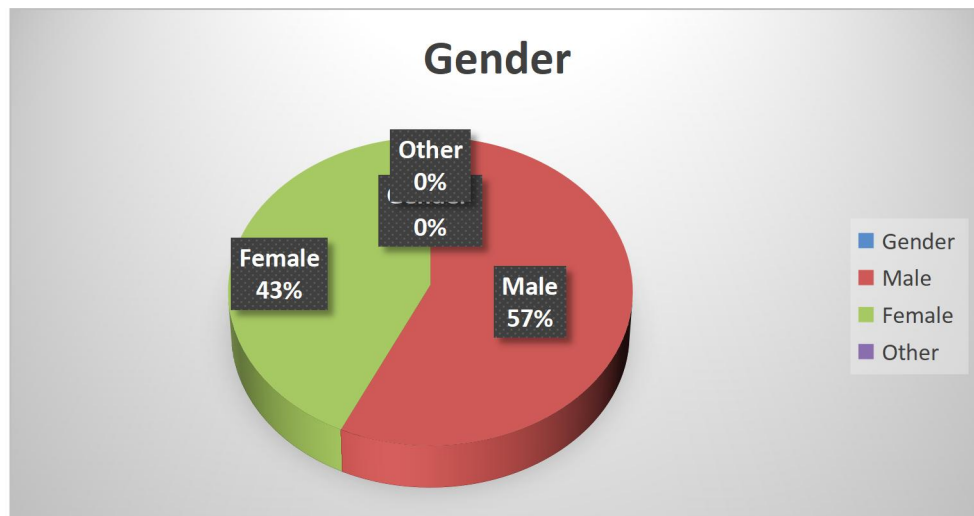
3. To measure how satisfied employees are with the safety provisions made at D-Mart shopping malls in Latur city.

RESEARCH METHODOLOGY

A combination of primary and secondary sources are used to get the data. A timetable for conducting interviews is used to get primary data, while books, periodicals, internet, etc. are used to gather secondary data. 100 employees were interviewed for the current study on a field visit using convenience sample techniques.

DATA ANALYSIS AND INTERPPRETATION

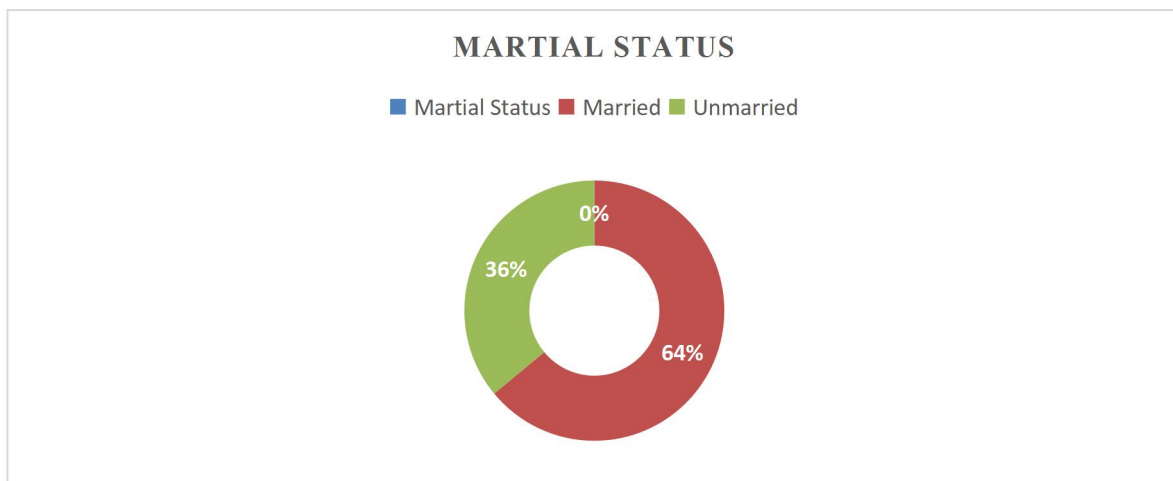
Graph 1.1. Distribution of gender of the employee



Source: Primary data

From the above graph, it is indicate that out of 100 employee 57% are male and 43% are female.

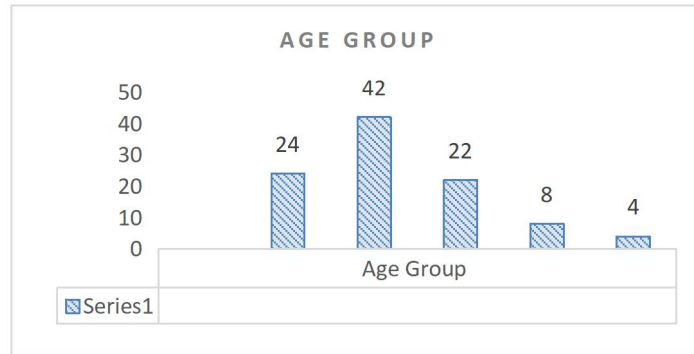
Graph 1.2 Distribution of marital status of the employees



Source: Primary data

From the above table, it is inferred that about 64 percent of the respondents are married and 36 percent respondents are unmarried.

Graph 1.3 Distribution of AgeGroups of the employees



Source: Primary data

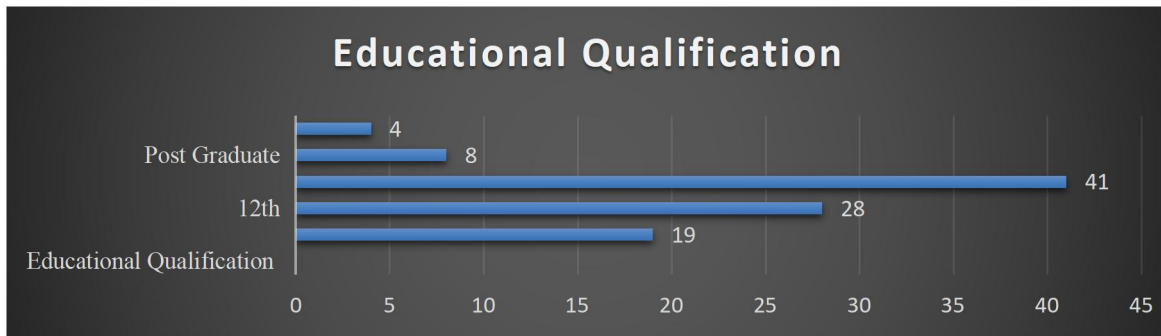
From the above table, it is inferred that employees’ groups are different

Graph 1.4 Distribution of Designation of the employees

Source: Primary data

From the above table, it is inferred that 54 percent of employees are sales executive, about 22 percent of employees are working in bill section staff, 13 percent of the employees are Managers level and 11 percent are housekeeping staff category respondents.

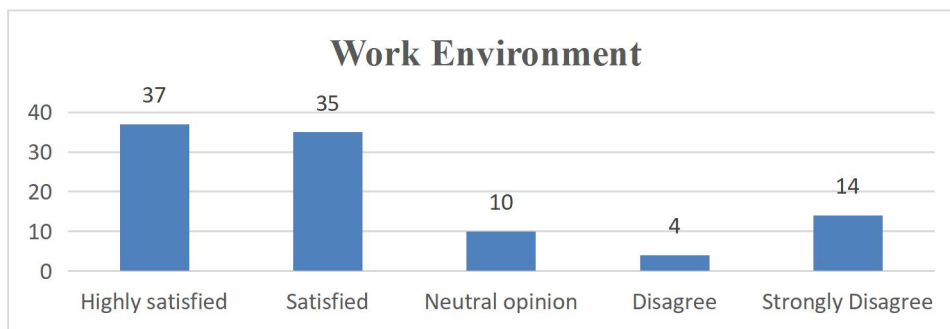
Graph 1.5 Employee’s educational qualification



Source: Primary data

According to the above graph, 8 percent of respondents have postgraduate level education, followed by 28 percent of respondents who have a 12th grade education and 19 percent of respondents who have a 10th grade education. Of the respondents, 41% have undergraduate level education. Additionally, it was discovered that 4% of the respondents had completed ITI, diploma, and other types of training.

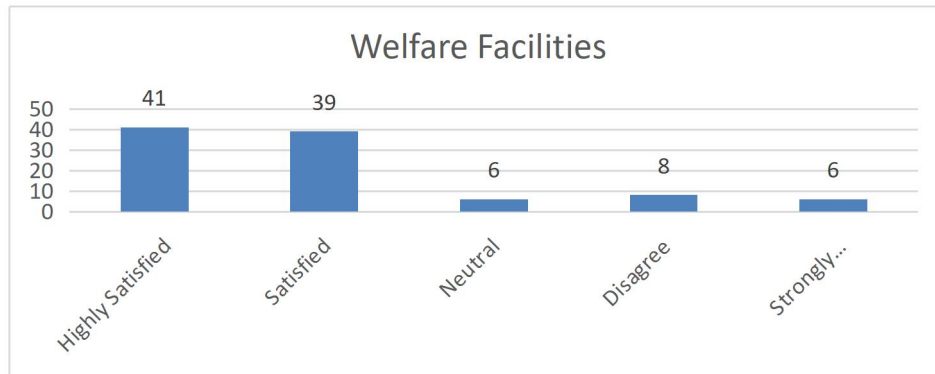
Graph 1.6 Satisfaction Level for Work Environment



Source: Primary data

From the above table, shows that the about 35 percent of the employees are satisfied with the working conditions available at D-Mart shopping malls, 37 percent of the employees are highly satisfied with the working environment at shopping malls and 10 percent of employees having neutral opinion about the work environment at malls.

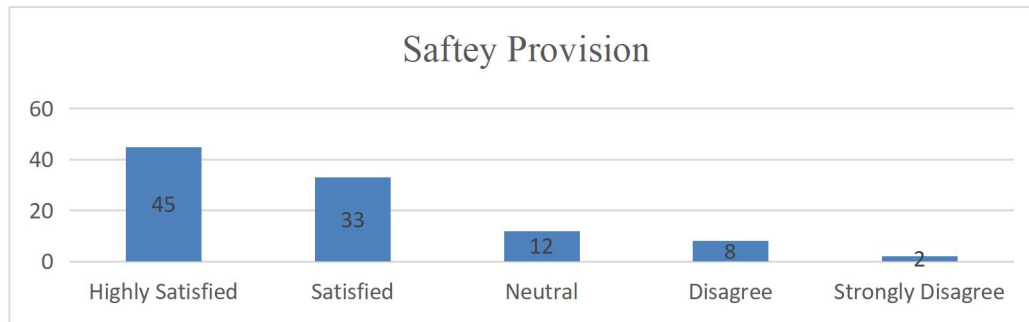
Graph 1.7 Employees Opinion on Welfare Facilities



Source: Primary data

From the above table, it is inferred that 41 percent of the respondents are highly satisfied with the welfare facilities, 39 percent of the respondents are highly satisfied 6 percent of the respondents are having neutral opinions, 8 percent of the respondents are dissatisfied with the welfare facilities provided by D-Mart shopping malls and 7 percent of the respondents are highly dissatisfied.

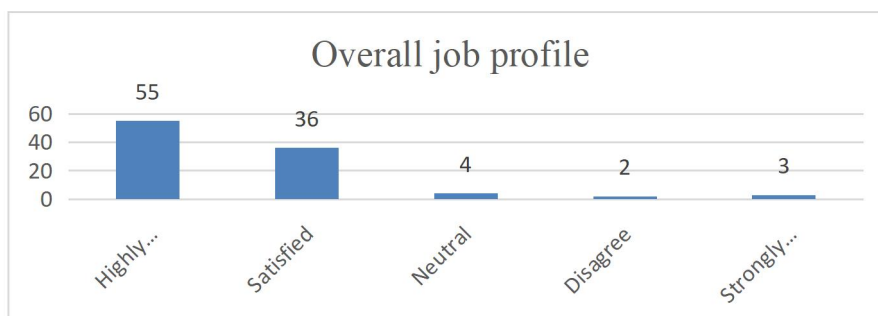
Graph 1.8 Employees Opinion on Safety Provisions



Source: Primary data

From the above table, it is inferred that 45 percent of the respondents are highly satisfied with safety provisions available at shopping malls, 33 percent of the respondents are satisfied with the safety provisions, 8 percent of the respondents are having neutral opinion.

Graph 1.8 Employees Opinion on overall job profile



Source: Primary data

From the above table, it is inferred that 55 percent of the respondents are highly satisfied with overall job profile available at shopping malls, 36 percent of the respondents are satisfied with the safety provisions, 4 percent of the respondents are having neutral opinion.

FINDINGS

After studying this chapter, I have found that the following points: -

1. There are employee who work in D-Mart Latur are 57% of male employee and rest 43% are female employee.
2. Out of 100% employee 64% are married
3. Job designation of employee it is inferred that 54 percent of employees are sales executive, about 22 percent of employees are working in bill section staff, 13 percent of the employees are Managers level and 11 percent are housekeeping staff category respondents.
4. About educational qualification it was found that in Latur D-Mart 8 percent of respondents have postgraduate level education, followed by 28 percent of respondents who have a 12th grade education and 19 percent of respondents who have a 10th grade education. Of the respondents, 41% have undergraduate level education. Additionally, it was discovered that 4% of the respondents had completed ITI, diploma, and other types of training.
5. Employee are much more satisfied about working conditions available at D-Mart 35 percent of the employees are satisfied with the working conditions available at D-Mart shopping malls, 37 percent of the employees are highly satisfied with the working environment at shopping malls and 10 percent of employees having neutral opinion about the work environment at malls.
6. Employees Opinion on Welfare Facilities it is inferred that 41 percent of the respondents are highly satisfied with the welfare facilities, 39 percent of the respondents are highly satisfied 6 percent of the respondents are having neutral opinions, 8 percent of the respondents are dissatisfied with the welfare facilities provided by D-Mart shopping malls and 7 percent of the respondents are highly dissatisfied.
7. Employees Opinion on Safety Provisions it is inferred that 45 percent of the respondents are highly satisfied with safety provisions available at shopping malls, 33 percent of the respondents are satisfied with the safety provisions, 8 percent of the respondents are having neutral opinion.
8. Employees Opinion on overall job profile it is inferred that 55 percent of the respondents are highly satisfied with overall job profile available at shopping malls, 36 percent of the respondents are satisfied with the safety provisions, 4 percent of the respondents are having neutral opinion.

SUGGESTION

Overall, after studying this chapter, I would like to suggest

1. Managerial staff should be increase for smooth running of business of D-Mart at Latur.
2. Apart from regularly payment **BOD** might be provide other facilities like fringe benefits, entertainment area for employee.
3. Housekeeping staff must be increase for cleanliness at the D-Mart.
4. For festival seasons billing staff should be recruits for handling billing rush.
5. For festival seasons Company must be provides extra payout for their works because there was too much rush in that situation.

CONCLUSION

After opening its first location in Powai in 2002, D-Mart expanded to 176 locations throughout 72 cities, occupying more than 5.9 million square feet of retail space. As of December 31, 2019, D-Mart employed 7713 permanent staff members and 33597 contract workers. It is determined that the majority of employees—approximately 64%are married. They hold a variety of positions, including those at the worker, billing department, and executive levels,



and the majority of them hold graduate- and postgraduate-level degrees. Employee satisfaction includes things like the working atmosphere, welfare amenities, and safety features.

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E-Commerce For Social And Environmental Goods

S.S.Patil

Asst.Prof.

Dayanand College of Commerce,Latur

Abstract

There are various new and modern trends have been introduced in the last decades one of the most emerging trend is e-commerce, e-banking, e-retailing and e-publishing. All concepts are related to electronic systems or transactions. Electronic system is related to internet or online. Electronic commerce, popularly known as e-commerce has emerged as the modern day Avatar in marketing. It has become the buzzword of the day. It has been assuming acceptability and popularity by leaps and bonds in the present day business. Given such back drop it seems pertinent to examine and explore the suitability of e-commerce is not about reinvesting business; it is about streamlining current business process to improve operating efficiencies which, in turn will strength the value to provide to customer which in turn will provide the competitive advantages over competitors in simple world E-Commerce is the process of doing business electronically or over internet.

Introduction

The advanced of internet technology has really revolutionised the business world today. Internet is reshaping the way information system is being used in business. New uses of information system and new business model have become possible because of internet, which has eliminated many technical efforts. Geography and cost barriers obstructing the Global flow of information. The first changing word of information technology (IT) application in business is now popularly known as e-business. E-commerce is the process of buying selling goods and services electronically include both front and back office application that drives the modern business. In other support E-Commerce enterprise communication and collation and web enabled business process which within a network enterprise and with its stake holder's e-commerce.

Definition

E-commerce is the buying and selling of goods and service, or the transmittting of funds or data, over an electronic network, premier the internet.

Objective

1. To study of history of e-commerce
2. To study of types of e-commerce
3. To study of benefits of e-commerce

Research Methodology

The research paper mainly depends upon the secondary data i.e. available from the following sources for the purpose of research study. Articles on e-commerce, books and journals, Seminars and websites.

History of E-Commerce

The history of e-commerce started over 40 years ago, when the introduction of early Technology like electronic data interchange (EDI) and teleshopping in the 1970 paved the way modern day E-commerce store as we know it today. The history of e-commerce is closely intertwined with the history of the Internet online shopping become possible when the internet was opened to the public in 1991. Amazon was one of the first e-commerce side in the US to start selling products online and thousands of business have followed since. For many Americans, e-commerce is something we participate in on daily basis, like making an online bill payment or purchasing from an online seller. E-commerce can take many forms and in involve different transactions. Let's take a look at generations of E-commerce-

E-commerce development can broadly divided into two generations. The first generation of e-commerce from 1995

to 2000 was dominated by companies operating in USA. Web pages were primarily in English, particularly on commerce sites. The second generation of e-commerce is international in its scope, with global enterprise doing business in many countries and in many languages. Second generation of e-commerce website is available in multiple languages.

E-commerce CSF

Profit making is major goal of every business. CSF is defined as an essential factor that helps the business to achieve its desired goals consequently; CSF is one of the issues, which needs to be identified for the success in market. Some factors are internal and in control of the company, while some factors are external and beyond the control of the company. Such Internal and External Factors-

Internal Factors

- Quality Assurance
- Purchasing Incentives
- Buying Aids
- Increased Security and Trust
- Efficient Customer Information Handling
- Innovative Organization
- Outsourcing

External Factors

- Internet usage
- Broadband and Mobile devices
- E-Retailers
- Competitors
- Technology Integration
- Consumer Characteristics

E-commerce For Social Good and A Future Outlook-

Despite many disadvantages e-commerce is expanding rapidly. Internet economy is growing dramatically and opening up new commercial opportunities for business and consumers. For many industries, Internet has become a significant mean to conduct their business copyright industries e.g. film, music, games an 1.8% of total revenue in 2007.

Future e-commerce leaders will be those that make the most of new technology and smartly capture the evolving trends at the onset. Prioritizing business strategy, customer needs and current capability goes a long way when outpacing the competition. Identify value pools to quantify market size, define the target experience of the most valuable user journey and conduct research to understand feasibility and viability of change. The brands that understand and where the best opportunity lie will drive the future.

Economic Growth And Environmental Sustainability

Sowbarani G

Assistant Professor of Commerce
Karpagam Academy of Higher Education

Abstract:

Global advancement depends critically on striking a balance between environmental sustainability and economic prosperity. It means growing prosperity while protecting the planet's limited resources and ecosystems for next generations. In order to meet existing needs without jeopardizing the ability of future generations to meet their own, sustainable development techniques balance economic activity with ecological integrity. Adopting eco-friendly technologies, renewable energy sources, and conscientious consumer habits promotes development while reducing the impact on the environment. This balance protects both the ecological integrity of the earth and human well-being by fostering robust, just communities that coexist peacefully with the environment.

Key Words: Ecosystem, Technology, Equilibrium, Challenges.

Introduction

In modern discourse, the nexus between environmental sustainability and economic growth is crucial because it represents the precarious balance between planetary preservation and human progress. Environmental sustainability, or the capacity to maintain ecological balance and protect natural resources for future generations, is closely linked to economic growth, which is typically gauged by gains in Gross Domestic Product (GDP) and material affluence. Opportunities and difficulties arise from this nexus as countries struggle to meet the demands of an expanding population and deal with urgent environmental concerns including pollution, climate change, and biodiversity loss. Innovative strategies that balance environmental requirements with economic goals and promote justice, resilience, and prosperity for both present and future generations are needed to achieve sustainable development.

Review of Literature

Ekins, P. (2002). *Economic growth and environmental sustainability: the prospects for green growth*. Routledge observed that Environmental protection, in particular the connection between sustainability and economic growth, has been a contentious issue in public policy for the last 20 years. Clear explanations of environmental-economic accounting, sustainability principles, and important topics like environmental taxation and the Environmental Kuznets Curve are provided by Paul Ekins. Through self-contained chapters, his work navigates difficulties and aids in comprehension for both politicians and students. By promoting the viability of "green growth" with the right policies, Ekins creates novel standards for evaluating the compatibility of economic growth with environmental sustainability. Students, scholars, and politicians interested in environmental economics and studies will find "Economic Growth and Environmental Sustainability" to be a useful resource.

Sorrell, S. (2010). Energy, economic growth and environmental sustainability: Five propositions. *Sustainability*, 2(6), 1784-1809 This paper addresses five controversial claims: (a) rebound effects impede the gains in energy efficiency, making it difficult to decouple from economic growth; (b) energy's contribution to productivity and growth is undervalued; (c) sufficiency and efficiency must be balanced; (d) sustainability and perpetual growth in wealthy nations clash; and (e) zero-growth and fractional reserve banking clash. By tackling neglected or forbidden subjects, each questions received knowledge. Even if the propositions are connected, acceptance of one does not imply endorsement of the other.

Kihombo, S., Vaseer, A. I., Ahmed, Z., Chen, S., Kirikkaleli, D., & Adebayo, T. S. (2022). Is there a tradeoff between financial globalization, economic growth, and environmental sustainability? An advanced panel analysis *Environmental Science and Pollution Research*, 29, 3983-3993 Current research frequently uses the KOF index to assess how globalization affects ecological footprint (EF), with an emphasis on social, political, and economic globalization. Nonetheless, little is known about how financial globalization affects EF. This study examines, allowing for population density, the relationship between financial globalization (FG), GDP growth, and EF in West Asian and Middle Eastern countries between 1990 and 2017. A substantial correlation between FG, GDP, and EF is shown via cointegration analysis, with FG significantly lowering EF. Density of population exacerbates EF,

and an environmental Kuznets curve between EF and economic expansion indicates how important it is to further finance globalization for ecological sustainability in the area.

Statement of the Problem

Investigating how green technology affect long-term economic stability is the goal of this study. The precise impact of green technology on environmental concerns and economic growth is still unknown, despite growing interest in their potential. Indicators of economic stability such as GDP growth, employment levels, income distribution, and shock resistance to the external environment are some of the variables that this research aims to clarify in relation to the uptake of green technology. This research aims to clarify the role of green technology in promoting sustainable economic development through rigorous empirical analysis, so assisting in the formulation of long-term policy decisions that balance environmental preservation with economic prosperity.

Objectives of the Study

1. To ascertain how green technologies affect long-term economic stability
2. To assess regularity policies' contribution to the advancement of environmentally friendly business activities
3. To determine which sustainable methods, promote economic growth while protecting the environment.

Statistical tools used for the study

Only 75 of the 80 respondents submitted data, which was subsequently thoroughly reviewed, tallied, and analyzed using statistical techniques such factor analysis, regression, correlation, and simple frequency.

		Correlations						
		VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007
Gender	Pearson Correlation	1	-.126	-.213	.026	-.093	.094	-.242*
	Sig. (2-tailed)		.282	.067	.824	.427	.421	.036
	N	75	75	75	75	75	75	75
Educational Qualification	Pearson Correlation	-.126	1	.097	.060	.131	-.138	-.114
	Sig. (2-tailed)	.282		.407	.610	.262	.239	.329
	N	75	75	75	75	75	75	75
Occupation	Pearson Correlation	-.213	.097	1	-.100	-.041	.127	-.009
	Sig. (2-tailed)	.067	.407		.392	.725	.278	.941
	N	75	75	75	75	75	75	75
Family income	Pearson Correlation	.026	.060	-.100	1	-.099	.027	-.127
	Sig. (2-tailed)	.824	.610	.392		.396	.819	.276
	N	75	75	75	75	75	75	75
Family type	Pearson Correlation	-.093	.131	-.041	-.099	1	.048	.068
	Sig. (2-	.427	.262	.725	.396		.685	.563

	tailed)							
	N	75	75	75	75	75	75	75
No of earning members in the Family	Pearson Correlation	.094	-.138	.127	.027	.048	1	-.160
	Sig. (2-tailed)	.421	.239	.278	.819	.685		.170
	N	75	75	75	75	75	75	75
Are you involved in any community initiatives or organizations	Pearson Correlation	-.242*	-.114	-.009	-.127	.068	-.160	1
	Sig. (2-tailed)	.036	.329	.941	.276	.563	.170	
	N	75	75	75	75	75	75	75

The correlation analysis shows a number of interesting connections between the variables. There is a noteworthy inverse relationship between gender and community involvement ($p < .05$), suggesting that women are generally more involved in community projects or groups than men. The lack of a substantial association between educational attainment and other variables suggests that educational qualification is independent. The relative autonomy of family income within the dataset is indicated by the fact that it does not significantly correlate with any other variable. Notably, there is a noteworthy inverse relationship ($p < .05$) between the number of earners in the family and community involvement, indicating that households with a higher earner count may have a lower level of community involvement. All things considered, these results clarify the relationship between community involvement and demographic characteristics.

Limitation

The difficulty of precisely projecting how green technologies would affect economic stability over the long run is one possible study constraint. It may be difficult to pinpoint the exact effects of adopting green technologies because of the complexity of economic systems and the complexity of environmental sustainability. Furthermore, aspects like the dynamic nature of environmental and economic variables, analytical techniques, and the availability of data may have an impact on the study's conclusions. Moreover, the study's scope might not have adequately encompassed the wide range of variables impacting environmental sustainability and economic growth, which could restrict how broadly applicable its findings can be. This study attempts to offer important insights into the possible trade-offs and synergies between environmental conservation and economic development, notwithstanding these constraints.

Conclusion

The research highlights the crucial relationship between environmental sustainability and economic growth, and it promotes the use of green technologies to reduce environmental damage and promote economic stability. To successfully traverse the complexities of this dynamic relationship, however, achieving this balance calls for concerted policy actions and ongoing study. Societies may work toward a more resilient and sustainable future by realizing how these objectives are interconnected.

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Consumer Protection Act-2019 : A New Path in Strengthening Consumers

Nagesh M. Sugare

Research Scholar

Dayanand College of Commerce, Latur

Abstract:

The industrial revolution and the development in international trade and commerce has led to the vast expansion of business and trade, as a result of which a variety of consumer goods have appeared in the market to cater to the needs of the consumers and a host of services have been made available to the consumers like insurance, transport, electricity, housing, entertainment, finance and banking. A well organized sector of manufacturers and traders with better knowledge of markets has come into existence, thereby affecting the relationship between the traders and the consumers making the principle of consumer sovereignty almost inapplicable. The advertisements of goods and services in television, newspapers and magazines influence the demand for the same by the consumers though there may be manufacturing defects or imperfections or short comings in the quality, quantity and the purity of the goods or there may be deficiency in the services rendered. In addition, the production of the same item by many firms has led the consumers, who have little time to make a selection, to think before they can purchase the best. For the welfare of the public, the glut of adulterated and sub-standard articles in the market have to be checked.

Preface:

Consumer protection is the practice of safeguarding buyers of goods and services against unfair practices in the market. It refers to the steps adopted for the protection of consumers from corrupt and unscrupulous malpractices by the sellers, manufacturers, service providers, etc. and to provide remedies in case their rights as a consumer have been violated.

Introduced in the Lok Sabha in December 1986, the Consumer Protection Act 1986 provided for the protection of the rights of the consumers. It established a redressal mechanism for the consumers if they were affected by defective manufactured goods and imperfect services, either due to their lack of knowledge or the vendor's fault. Product liability on the part of vendors was covered under this Act. The Consumer Protection Act 1986 was replaced by the Consumer Protection Act of 2019.

Objective

- The Consumer Protection Act 1986 was introduced to protect consumers' rights and interests. Consumer Protection Authorities were established across 3 tiers-Central consumer protection authority, State Consumer Protection Councils, and District Consumer Protection Councils.
- These rights along with product liability, consumer dispute redressal commissions, jurisdiction, penalties, and more were covered under Chapters II and III of the Act.

In India, the protection of the rights of the consumers is administered by the Consumer Protection Act, 2019. The Consumer Protection Act, 2019 was introduced to replace the Consumer Protection Act, 1986. The new Act contains various provisions which incorporate the challenges faced by modern and technology-dependent consumers. The Act also contains various provisions for the protection and promoting the rights of the consumers.

Meaning of the word 'consumer'

A consumer is an individual or group of individuals who purchase goods and services for their own personal use and not for the purpose of manufacturing or resale. Section 2(7) of the Consumer Protection Act, 2019 defines a consumer as any person who buys goods or services in exchange for consideration and utilises such goods and services for personal use and for the purpose of resale or commercial use. In the explanation of the definition of consumer, it has been distinctly stated that the term 'buys any goods' and 'hires or avails any services' also includes all online transactions conducted through electronic means or direct selling or teleshopping or multi-level marketing.

Need for the Consumer Protection Act, 2019

The Consumer Protection Act, 2019 was enacted by the Indian legislature to deal with matters relating to violation of consumer's rights, unfair trade practices, misleading advertisements, and all those circumstances which are prejudicial to the consumer's rights. The intention of the Parliament behind enacting the Act was to include provisions for e-consumers due to the development of technology, buying and selling of goods and services online have considerably increased during the last few years.

The Act seeks to provide better protection of the rights and interests of the consumers by establishing Consumer Protection Councils to settle disputes in case any dispute arises and to provide adequate compensation to the consumers in case their rights have been infringed. It further provides speedy and effective disposal of consumer complaints through alternate dispute resolution mechanisms. The Act also promotes consumer education in order to educate the consumer about their rights, responsibilities and also redressing their grievances.

Objective of the Consumer Protection Act, 2019

The main objective of the Act is to protect the interests of the consumers and to establish a stable and strong mechanism for the settlement of consumer disputes. The Act aims to:

Protect against the marketing of products that are hazardous to life and property.

- Inform about the quality, potency, quantity, standard, purity, and price of goods to safeguard the consumers against unfair trade practices.
- Establish Consumer Protection Councils for protecting the rights and interests of the consumers.
- Assure, wherever possible, access to an authority of goods at competitive prices.
- Seek redressal against unfair trade practices or unscrupulous exploitation of consumers.
- Protect the consumers by appointing authorities for timely and sufficient administration and settlement of consumers' disputes.
- Lay down the penalties for offences committed under the Act.
- Hear and ensure that consumers' welfare will receive due consideration at appropriate forums in case any problem or dispute arises.
- Provide consumer education, so that the consumers are able to be aware of their rights.
- Provide speedy and effective disposal of consumer complaints through alternate dispute resolution mechanisms.

What are consumer rights under Consumer Protection Act, 2019

There exist six rights of a consumer under the Consumer Protection Act, 2019. The rights of the consumers are mentioned under Section 2(9) of the Act, which are as follows:

- The right of a consumer to be protected from the marketing of goods and services that are hazardous and detrimental to life and property.
- The right of a consumer to be protected against unfair trade practices by being aware of the quality, quantity, potency, purity, standard and price of goods, products or services.
- The right of a consumer to have access to a variety of goods, services and products at competitive prices.
- The right to seek redressal at respective forums against unfair and restrictive trade practices.
- The right to receive adequate compensation or consideration from respective consumer forums in case they have been wronged by the seller.
- The right to receive consumer education.

Essential provisions of Consumer Protection Act, 2019**Consumer Protection Councils**

The Act establishes consumer protection councils to protect the rights of the consumers at both the national and state levels.

Central Consumer Protection Council

Under Chapter 2 Section 3 of the Consumer Protection Act, 2019 the Central Government shall establish the Central Consumer Protection Council which is known as the Central Council. It is an advisory body and the Central Council must consist of the following members;

The Minister-in-charge of the Department of Consumer Affairs in the Central Government will be appointed as the chairperson of the council, and Any number of official or non-official members representing necessary interests under the Act.

The Central Council may meet as and when necessary, however, they must hold at least one meeting every year. The purpose of the Central Council is to protect and promote the interests of the consumers under the Act.

State Consumer Protection Councils

Every state government shall establish a State Consumer Protection Council known as the State Council having jurisdiction over that particular state. The State Council acts as an advisory body. The members of the State Council are:

The Minister-in-charge of the Consumer Affairs in the State Government will be appointed as the chairperson of the council, Any number of official or non-official members representing necessary interests under the Act, and The Central Government may also appoint not less than ten members for the purposes of this Act.

The State Councils must hold at least two meetings every year.

District Consumer Protection Council

Under Section 8 of the Act, the state government shall establish a District Consumer Protection Council for every district known as the District Council. The members of the District Council are:

The collector of that district will be appointed as the Chairperson of the District Council, and Any other members representing necessary interests under the Act.

Central Consumer Protection Authority

The Central Government shall establish a Central Consumer Protection Authority which is known as the Central Authority under Section 10 of the Consumer Protection Act, 2019, to regulate matters relating to violation of the rights of consumers, unfair trade practices and false or misleading advertisements which are prejudicial to the interests of the public and consumers and to promote, protect and enforce the rights of consumers. The Central Government will appoint the Chief Commissioner and the other Commissioners of the Central Authority as required under the Act.

The Central Authority must have an 'Investigative Wing' under Section 15 of the Act to conduct an inquiry or investigation. The investigative wing must comprise of the Director-General and the required number of Additional Director-General, Director, Joint Director, Deputy Director and Assistant Director possessing the required experience and qualifications to carry out the functions under this Act.

Functions and duties of the Central Authority

The functions and responsibilities of the Central Authority are laid down in Section 18 of the Act which includes;

- To protect and promote the rights of the consumers as a class and to prevent violation of consumer rights,
- To prevent unfair trade practices,

- To ensure no false or misleading advertisements regarding any goods or services are promoted,
- To ensure no person takes part in false or misleading advertisements,
- Inquire or investigate in cases of violation of consumer rights or unfair trade practices.
- File complaints before the National, State or District Commission as the case may be,
- To review matters relating to the factors hindering the enjoyment of consumer rights.
- To recommend the adoption of international covenants and best international practices concerning consumer rights

Total Number of Cases Disposed by Consumer Forums since inception, www.ncdrc.nic.in-2018

Sr. No.	Name of the Agency	Cases filed	Cases disposed	Cases Pending	% of total disposal
1	National Commissions	122042	103520	18522	84.82 %
2	State Commissions	788463	678124	110339	86.01 %
3	District Forum	3903706	3605673	298033	92.37 %
	Total	4814211	4387317	426894	91.13 %

Conclusion

The Consumer Protection Act, 2019 is a modified piece of legislation that offers the consumers a great variety of benefits and rights to protect them from unfair trade practices, false or misleading advertisements, etc. The Act enables the consumers to seek alternative dispute resolution mechanisms and mediation so that the parties can opt for speedy and effective settlement of consumer disputes. The scope of e-filing of complaints and e-consumers in the Act portrays forward-thinking in part of the legislature. Furthermore, the Act also introduced new terms such as product liability, unfair contracts, etc. thereby widening the scope of protection of consumer rights and enabling the consumers to file complaints when their rights have been violated under the Act.

Thus, the inclusion of the provisions in this fills up the lacunae in the Consumer Protection Act, 1986. The enactment of the Act was paramount and it changed the ambit of protecting the rights of consumers in the country.

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Constitutional Provisions for Environment Protection in India

Dr. Shakuntala D. Jawanjal

Assistant Professor Political Science

M. S.P. Mandal's Shri Shivaji Law College, Parbhani.

Abstract:

Environment Protection, climate change and sustainable development are correlated with each other. Environment issues are having global as well as local concern. Our environment has a direct impact on us. Environment protection is collective responsibility. At global level the United Nations takes effort for its protection. The United Nation organizes conferences, issues declarations for member states and members are obliged with declarations. The United Nation member states take measures for the enforcement of provisions made by the organization.

India as one of the responsible members of UNO, made provisions Laws for environment and its protection. Constitutional provisions for environment protection in India are highlighted in this paper. The paper discussed provisions under fundamental rights, directive principles of state policy and fundamental duties of Indian constitution. The paper takes review of these provisions and in conclusion suggest simple ways to protect environment around us.

Key Words – climate change, Sustainable development, constitutional provisions

Introduction:

Sustainable development is a key word regarding environmental issues from 1970s. since then it has become the trademark of international organizations working for environment protection climate change and sustainable development are two sides of the same coin. Sustainable development focuses for the benefit of future generation. The present generation should be modest in their exploitation of natural resources; whereas climate change refers to long term shifts in temperature and weather patterns.

Development is mainly responsibility of government, which includes agricultural, industrial, economic social, political and infrastructural development. While concentrating on development all the governments have been neglected the loss of environment. The natural resources are exploited under the name of development. This act of human being is responsible for climate change and effect on environment.

Sustainable Development and Climate Change Meaning –

“Sustainable development is an approach that meets the needs of the present without compromising the ability of future generation to meet their own needs.”¹

The above definition is given in the report of United Nations General Assembly on the environment development in 1987. Sustainable development is an action plan for protection of environment, natural resources and its elements.

“Sustainability is often thought of as a long-term goal, while sustainable development refers to many processes and pathways to achieve it.”²

Climates are the weather conditions that are typical in certain place. It contains humidity temperature and wind.

Climate change refers to long term shifts in temperature and weather patterns. Basically, human activities have been the main driver of climate change.

People generally think climate change mainly means warmer temperature, but temperature rise is only the beginning because the Earth is a system, where everything is connected. Change in one element causes changes in all others and that ultimately affects living beings and human society. The consequences of climate change include intense drought, water scarcity, severe fires, rising sea levels, flooding, melting polar ice catastrophic storms and declining biodiversity.

Connection between climate change and sustainable development:

There is significant connection between climate change and sustainable development. Climate change is issue which impacts on the environment, human society and individuals. Whereas sustainable development aims to reduce the impact of climate change that affect the environment and human being.

Climate change affects environment, it creates imbalance in temperature, rainfall which ultimately affects human life by increasing temperature, diseases, health issues, agricultural production, rise in water levels.

Scientists have been aware about the high concentration of carbon dioxide and other greenhouse gases in the atmosphere since 1960s. the enhanced greenhouse gases effecting the Earth's climate equilibrium and has led to a warmer world. Warming temperature lead to the melting glaciers. Even the temperature of the oceans has also risen. Due to carbon dioxide the biodiversity of ocean is disturbed. The climate change has affected human life in various ways. Climate related disasters, causes for migration of people, "climate changes and disasters have always driven people to leave their homes. According to the Internal Displacement Monitoring Centre, between 2008 to 2018 about 265 million people worldwide were internally displaced as a response to disasters."³

Sustainable development looks towards human needs and their present and future well-being. Sustainable development can be achieved through proper integration of human and environmental system. Sustainable development tries to find a balance between economic development, environment protection and social well- being. Sustainable development demands for reduce, reuse and recycle of the resources. Climate change issue has been taken consideration by international organizations following efforts are at international level for environment protection.

International Perspectives for Environment Protection –

United Nations organization has taken initiatives for the global environment protection since 1970s. There are many conventions that have been taken place for the improvement and protection of the environment.

United Nations Conference on Human Environment – 1972

"The United Nation Conference on Human Environment 1972 popularly known as Stockholm conference Sweden is a landmark step towards environment protection. It was the first world conference to make the environment as a major issue. 169 countries attended the conference."⁴ The participants of Stockholm conference adopted 26 principles and an Action Plan for human environment. It is said in the declaration that, "Man is both creature and molder of his environment, which gives him physical substance and affords him the opportunity for intellectual, moral, social and spiritual growth."⁵

Some important principles adopted in conference are as follows:

- 1) Man has the fundamental right to freedom equality and adequate conditions of life in an environment of a quality that permits a life of dignity and well-being and he bears a solemn responsibility to protect and improve the environment for present and future generations.⁶
- 2) The Natural Resources of the earth including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguard for the benefit of present and future generation through careful planning or management as appropriate.⁷
- 3) The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.⁸
- 4) The 7th principle sepalsabout state's role and said, "States shall take all possible steps to present pollution of the seas by substances that are liable to create hazards of human health to living resources and marine life to damage amenities or to interfere with other legitimate uses of the sea."⁹
- 5) The 11th principle is about, "The environmental policies of the states should enhance and not adversely affect the present of future development potential of developing countries nor should they hamper the attainment of better living conditions for all and appropriate steps should be taken by states and International organizations with a view to reaching arrangement on meeting the possible national and international economic consequences resulting from the application of the environment measures."¹⁰

- 6) The 17th principle of the declaration is, “Appropriate national institutions must be entrusted with the task of planning, managing or controlling the enhancing environmental quality.”¹¹

The United Nation conference declaration expected that environment protection efforts must be taken from three levels, at international level by committing conventions, at state level the member states of UNO should make provisions and laws within their sphere and at local level people, individuals should take measures towards it.

Considering this the next major step was taken by UNO for environment issue that was ‘The Earth Summit’ 1992.

The Earth Summit (Rio de Janeiro conference) 1992-

“The United Nation conference on environment and development was held in June 1992 at Rio-de-Janerio, popularly known as ‘The Earth Summit,’ wherein more than 150 governments participated.”¹²

“The Earth summit focused and forced the people worldwide to rethink on environment issues and pollution. The Earth summit declared a document on environment, which is known as ‘Rio-declaration’ in which 27 principles consisted, which guided the behavior of nations towards environmental issues and sustainable development.”¹³

As the result of Earth summit, to enhance international cooperation on environment issues the United Nation has set up a commission on sustainable development on 16th February, 1993.¹⁴

United Nation is working at world level for environment protection, by organizing conferences, conventions, by setting up commission and its members passed provision laws for the enforcement of principles of Stockholm as well as Rio declaration.

As a member of the United Nations organizations, India has made various laws and provisions in constitution for environment protection.

Constitutional provisions and Environment protection in India-

In India, environment protection provision not only raised in constitution but also it has human rights approach. “The constitution of India obligates the state as well as citizens to protect and improve the environment.”¹⁵

Environmental laws in India has base of Indian constitution, “Article 253 of Indian constitution empowers the Parliament of India to make any law for the whole or any part of the territory of India for implementing any threaten, agreement or convention with any other countries or any decision made at nay international conference, association or other body.”¹⁶

“Article 21 of Indian constitution under fundamental rights guarantees all persons a fundamental right to life and personal liberty.”¹⁷

“Article 21 guarantees a fundamental right to life, a life of dignity, to be lived in a proper environment, free of danger of disease and infection. It is an established fact that there exists a close link between life and environment.”¹⁸

“From the various decisions of cases the Supreme Court mentioned that thoughtless development can cause avoidable harm to the environment as well as it can deprive the people of their right to livelihood.”¹⁹

The slow poisoning by the polluted atmosphere caused by environmental pollution and spoliation should also be regard as amounting to violation of Article 21 of the constitution.²⁰

Article 19(1) of guarantees all citizens, ‘The right to practice any profession of to carry any occupation.’ But the right is not absolute one cannot carry the business which can become a health hazard to the entire society. Reasonable restrictions can be imposed in the interest of the public.

Directive Principles of State Policy and Environment Protection: -

The constitution of India lays down 15 principles as Directive Principles of state policy, which are fundamental in governance of the state and it is duty of the state to apply these principles in making laws.

Under Directive Principles government of India has taken steps towards making laws for environment protection and public health.

Article 47 of Directive principles provides “Nutrition standard of living and public health.”²¹ Public health must be improved through environment protection and development. “Article 48 stands for scientific agriculture and animal husbandry.”²²

Article 48A – “The state shall Endeavour to safeguard the countries forests and wildlife and to maintain and promote the environment.”²³

Article 48A – of Indian constitution added in 1976 (42nd Amendment) dealing specially with protection and improvement of environment.

Fundamental Duties & Environment Protection: -

Fundamental duties are the obligations which evens citizen of India has to fulfill. Article 51 (A)g– of this part specially deals with the fundamental duty with respect to environment. It provides “It shall be the duty of every citizen of India to protect and improve the natural environment including forests lakes, rivers and wildlife and to have compassion for living creatures.”²⁴

Article 51(A)j provides – “It shall be the duty of every citizen of India to strive towards excellence in all spheres of individual and collective activity, so that the nation constantly rises to higher levels of endeavor and achievements.”²⁵

India is one of the respective members of United Nation and to put into effect the Stockholm conference and Earth Conference declaration certain acts are passed for environment protection.

Conclusion: -

Human beings and Environment are closely related. Both affects and effects upon each other; hence it becomes one of the major responsibilities of us to protect our environment. No doubt, development is essential for human society but harming to nature, environment will ultimately harm human society and that isproven by Mother Nature time to time. Sustainable development is the pathway through which we can protect nature, environment and our future generation. Individuals can save environment by doing simple things like –

1. Using bicycles, common transformation which will help to reduce carbon dioxide and green gases.
2. Walking is also effective activity good for human health as well as protection for environment.
3. Tree plantation and taking its care helps to increase oxygen. It must be one of the legal duties of every person.
4. Switching every system from fossil fuels to renewable like solar and wind will reduce the emissions driving climate change.
5. Awareness can be create among people and young generation by adding environmental studies in curriculum at school and colleges.

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An Overview of India's Sustainable Development

Suhana Isak Shaikh

P.G. Student

Dayanand College of Commerce, Latur

ABSTRACT:

Sustainable development has become a prominent subject across various academic disciplines. Over time, its definition has evolved, with the United Nations providing clarity through its 2030 agenda. The UN identifies three main pillars of sustainable development and has formulated 17 Goals based on the assessment of fundamental human needs, encompassing dimensions such as ending poverty and achieving zero hunger. This paper examines India's current progress towards these goals, emphasizing initiatives such as reducing plastic usage and improving literacy rates nationwide as key strategies for achieving sustainable development. India has prioritized five areas in its pursuit of Sustainable Development Goals.

Key Words:- Sustainable Development, SGD, Environment.

INTRODUCTION - SUSTAINABLE:

Sustainability refers to the capacity to endure and persist well into the future. It necessitates ongoing action and a temporal dimension wherein the level of action remains consistent or increases over time.

Objectives

- ▶ To study the performance of India's Sustainable Development.
- ▶ To Understand SDG goals in detail.

Research Methodology

Research methodology of the paper deals with An Overview of India's Sustainable Development. The secondary data for research paper, and studied from the Govt. Publications, Books, and collected the Monthly Journals and newspapers on SGD.

newspapers on women participation in politics.

SUSTAINABLE DEVELOPMENT:

As defined by the United Nations: "Sustainable development is the kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

PILLARS OF SUSTAINABLE DEVELOPMENT:

Sustainable development rests on three primary pillars, each encompassing various aspects essential for achieving sustainability. These pillars are characterized by the following key features:

ENVIRONMENT:

- Decreasing carbon dioxide emissions.
- Safeguarding biodiversity.
- Lowering energy consumption.
- Managing chemicals effectively, among other measures.

SOCIAL:

- Addressing human rights concerns.
- Collaborating with and supporting regional communities.
- Ensuring safety and rights of workers, among other social considerations.

ECONOMIC:

- Achieving consistent and profitable growth.
- Effectively managing risks.
- Maximizing total shareholder return.

When the three pillars of sustainable development intersect, they give rise to three additional forms of sustainable development: Socio-Environmental, Eco-Economy, and Socio-Economic.

SUSTAINABLE DEVELOPMENT GOALS:

In September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development, comprising 17 goals collectively known as Sustainable Development Goals (SDGs). With 193 member countries, including India, the agenda aims to eradicate all forms of poverty, address inequalities, combat climate change, and ensure inclusivity with the principle of "Leaving no one Behind".

The Sustainable Development Goals incorporate a focus on disability to promote inclusivity and empower individuals worldwide. The 17 goals encompass 169 targets, encompassing all dimensions necessary for achieving sustainable development. These goals are as follows:

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure
10. Reduced Inequality
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace, Justice, and Strong Institutions
17. Partnerships for the Goals



INDIA'S STATUS:

India has played a pivotal role in the declaration and subsequent progress towards achieving the Sustainable Development Goals (SDGs). With approximately 17% of the world's population, India has made significant strides, crossing the halfway mark in achieving all 17 SDGs in just three years.

INDIA'S INDEX:

- ▶ India's 2023 score of 63.45% was a little improvement from 60.3% the year before.
- ▶ On specific parameters, India's performance has declined in terms of "reducing inequalities" and "life on land." India ranks quite low when it comes to biodiversity conservation and life on land.
- ▶ The index evaluates the progress of Indian states and Union Territories on a scale of 0 to 100. Notably, top-performing states include Himachal Pradesh, Kerala, and Tamil Nadu, each scoring 69%, while states like Assam, Bihar, and Uttar Pradesh lag behind with scores ranging from 0 to 49%. Additionally, Goa, Kerala, Manipur, Mizoram, and Nagaland have excelled in achieving the Zero Hunger Goal.

PACE TAKEN BY INDIAN GOVERNMENT:

The Indian Government has adopted five significant steps to advance the Sustainable Development Goals:

- Ratifying the Paris Agreement
- Implementing Clean Development Mechanism projects
- Developing State Action Plans on Climate Change
- Implementing Coal Cess and establishing the National Clean Energy Fund
- Establishing the National Adaptation Fund for Climate Change

MEASURES OF SUSTAINABLE DEVELOPMENT:

The Indian Government, through the policy commission NITI Aayog (National Institution for Transforming India), has outlined several measures to achieve Sustainable Development Goals, including:

- Adoption of environmentally friendly technologies
- Promotion of the 3-R approach (Reduce, Reuse, Recycle)
- Heightened environmental education and awareness
- Population stabilization efforts
- Conservation of non-renewable resources and utilization of renewable resources

CONCLUSION:

The Sustainable Development Goals offer a comprehensive framework to address poverty, hunger, peace, and environmental sustainability. Achieving population stability is crucial for advancing sustainable development, leading to outcomes such as social cohesion, fertile soil, and disease prevention. Initiatives like pollution-free Tamil Nadu and the promotion of biofuels exemplify India's commitment to sustainable development. The Indian Government's motto "SABKA SAATH, SABKA VIKAS" (Development for All) underscores its dedication to transforming architecture and achieving sustainable development goals in 18 months.

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Digital Disruption: The Rise of Financial Technology(FinTech) in Modern Finance

¹Umesh Shankarrao Solanke, ²Prof.(Dr.)D.M.Khandare

¹(Research Scholar, School of Commerce and Management Sciences, SRTM University, Nanded.

²(Sr.Professor, Faculty Dean, Director, School of Commerce and Management Sciences, SRTM University, Nanded.)

Abstract: The contemporary financial landscape is undergoing a profound transformation propelled by the burgeoning influence of financial technology (fintech). This paper investigates the phenomenon of digital disruption within modern finance, focusing on the meteoric ascent of fintech and its far-reaching implications for traditional financial paradigms. Through an extensive review of scholarly literature and empirical evidence, this study elucidates the multifaceted dimensions of fintech's rise, analysing its drivers, challenges, and transformative potential. The advent of fintech has revolutionized the delivery and accessibility of financial services, catalyzing a democratization of finance that transcends geographical boundaries and socioeconomic disparities. From mobile payments and blockchain technology to automated investment platforms, fintech innovations have redefined the contours of financial intermediation, empowerment, and inclusion. Moreover, this research investigates the responses of incumbent financial institutions to the fintech revolution, examining strategies of adaptation, collaboration, and competition in the face of disruptive technological forces. It also explores the regulatory landscape governing fintech adoption, highlighting the tension between innovation and regulatory compliance, as well as the imperative to safeguard consumer protection and financial stability. Furthermore, this research paper underscores the broader societal and economic implications of fintech's proliferation, including its potential to enhance financial inclusion, stimulate economic growth, and reshape traditional business models. However, it also addresses pertinent concerns related to data privacy, cybersecurity, and the exacerbation of existing socioeconomic disparities. In conclusion, this research underscores the transformative power of fintech in reshaping the dynamics of modern finance, advocating for a holistic approach that leverages innovation while mitigating risks and fostering inclusive growth. By elucidating the intricacies of digital disruption within the financial realm, this paper aims to contribute to a nuanced understanding of fintech's role in shaping the future of finance and society at large.

Keywords: Financial Technology, Fintech, Digital Disruption, Modern Finance, Fintech Innovation, Financial Inclusion, Mobile Banking, AI in Finance

1. Introduction

In the past decade, the financial industry has undergone a profound transformation, largely driven by the advent of financial technology, or fintech. This digital disruption has redefined the way we think about money, transactions, and financial services, creating new opportunities for innovation while challenging traditional financial models. From mobile banking and peer-to-peer lending to blockchain technology and robo-advisors, fintech has revolutionized the accessibility, speed, and efficiency of financial operations.

The rapid rise of fintech has implications for a wide range of stakeholders, including consumers, businesses, financial institutions, and regulators. For consumers, fintech has democratized access to financial services, allowing for more personalized and convenient banking experiences. Businesses have benefited from streamlined payment systems and new avenues for fundraising and investment. Financial institutions, on the other hand, are experiencing increased competition and are compelled to adapt to stay relevant. Meanwhile, regulators face the challenge of ensuring that innovation does not compromise financial stability or consumer protection.

This research paper seeks to explore the multifaceted impact of digital disruption on modern finance, analyzing the key drivers behind FinTech's growth, the emerging trends within the industry, and the regulatory landscape that governs it. Through this analysis, we aim to understand how fintech is reshaping the financial industry and what this means for the future of finance. Ultimately, this paper provides a comprehensive overview of a rapidly evolving field, offering insights into the benefits and risks associated with digital disruption in finance.

2. Review of Literature:

Fintech Revolution: The Future of Financial Services (Barrett, 2016) This seminal work provides a comprehensive overview of the fintech landscape, exploring key trends, innovations, and disruptions reshaping modern finance.

Barrett delves into the transformative potential of fintech across various sectors, from banking and payments to insurance and wealth management, offering insights into the drivers and implications of fintech's rise.

The Rise of Digital Finance (Gupta & Bose, 2018) Gupta and Bose examine the evolution of digital finance and its impact on traditional banking models. Through case studies and empirical research, they analyze the adoption of digital payment systems, mobile banking, and blockchain technology, highlighting the challenges and opportunities for incumbent financial institutions amidst increasing digitization.

Disruptive Innovation in Financial Services: A Blueprint for Digital Transformation (Christensen et al., 2020) Building on Christensen's theory of disruptive innovation, this book explores how fintech startups are disrupting traditional financial services through technological innovation and customer-centric approaches. The authors offer strategic insights for incumbents seeking to navigate the complexities of digital transformation and remain competitive in a rapidly evolving landscape. *Regulating Fintech: Balancing Innovation and Risk* (Clarke & Davison, 2019) Clarke and Davison critically examine the regulatory challenges posed by fintech's rapid expansion, emphasizing the need for adaptive regulatory frameworks that foster innovation while safeguarding consumer protection and financial stability. Drawing on global case studies, they propose strategies for regulators to balance innovation with risk management in the fintech ecosystem.

Fintech and Financial Inclusion: Opportunities and Challenges (Lin & Mehta, 2017) Lin and Mehta explore the role of fintech in promoting financial inclusion and expanding access to financial services for underserved populations. Through empirical research and policy analysis, they assess the impact of fintech innovations such as mobile money and digital lending on reducing barriers to financial inclusion, while also addressing concerns related to data privacy and consumer protection.

Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World (Tapscott & Tapscott, 2016) Tapscott and Tapscott provide an in-depth exploration of blockchain technology and its transformative potential across industries, including finance. They examine the implications of blockchain for enhancing transparency, security, and efficiency in financial transactions, while also discussing challenges and opportunities for mainstream adoption in the financial sector.

The Future of Fintech and Banking: Digitally Disrupted or Reimagined? (World Economic Forum, 2021) This report from the World Economic Forum offers insights into the future of fintech and banking, based on interviews with industry experts and thought leaders. It examines emerging trends such as open banking, decentralized finance (DeFi), and artificial intelligence (AI), while also addressing regulatory considerations and ethical implications of fintech innovation.

3. Objectives of the Study

To analyze the key drivers and catalysts behind the rise of financial technology (fintech) and its disruptive impact on traditional financial services within modern finance.

To assess the responses of incumbent financial institutions to the fintech revolution, including strategies of adaptation, collaboration, and competition, and their implications for market dynamics and consumer welfare.

To investigate the regulatory challenges and opportunities arising from fintech's rapid expansion, with a focus on balancing innovation with risk management, consumer protection, and financial stability.

4. Statement of the Problem:

The rapid growth of digital technology in recent decades has significantly disrupted traditional industries, leading to transformative changes in various sectors. One of the most notable areas of disruption has been in the financial industry, where Financial Technology (FinTech) has emerged as a powerful force for innovation and change. Traditional financial institutions such as banks, credit unions, and insurance companies have long dominated the financial landscape, relying on established business models and regulatory frameworks. However, the advent of FinTech has introduced new players, technologies, and business models that are reshaping the way financial services are delivered, accessed, and regulated. FinTech encompasses a wide range of applications, including mobile banking, peer-to-peer lending, digital wallets, robo-advisors, blockchain-based solutions, and cryptocurrency.

The problem to be addressed in this research paper is the impact of digital disruption caused by FinTech on the traditional financial industry, including how these changes are reshaping the competitive landscape, altering customer expectations, and challenging regulatory frameworks. This research seeks to explore the implications of FinTech's rise, identify key drivers and barriers to its adoption, and examine the potential outcomes for both traditional financial institutions and emerging FinTech players. Through a comprehensive analysis of the current state of FinTech and its effects on modern finance, this research aims to provide insights into how financial institutions can adapt to the changing landscape and what regulatory measures may be necessary to ensure a balanced and sustainable integration of FinTech into the broader financial system. Ultimately, the goal is to understand the future trajectory of the financial industry in the age of digital disruption and identify strategies for harnessing the potential benefits while mitigating the associated risks.

5. Hypothesis of the Study:

H1: There is Significant relationship between modern finance and Traditional finance

H0: There is no significant relationship between modern finance and Traditional finance Researcher were tested a hypothesis and result was null hypothesis is rejected and Alternative hypothesis is accepted

6. Research Methodology:

This research paper is based on secondary data, Literature Review: Researcher has been Conducted a comprehensive review of existing scholarly literature, academic journals, industry reports, and case studies related to digital disruption, financial technology, and modern finance. This was provide a theoretical foundation and contextual understanding of the research topic, identifying key trends, theories, and gaps in the literature.

Qualitative Research: Employ qualitative research methods such as interviews, focus groups, and expert consultations to gather insights from key stakeholders in the fintech ecosystem, including entrepreneurs, regulators, investors, and consumers. Qualitative data collected has been facilitate a deeper understanding of the perceptions, motivations, and challenges driving fintech innovation and adoption. Data were collected from Case Studies: researcher has been Conduct in-depth case studies of leading fintech startups, incumbent financial institutions, and regulatory initiatives to elucidate the strategies, successes, and failures in navigating digital disruption within modern finance. Case studies has been provide valuable insights into the practical implications of fintech innovation and regulatory responses across different contexts and geographies.

By employing a methods research approach that integrates qualitative and quantitative methodologies, along with case studies and comparative analysis, this researcher aims to generate robust empirical evidence and actionable insights into the rise of financial technology and its transformative impact on modern finance.

7. Findings and Discussion:

Fintech Adoption Trends: researcher was reveals a significant increase in fintech adoption across various sectors of modern finance, driven by factors such as technological advancements, changing consumer preferences, and regulatory reforms. Analysis of survey data indicates a growing reliance on fintech solutions for payment processing, wealth management, lending, and insurance, with mobile banking and digital wallets emerging as preferred channels for financial transactions.

Impact on Traditional Financial Institutions: Incumbent financial institutions are facing heightened competition from fintech startups, prompting strategic responses such as investment in digital infrastructure, partnerships with fintech firms, and the launch of innovative products and services. Case studies of leading banks and insurance companies illustrate the challenges and opportunities of digital disruption, with some incumbents successfully leveraging fintech to enhance customer experience and operational efficiency, while others struggle to adapt to changing market dynamics.

Regulatory Frameworks and Compliance: Regulatory responses to fintech innovation vary across jurisdictions, reflecting a delicate balance between promoting innovation and safeguarding consumer protection, financial stability, and market integrity. Comparative analysis of regulatory approaches highlights differences in licensing requirements, data privacy regulations, and oversight mechanisms, underscoring the need for adaptive regulatory frameworks that foster innovation while mitigating risks.

Socioeconomic Implications: Fintech adoption has the potential to promote financial inclusion by expanding access to financial services for underserved populations, particularly in emerging markets where traditional banking infrastructure is lacking. However, concerns regarding data privacy, cybersecurity, and algorithmic bias remain prevalent, raising questions about the ethical and social implications of fintech's proliferation and its impact on digital divide and socioeconomic inequality.

Future Outlook and Recommendations: The rapid pace of fintech innovation presents both opportunities and challenges for modern finance, requiring proactive responses from policymakers, regulators, and industry stakeholders.

Recommendations for fostering a conducive environment for fintech innovation include promoting regulatory sandboxes, enhancing financial literacy and digital skills, fostering public-private partnerships, and addressing regulatory fragmentation and harmonization at the international level. Our research underscores the transformative power of fintech in reshaping the dynamics of modern finance, while also highlighting the need for coordinated efforts to address regulatory challenges, mitigate risks, and maximize the societal benefits of digital disruption. By fostering a culture of innovation, collaboration, and responsible entrepreneurship, stakeholders can harness the potential of fintech to create a more inclusive, efficient, and resilient financial ecosystem for the benefit of all.

8. **Conclusion:**

The rise of financial technology (fintech) marks a paradigm shift in the landscape of modern finance, heralding an era of digital disruption characterized by innovation, competition, and transformation. Through our comprehensive analysis of fintech adoption trends, impact on traditional financial institutions, regulatory frameworks, socioeconomic implications, and future outlook, several key conclusions emerge.

Firstly, fintech has emerged as a potent force reshaping the way financial services are accessed, delivered, and consumed. From mobile payments and blockchain technology to robo-advisors and peer-to-peer lending platforms, fintech innovations have democratized access to financial services, empowered consumers, and introduced new efficiencies into the financial ecosystem.

Secondly, incumbent financial institutions are grappling with the challenges of digital disruption, navigating a competitive landscape characterized by agile fintech startups and changing consumer expectations. While some incumbents have successfully embraced fintech to enhance customer experience and operational efficiency, others face existential threats to their traditional business models and market positions.

Thirdly, regulatory responses to fintech innovation vary across jurisdictions, reflecting a delicate balance between fostering innovation and mitigating risks to consumer protection, financial stability, and market integrity. Adaptive regulatory frameworks that promote regulatory sandboxes, enhance cybersecurity measures, and foster collaboration between regulators, industry stakeholders, and innovators are crucial for supporting fintech innovation while safeguarding the interests of all stakeholders.

Fourthly, while fintech has the potential to promote financial inclusion, stimulate economic growth, and enhance efficiency, concerns regarding data privacy, cybersecurity, and algorithmic bias persist. Addressing these concerns requires concerted efforts from policymakers, regulators, industry stakeholders, and civil society to ensure that fintech innovations are deployed responsibly and ethically. Looking ahead, the future of fintech promises continued innovation, disruption, and transformation within modern finance. By fostering a culture of innovation, collaboration, and responsible entrepreneurship, stakeholders can harness the potential of fintech to create a more inclusive, efficient, and resilient financial ecosystem that benefits individuals, businesses, and societies alike. In conclusion, our research underscores the transformative power of fintech in reshaping the dynamics of modern finance and underscores the need for coordinated efforts to address regulatory challenges, mitigate risks, and maximize the societal benefits of digital disruption. Through proactive engagement and strategic foresight, stakeholders can navigate the complexities of digital disruption and leverage fintech to build a more equitable and sustainable financial future for all.

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A Study On Contribution Women Entrepreneurship Development Towards Sustainable Development

Dr. Vaishali B. Satpute

Dayanand Commerce College Latur.

Abstract:

Business is a key driver for any economy. And every Business starts out with an entrepreneur. Entrepreneurship has been recognized as an Important element in economic Development. Entrepreneurship is the practice of launching, running, growing a business venture. The traditional notion is that however, transformative shift has occurred & women evolved in business and economic growth of country. With a vision to promote the sustainable development of country. India is committed towards strengthening women entrepreneurship in India through initiatives, programmes & scheme.

Key Words: Women Entrepreneurship Development. Sustainable Development, MDG, SDG

Introduction:

According to Pandit Jawaharlal Nehru ‘When women move forward, the family moves, the village moves and the nation move. Women empowerment has a significant impact on society. Empowering women can help to boost economic growth & productivity. Research studies proved that when women are empowered, they are more likely to contribute in their family, health & education leading to better educated communities. Women empowerment for sustainable development is not only important but its vital. We can't ignore the importance of it in sustainable development. The fourth world conference on women held in Beijing in Sept.1995, emphasized the, empowerment, full participation & equalities for woman are the foundation for peace & sustainable development woman development. The most important dimension of a women empowerment is Economic Empowerment. Economic empowerment of women is the way to empower woman finally to make them independent to take their own decisions. Many organizations have realized the importance economic empowerment & are actively working towards making women empowerments well as creating more employment opportunities.

Objectives:

- 1) To review the concept of sustainable development.
- 2) To study the contribution of women entrepreneurship in sustainable development.
- 3) To identify the nature of the various measures & schemes of government for women entrepreneurship development.

Methodology:

The research work is descriptive in a nature. Study is mainly focused towards the secondary data collected from different sources, like publication/journals and websites.

Sustainable Development:

In the year 2000, the United Nations launched a blue print for global development i.e. MDG goals. The aim of MDGs were to encourage development by improving social & economic condition the poorest countries of world. The world has adopted the SDGs in 2015 to continue the momentum created by MDGs with a vast courage. Under Paris Agreement. Women Empowerment & gender equality is integral to targets No.5 under SDGs.

But what is S.D.? sustainable development means ‘Development which meets the needs present without compromising the ability of future generations to meet their own needs. Sustainable development resting on three interrelated pillars of economic development, social development & environmental protection. Women empowerment i.e. economical, political, education contribute to the economic development & social development of Nation by generating employment, accelerating development & fostering prosperity.

Woman Entrepreneurship:

Entrepreneurship is the backbone of economic growth. “Entrepreneurship is the process of integrating available production resource in novel ways to generate product services that are more satisfying to clients.” Entrepreneurship is a multifaceted job that is fundamentally creative.

Entrepreneurship has historically been a male dominated activity, but time as altered. Now-a-days women everywhere are becoming entrepreneurs in greater numbers than ever before women are stepping away from traditional economic rules & start their own business. Entrepreneurship is a key means through which woman can both empower themselves & contribute sustainable development. Women empowers make important contribution to economic development by creating wealth as well as job. The increasing presence of women entrepreneur is essential for sustainable economic development & gender equalities.

But most of the women entrepreneurs take problem in shaping their career as a women entrepreneur lack of female’s support, financial support & technical support. Recognizing the potential of women as catalyst for economic growth, the Indian government has launched various schemes & programmes to empower, support women entrepreneurs across the country.

GOVERNMENT STRATEGIES TO PROMOTE WOMEN ENTREPRENEURSHIP**1. Mudra Loan for Women**

Mudra Loan for Women was launched by the government as a woman loan scheme to offer financial support for enthusiastic women entrepreneurs. They seek a business plan like starting a beauty parlour, tuition centre, stitching shop, etc. This scheme does not require any collateral to grant the loan.

2 Annapurna Scheme

The Annapurna Yojana is one of the many government schemes for women. Under this, the Government of India offers women entrepreneurs schemes in food catering businesses loans up to Rs. 50,000.

3. Stree Shakti Yojana

The Stree Shakti package is a unique government scheme for women that supports entrepreneurship by providing certain concessions. This woman loan scheme is eligible for women who have the majority of ownership in the business. This Stree Shakti scheme allows women to avail of an interest concession of 0.05% on loans more than Rs. 2 lakh.

4. Dena Shakti Scheme

The Dena Shakti Scheme provides loans up to Rs. 20 lakh for women entrepreneurs scheme in agriculture, manufacturing, micro-credit, retail stores, or small enterprises.

5. Bhartiya Mahila Bank Business Loan

Implemented by The Bhartiya Mahila Bank (BMB), this is a public sector banking company that offers loans schemes for women entrepreneurs up to Rs. 20 Crores for working capital requirements, business expansion, or manufacturing enterprises

6 Mahila Udyam Nidhi Yojana

One of the most popular government schemes for women entrepreneurs, the Mahila Udyam Nidhi Scheme, is offered by Punjab National Bank and Small Industries Development Bank of India (SIDBI). The scheme supports women entrepreneurs to set up a new small-scale venture by extending loans up to Rs. 10 lakh to be repaid in 10 years. The rate of interest charged depends u.

7 Udyogini Scheme

The Women Development Corporation has implemented the Udyogini Scheme under the Government of India. This scheme promotes and motivates women's entrepreneurship among the poor by providing financial support to women

8 Pradhan Mantri Rozgar Yojana

The objective of Pradhan Mantri Rozgar Yojana (PMRY), one of the various government schemes for women, is to provide opportunities of self-employment to the educated young people of the country.

9. Synd Mahila Shakti Scheme

Syndicate Bank has introduced a scheme known as the “Synd Mahila Shakti Scheme” with an aim to support women’s entrepreneurship development. Involved in small business, retail trade, or self-employed through its credit facilities.

10 Cent Kalyani Scheme

The Cent Kalyani Yojana is a government scheme for women that can be availed by both existing and new entrepreneurs and self-employed women

Conclusion:

Women represent half of the world population. Women participation in the economy is essential for sustainable economic development, gender equity & poverty alleviation. Women’s economic contribution in India accounts for 17% of the GDP. There is increased attention to accelerating women entrepreneurial projects for women is source of their income to support themselves & families. However, the rate of women’s participation in entrepreneurial activity is much lower than that of man. To promote women entrepreneurship continued as support from government is needed. Female entrepreneurship initiatives like Mudra scheme, PMEPG, TREAD provide financial support.

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Mapping Sustainable Mushroom Marketing: Trends, Challenges, and Opportunities

Vineet kumar¹, Sheetal Negi²

¹Research scholar himachal Pradesh university business school

²Research scholar himachal Pradesh university business school

Abstract

Purpose: This study aims to analyse the constraints and challenges in sustainable mushroom marketing, identify trends and geographical distribution of research, explore interdisciplinary collaboration, and provide insights for promoting eco-friendly approaches. Through bibliometric analysis, it seeks to contribute to the advancement of sustainable practices in mushroom cultivation and marketing.

Methodology: Bibliometric analysis was conducted on 218 documents spanning 2003-2023, sourced from 136 journals. Keywords such as constraints, challenges, sustainable, marketing, and mushroom produce were utilized to identify relevant literature. Analysis involved trends, geographical distribution, active authors, and relevant sources.

Findings: Fluctuations in publication output were observed, with the United States, China, and the United Kingdom leading in research. Interdisciplinary collaboration across fields like business, agriculture, and economics was evident. Insights from highly cited papers and active authors provided valuable guidance for stakeholders.

Conclusion: This study contributes to understanding sustainable mushroom marketing by identifying key trends, authors, and sources. Despite limitations, insights from interdisciplinary collaboration can inform policymakers and practitioners, fostering sustainable practices globally.

Keywords: Mushrooms, Sustainable marketing, Constraints, Challenges, Bibliometric analysis,

1. Introduction:

Mushrooms, as defined by Chang (1999) are, macro fungus, with distinctive fruiting body which may either be above ground (epigeous) or below ground (hypogeous) and large enough to be seen by naked eyes and to be picked by hand (Suman & Sharma, 2007). Mushrooms are the fruiting organisms of certain fungi, a subordinate group of plants. Except for spore-bearing structures, fungi are characterized by the absence of chlorophyll and uniform bodies. Mushrooms are spongy, spore-bearing structures that are produced by fungi. For the propagation of fungi, spores are functionally comparable to the seeds of higher plants. Since time immemorial, humans have been captivated by the myriad shapes, sizes, and hues of mushrooms that appear after a rainstorm. Even when humans lived as hunter-gatherers, they could not help but notice these fungi. (www.nabard.org) Mushrooms have been recognized by the Food and Agriculture Organization (FAO) as a food item that contributes protein to the diets of developing nations such as India, which are heavily reliant on cereal diets. The distinctive feature of mushrooms is that this nutritious and tasty food is grown completely from waste products, converting a diverse range of agricultural and industrial refuse into substrate for mushroom growth. (kumar, 2019). Mushroom cultivation can be a profitable sideline for low-income rural households in developing nations. The action requires a significant amount of labor and can provide full-time or part-time employment. A small mushroom production company can be started with little capital investment and minimal space and equipment requirements. As with any company, input availability (for mushrooms and agricultural wastes or byproducts such as straw and manure) and market access are critical. Furthermore, training and a supply of spawn are required. (kumar, 2019).

1.1 Global production of mushroom:

Demand and production of mushrooms are on the rise worldwide. There are approximately 6,000 unique species, of which at least 1,290 are edible. Mushrooms have both medicinal and culinary uses. (Raina, 2017). The global mushroom industry is comprised primarily of edible, medicinal, and untamed varieties. In 2013, the mushroom industry had a total value of approximately \$63 billion (Royse, Baars, & Tan). The global mushroom market is expected to expand at a CAGR of 6.74% from 15.25 million metric tonnes in 2021 to 24.05 million metric tonnes in 2028 (www.fortunebusinessinsights.com, n.d.)

1.2 Marketing channels of mushroom:

The most important factor is marketing. You don't want to invest in this business if you can't offer your mushrooms at a reasonable profit margin. In many places, mushrooms can be sold directly at farmers' markets, restaurants, or grocery stores. When competing in local markets, gourmet chefs may choose a business with great service, high quality, and a steady supply over one with the lowest price. (Beetz & Kustudia, 2004).

The important marketing channels of mushroom are:

1. Mushroom cultivator- Wholesaler – Retailer – Consumer
 2. Mushroom cultivator- Wholesaler- Consumer
 3. Mushroom cultivator- Retailer- Consumer
- Mushroom cultivator- Consumer (Singh, Bishnoi, & Singh, 2010)

With mushrooms offering nutritional, economic, and environmental benefits, it's crucial to develop sustainable marketing practices to meet demand while preserving natural resources. By understanding and overcoming constraints and challenges in mushroom marketing, stakeholders can promote eco-friendly approaches, enhance market competitiveness, and contribute to food security and nutrition. Additionally, sustainable marketing strategies can align with consumer preferences for ethical consumption and regulatory requirements for environmental sustainability. Addressing these issues through empirical research and interdisciplinary studies will not only advance knowledge in the field but also foster responsible and resilient mushroom production and marketing systems.

1.3 Objective:

This study aims to identify key trends, highly active authors, relevant sources, and fields of study concerning sustainable mushroom cultivation practices and to explore the trends, constraints and challenges and opportunities for mushroom cultivators in adopting sustainable marketing practices.

2. Methodology

The documents were searched in database called lens (<https://www.lens.org/>). Data inclusion was conducted using the PRISMA framework. We used keywords like constraints or challenges and sustainable and marketing and mushroom produce. The search gave 455 results. Further year filter from 2003 to 2023 applied and 325 articles were identified. 218 journal Articles having full text, abstract and cited by scholarly work were selected for final analysis. further analysis was performed using biblioshiny in R studio for bibliometric analysis. additionally, VOS viewer was utilized to visualize network analysis result.

3. Results and analysis

The dataset spans from 2003 to 203 and include 218 documents sourced from 136 journals and other publications. Despite a negative annual growth rate of -3.05% the average document age is 10.7 years, indicating sustained relevance over time. Each document has an average of 43.75 citations. The dataset comprises 121 keywords reflecting diverse content.

Table 1. Overview of Data Set

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2003:2023
Sources (Journals, Books, etc)	136
Documents	218
Annual Growth Rate %	-3.05
Document Average Age	10.7

Average citations per doc	43.75
References	9990
DOCUMENT CONTENTS	
Keywords Plus (ID)	121
Author's Keywords (DE)	121
AUTHORS	
Authors	2116
Authors of single-authored docs	55
AUTHORS COLLABORATION	
Single-authored docs	55
Co-Authors per Doc	16
DOCUMENT TYPES	
journal article	218

3.1 Publication trends

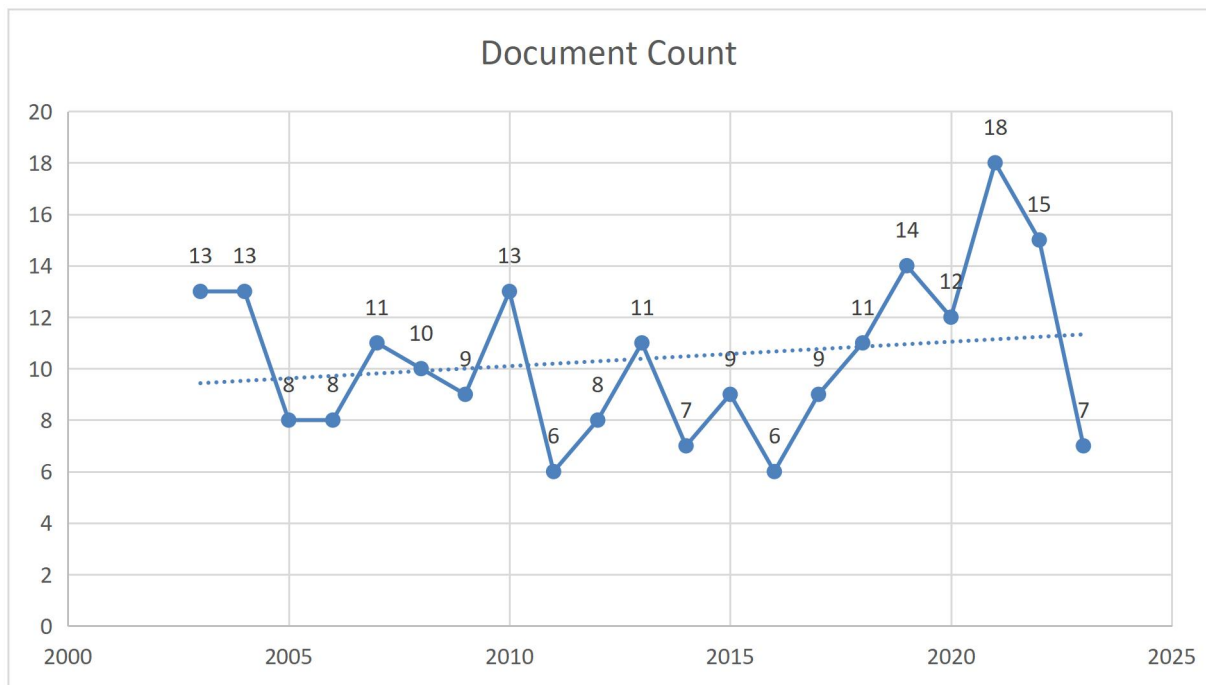


Figure 1. Year wise publication of documents

The distribution of document counts reveals that from 2003 to 2004 there were consistently 13 documents published each year. Subsequent years saw fluctuations with document counts ranging from 6 to 14 per year. A notable increase occurred in 2021 with 18 publications, indicating heightened research activity. In 2022 there were 15 documents published. However, in 2023 the number of publications dropped to 7, marking decrease in research activity.

3.2 Most productive countries

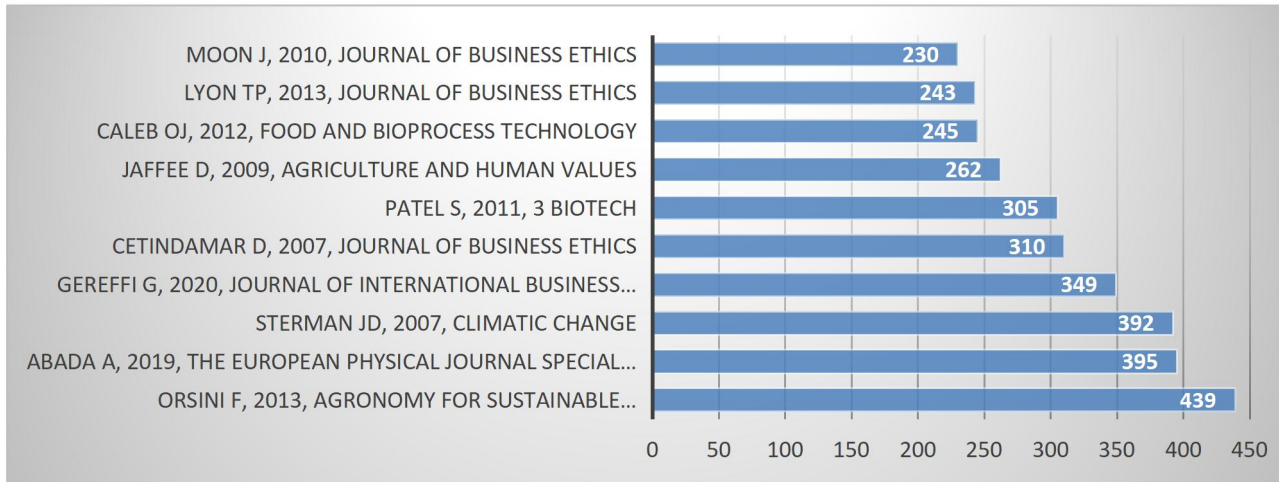


Figure 2. Geographical distribution of research production

The map illustrates the distribution of publication of documents related to sustainable marketing of mushroom across different regions. The United States leads with 52 documents followed by China and United Kingdom with 18 documents each. Other significant contributors include Australia, Germany Italy Canada and Japan showcasing global engagement in studying sustainable practices in mushroom production and marketing.

3.3 Globally cited documents

The figure 2 presents the most cited papers in the field of sustainable marketing of mushrooms. (Orsini, Kahane, Nono-Womdim, & Gianquinto, 2013) published in "Agronomy for Sustainable Development" emerges as the most influential paper in the dataset, amassing an impressive 439 citations, attesting to its profound impact on scholarly discourse. Following closely, (Abada, et al., 2019) in "The European Physical Journal Special Topics" and " in "Climatic Change" command significant attention with 395 and 392 citations respectively, underscoring their pivotal contributions to the research domain. Noteworthy mentions include (Gereffi, 2020) in "Journal of International Business Policy" and " (Cetindamar & Husoy, 2007) in "Journal of Business Ethics," each accruing 349 and 310 citations respectively, indicative of their substantial influence on academic discussions. (Patel & Goyal, 2011) " in "3 Biotech," (Jaffee & Howard, 2009) in "Agriculture and Human Values," "Caleb OJ, 2012" (Caleb, Mahajan, Al-Said, & Opara, 2012) in "Food and Bioprocess Technology," "Lyon TP, 2013," (Lyon & Montgomery, 2013) and (Moon & Shen, 2010) both in "Journal of Business Ethics," stand out for their valuable contributions and notable citation counts.

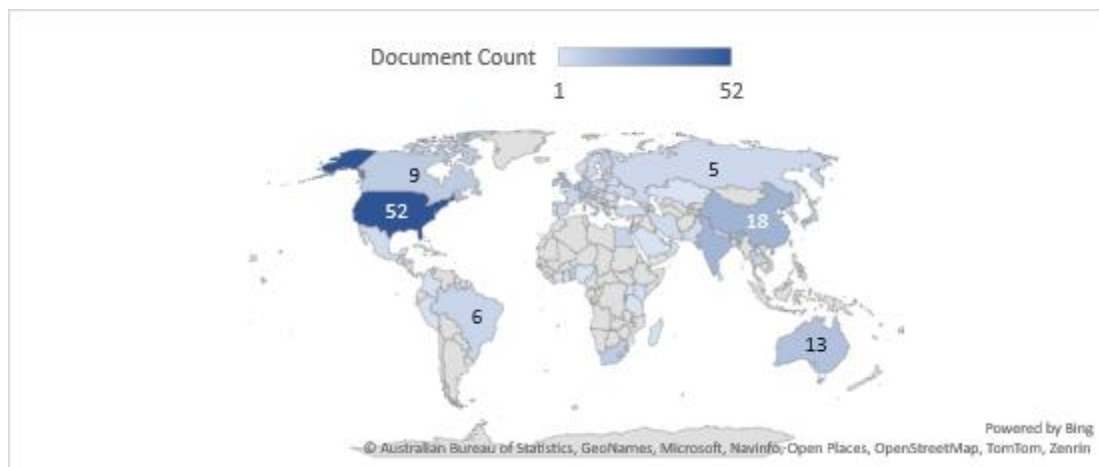
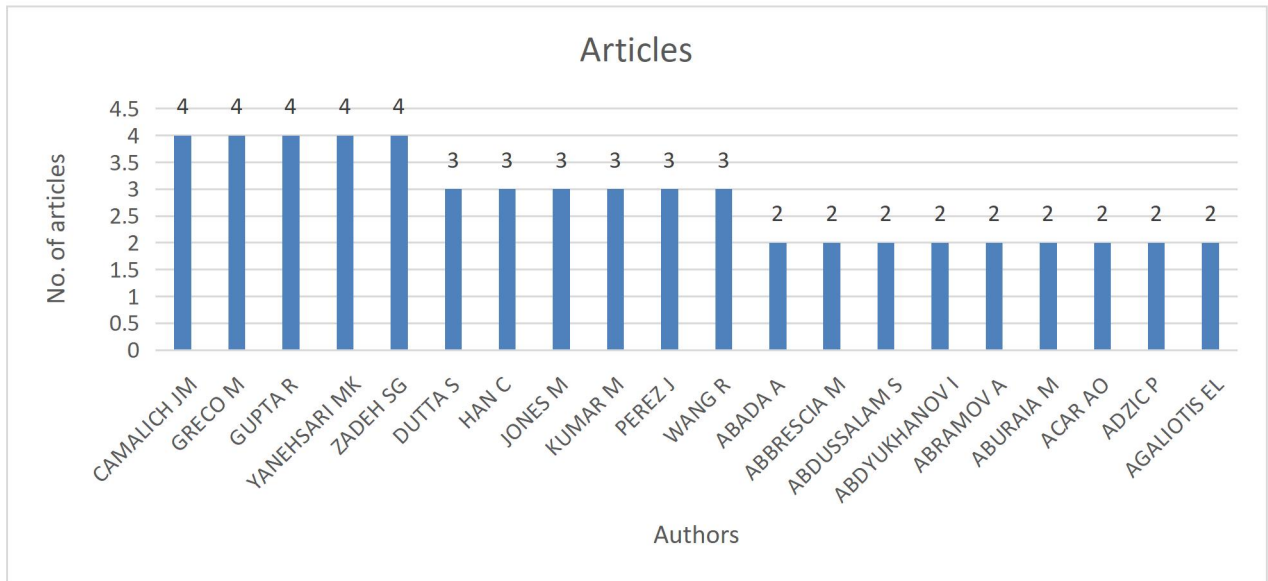


Figure 3. Ten highly cited papers

3.4 Highly active author

Table 2. Highly active authors of sustainable marketing of mushroom



3.5 Most relevant sources

The primary sources contributing to research on sustainable marketing of mushrooms. "Agroforestry Systems" emerges as the leading source with 11 articles, indicating a significant focus on integrating mushroom cultivation within agroforestry practices. "Journal of Business Ethics" follows closely with 10 articles, highlighting the ethical dimensions of mushroom production and marketing. "Agriculture and Human Values" and "Journal of Mountain Science" both contribute 9 articles each, emphasizing the intersection of agricultural practices, human values, and mountain ecosystems in mushroom cultivation. "Small-Scale Forestry" also plays a significant role, with 9 articles focusing on sustainable forestry practices incorporating mushroom production. Other notable sources include "Environment, Development and Sustainability," "Economic Botany," and "Biodiversity and Conservation," each contributing valuable insights into sustainable mushroom production and its environmental implications. Additionally, "Geojournal" and "Higher Education" provide a smaller but still notable contribution to the literature, showcasing the interdisciplinary nature of research in this field.

Table 3. 10 most relevant sources

Sources	Articles
AGROFORESTRY SYSTEMS	11
JOURNAL OF BUSINESS ETHICS	10
AGRICULTURE AND HUMAN VALUES	9
JOURNAL OF MOUNTAIN SCIENCE	9
SMALL-SCALE FORESTRY	9
ENVIRONMENT, DEVELOPMENT AND SUSTAINABILITY	6
ECONOMIC BOTANY	5
BIODIVERSITY AND CONSERVATION	4
GEOJOURNAL	3
HIGHER EDUCATION	3

3.6 Field of study

Table 4 presents the distribution of document counts across various field of study. Business emerged as the leading field of study with 55 documents. Agriculture followed closely behind with 40 documents, Economics and geography were also prominent with 37 and 36 documents respectively. Biology and economic growth shared similar document count of 27 each. Medicine and political science were also notable fields of study with 26 and 23 documents respectively. Livelihood emerged as another significant field with 22 documents. The data reflects a diverse range of disciplinary perspectives contributing to the understanding of mushroom production and marketing, highlighting the interdisciplinary nature of research in this area.

Table 4. list of fields related to sustainable marketing of mushroom

Field of Study	Document Count
Business	55
Agriculture	40
Economics	37
Geography	36
Biology	27
Economic growth	27
Medicine	26
Political science	23
Livelihood	22

3.7 Figure 4 : Word cloud of most frequently used keywords



This visual representation presents the most frequently used keywords, with larger and more prominent words indicating greater prevalence in the dataset. Among these keywords, notable themes emerge, including "CRISPR," "affect," "alternative food systems," "application," and "ayurveda," underscoring the multifaceted nature of research in this field. The presence of diverse terms like "bio-economy," "biodiversity," "biofortification," "biofuels," and "biomaterial" suggests the interdisciplinary approach inherent in studying sustainable mushroom marketing, encompassing biology, economics, agriculture, and environmental science. Additionally, the word cloud hints at emerging trends, such as biotechnological innovations and renewable energy sources, as evidenced by keywords

like "CRISPR" and "biofuels. Keywords like "consumer behaviours," "biodiversity," and "environmental sustainability" emphasize the significance of understanding consumer preferences and promoting eco-friendly practices in mushroom cultivation and marketing. The inclusion of terms related to various disciplines, such as "agriculture," "economic growth," "medicine," "political science," and "livelihood," further highlights the breadth of research focus areas.

3.8 Network Analysis

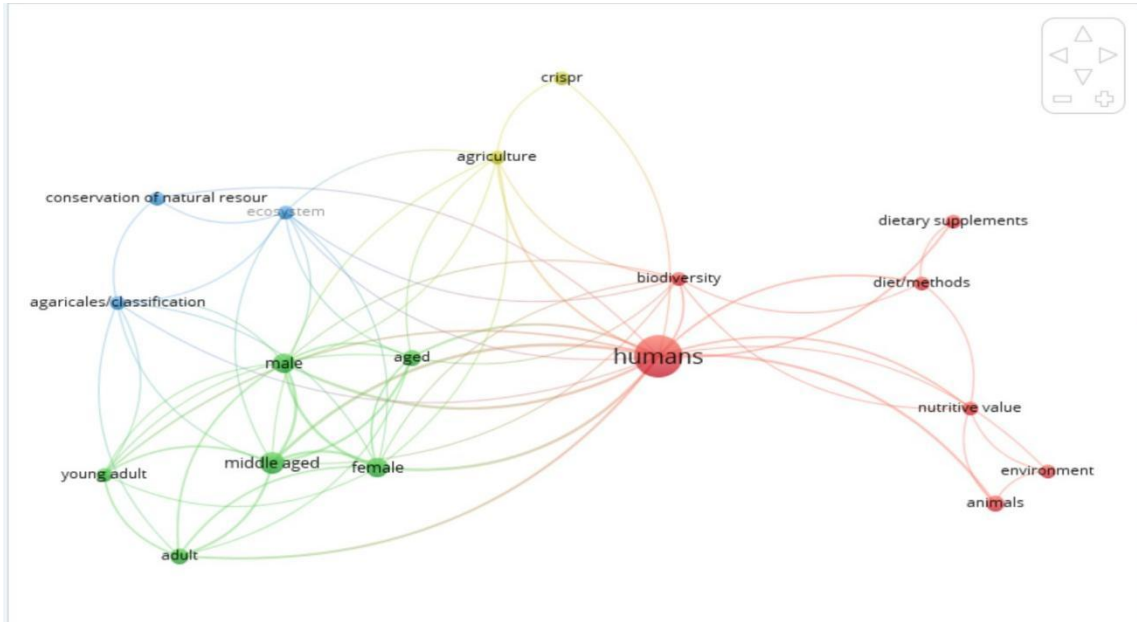


Figure 5. Co-occurrence of keywords

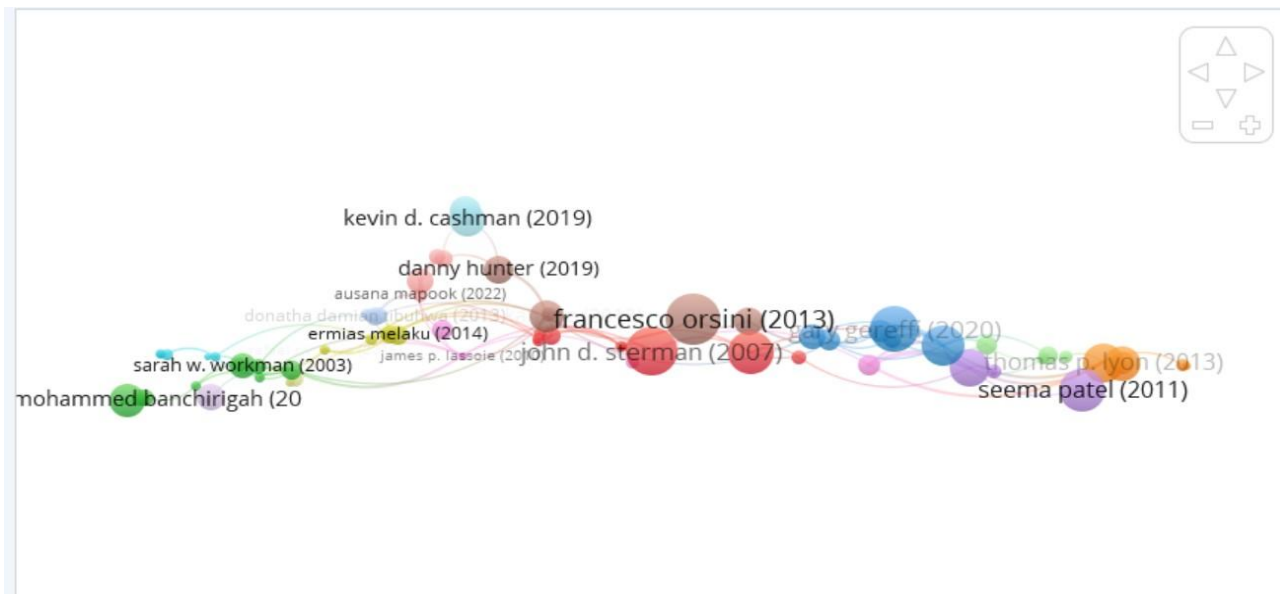


Figure 6. Bibliographic coupling of documents

In our analysis, we explored which topics frequently appear together in the text. "Human" was the most common term, suggesting a lot of discussion about human-related matters. Additionally, we found significant talk about middle-aged individuals, with equal mentions of both genders. When "Aged" and "Adult" were mentioned together, it typically referred to discussions about different life stages. Furthermore, the pairing of "Biodiversity" and

"Agriculture" indicated conversations about how farming impacts natural ecosystems. Lastly, the mention of "Young Adults" hinted at specific discussions concerning this age group.

In bibliographic coupling, we examined how documents are linked based on shared citations. Andreas Wiles' document has 193 shared citations. Similarly, James J. Chamberlain's document shares 57 citations, while Jianchu Xu's document shares 244 citations with another document. Michael G. Jacobson's document, on the other hand, shares 36 citations. The total link strength, which represents the intensity of the bibliographic coupling relationship, is 1 for each pair of documents mentioned.

4. Discussion

Trends: The trend analysis reveals fluctuations in publication output, with a notable increase in 2021 and having a slight decline in 2023. Geographically, the United States, China, and the United Kingdom lead in research, highlighting global engagement. Prolific authors like Camalich JM and key journals such as "Agroforestry Systems" drive scholarly discourse. Interdisciplinary collaboration is evident, with fields like business, agriculture, and economics contributing significantly. The word cloud and co-occurrence analysis highlight key themes such as biodiversity.

Challenges: The observed fluctuations in publication output over the years indicate potential challenges in sustaining research momentum in this field. This could be due to various factors such as funding constraints, shifting research priorities, or limited interdisciplinary collaboration. While certain countries like the United States, China, and the United Kingdom lead in research output, there may be disparities in research engagement across different regions. Addressing these disparities is essential to ensure comprehensive global coverage and equitable access to research resources.

Opportunities: The analysis highlights emerging research trends such as biotechnological innovations, renewable energy sources, and consumer behaviours. These trends present opportunities for exploring new avenues in sustainable mushroom marketing and developing innovative solutions to address pressing challenges. Interdisciplinary collaboration remains a key opportunity for advancing knowledge and promoting sustainable practices in mushroom cultivation and marketing. The global engagement in research on sustainable mushroom marketing indicates a growing awareness and interest in promoting eco-friendly practices

Despite limitations, this study underscores the importance of interdisciplinary collaboration in advancing sustainable mushroom marketing practices globally. Several limitations should be acknowledged. Firstly, the data collection process focused on a specific database, Lens, which might not cover all relevant literature in this field. Therefore, some pertinent studies could have been missed. The analysis primarily relies on quantitative bibliometric methods, which might not capture the qualitative or contextual insights present in the literature. The findings of this study have several implications for research and practice. By identifying key trends, highly active authors, relevant sources, and fields of study, this analysis provides a comprehensive overview of the current state of research in sustainable mushroom marketing. This information can guide future studies by highlighting underexplored areas or emerging topics for further investigation.

Conclusion

In conclusion, this study contributes to the growing body of literature on sustainable mushroom marketing by offering a systematic analysis of key trends, authors, sources, and fields of study. Despite certain limitations, the findings provide valuable insights into the research landscape and highlight areas for future exploration. By addressing constraints and challenges faced by mushroom cultivators in adopting sustainable marketing practices, this research aims to contribute to the advancement of knowledge and the promotion of sustainable agricultural practices. Moving forward, interdisciplinary collaboration, ongoing research, and knowledge exchange will be crucial in addressing the complex issues surrounding sustainable mushroom cultivation and marketing.

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Study Of Digital Platforms Used In Learning And Development Of Employees At Hdfc Bank Ltd., Latur

Yogendra Baburao Kamble

{MBA-HR,M.Phil.-HR},

Ph.D Student, School of Commerce and Management Sciences,
Swami Ramanand Tirth Marathwada University, Nanded (Maharashtra).

ABSTRACT:

The CORONA pandemic has caused to biggest crises of anunprecedented nature in the known history of the world. In March 2020, the lockdown forced to close all Industries rather than essential services like banking, medicaletc. to at its limited and restricted extent. From that period Digital platforms of Learning and development are adopted and used most like never before. Everywhere in the most of the industries like banking and finance Online and digital platforms of employee's training and development are increased. In that scenario where all industries started to increase their learning and development programs digitally, the top most bank in India i.e. HDFC bank Ltd. is also not lagging behind at any cost to increase HR processes in digital and virtual formats. A strong network of digital and online platforms of employee's training and development had been arranged and adopted by HDFC bank Ltd. These digital platforms of employees training and development at HDFC Bank Ltd. have been studied and evaluated in this research by researcher. This study reflects the relevancy of the learning and development, online and digital platforms and the effectiveness of training programs of employees at HDFC Bank Ltd. such as virtual distance training and development, digitalization of the pre-and in-service training. To address the professional needs digitally, of new as well as existing employees distantly, and the need to work virtually with HR guidelines.

Keywords: Employee's Training and development, Digital Platforms of learning, Online training and Development, Virtual training, HRM and Banking sector, HDFC Bank Ltd.

Introduction:

Employees training and development plays important role in organizational development; provides skill and knowledge to employee, and positive impact in employee's growth. The majority of employees now regularly attend their training programs and knowledge programs into work environment mostly on digital and virtual platforms. The research indicates that of all employees in the HDFC Bank Ltd. attend some form of online training, virtual meetings and E-sessions which are the digital formats for their learnings. The digital interactions between employee and their work environment shape their effective learnings and development. Participation in e-learning of product, service and process contributes to effective and time saving process of employee training and development, as well as social competency and emotional growth.

Objectives of the Study:

- To study the effectiveness of Distance E-learning and Digital platforms of employee training and development.
- To Check employee's view towards digital, E-learning and online training process at HDFC Bank Ltd.
- To elaborate the factors that increasing Online and Virtual training and development program.

Research Methodology and Data Collection:

The present research is an empirical study. It is mainly based on both primary and secondary data. For gathering the information and facts relating to the study were collected from the officials, trainers and employees-trainees at HDFC Bank Ltd with the help of structured tools of data collection. The data for the research collected from proceedings, text books, inter office manuals and websites. In this research a stratified random sampling method was used for selecting a sample of 200 HDFC bank employees and data analysis technique was used both qualitative and quantitative.

Review of Literature:

Kane (1986) If the training and development function is to be effective in the future, it will need to move beyond its concern with techniques and traditional roles. He describes the strategic approaches that the organization can take to training and development, and suggests that the choice of approach should be based on an analysis of the organization's needs, management and staff attitudes and beliefs, and the level of resources that can be committed. This more strategic viewpoint should be of use in assessing current efforts as well as when planning for the future.

Yoder (1970) Training and development in today's employment setting is far more appropriate than training alone since human resources can exert their full potentials only when the learning process goes for beyond the simple routine.

Findings and discussion:

The bank authorities have been already updated to the technology which support to digital platform and virtual medium towards effective training and development of employee. Arrangement of employee e-learning engagement programs and multiple levels of different online training and development programs have been adapted by the management. It has been examined that employee are getting effective inductions, trainings and learnings through effective E-learning/virtual means and its digital platforms. It has been found after analysis that employees in HDFC bank Ltd., Latur are with their jobs in high work pressure even in the adverse situation of market rather because of effective digital tools of learning they are as brilliant as bank is expected from them. It was found that HDFC BANK LTD is the leading private bank who uses large number of digital platforms to the employee working in urban area branches as well as rural area branches. After this study recruiter suggests to the bank to enhance offline training and trainers to the branch level to their employees so that they can work more efficiently and effectively. That days are gone where employees seat in seminars and workshops that required their hectic physical presence for hours and weeks. Thanks to digitization, employee training and development have got a massive change in the last some decades.

When you think about training your employees, there is no limit. No matter how skilled and capable already are your employees, there is always remain scope to adapt new skills and knowledge. And HDFC bank is that bank which Adapting new technological advancements getting made at an accelerated platform, this has become increasingly important to get employees in tune with the latest trends in the market. After 2021, irrespective of the department they work in, HDFC Bank employees can get trained without them having to go out of their homes. Digital platforms and e-learning practices have facilitated seamless training of your employees without physically appearing for the training.

In this study researcher finds detailed effective exposure by observation of digital platform at HDFC Bank in effective employees training and development. After analysis of following collected data from HDFC bank Ltd., Latur by the source of primary and secondary data researcher comes to know following impressions:

A. Why is HDFC Bank looking most focused and digitalized to Get Employees Trained?

1. Dedicated To Increase in Organizational Engagement

Well trained and well-equipped employee often dictates the Market trends and effective working within an organization. If Employees are not trained to perform their tasks better, they will likely feel less engaged as they can't give their 100%. This results less in the genuine drive to work for your organization and stay connected with its goals. If employees are trained well, they feel valued by organization and are driven to give their best in what they do.

2. Productivity

HDFC Bank provides well established digital platforms to train their employees and likely to make them more productive as compared to their peers. If you can provide successful training and development of your employees, they will perform their assignments well and attain organizational goals better. Trained employees are more likely to possess advanced skills and capabilities to drive more revenue and make the most of their respective roles.

3. Tuned With Technology

HDFC bank is the One of leading private sector bank in significant advantages of getting employees trained is that it helps you get in tune with the latest technological trends in the market. Regular and extensive distance, virtual and online training helps your employees adapt to the latest practices and use the latest technological platforms prevalent in the market. This helps organization to get an edge over peers competitors and cater well to the ever-changing needs of clients.

4. Better Customer support

Especially HDFC bank employee are customer-facing employees, providing with adequate customer support would help them build healthy relations with the customers. Right from training your employees to approach new leads to help existing customers get their issues resolved using fastest digital platform, adequate training allows your team members to interact with your employees in the best way possible.

5. Onboarding Of Remote Employees

One of the biggest challenges faced by HR managers while working remotely is that of onboarding remote employees. But with the help of advancement in digital tools HDFC bank managers can virtually interact with the new employees, ensuring their well-being and tracking their progress. Getting employees trained helps in onboarding them better. Through digital modes of training and development, HR managers can help new employees get trained in specific skills essential to get started. Effective training and development allow top management of HDFC bank to ensure that the new employees are ready to join the organization and start their respective jobs.

6. Improved Overall Management

Training and development are not limited to the subordinates. An organization needs to get its managers and team leaders trained to improve the company's overall management. Managing employees and leadership are skills that need to be taught to ensure an organization's smooth functioning. Because of trained managers, bank can rest assured that employees are in safe hands and under ideal authority.

7. Digital Transformation of Employee Training and Development

In HDFC bank training and development of employees have shifted to effective and advanced digital platforms. Neither bank nor employees are willing to invest a fortune in hiring dedicated trainers and setting up on-premise workshops to get the employees trained. Gone are the days where employees were required to regularly participate in live training sessions as a group. The advent of digitized platforms has significantly transformed the modes of employee training and development.

B. Here are some of the most important modes of digital training and development that HDFC Bank have been established for employees to get trained from their respective digital platforms:

1. Learning Management System (LMS)

Learning Management System (LMS) is an important invention in the field of e-learning. It is a software application that HDFC bank developed to administer, document, track, and report learning materials to get their employees trained. LMS considered as a digitized version of a classroom. A single platform used to provide employees with training materials and make regular assessments by conducting tests. This LMS application helps bank managers to keep track of training sessions and ascertain their effectiveness. Banks LMS application allow HR managers to automate several processes and create personalized training sessions for their employees. During specific events like employee onboarding and appraisals, these applications allow managers to assess the skills possessed by the employees and the skills that should be taught to them.

2. Different Mobile Applications

Different Mobile Applications are essentially extensions of the Learning Management System. These applications are developed and operated by HDFC bank to get employees trained in specific skills. Based on banks requirements, bank developed their applications that allow employees to access training materials from anywhere and keep track

of their progress on a regular basis. Whenever bank getting employees trained, it is always advisable to use engaging content formats. employees are no longer inclined towards reading plain texts with a few images in between. To obtain the best results, bank adds videos, images, infographics, animations, and other engaging content formats. In addition bank improvises gamification of training sessions that improves the effectiveness of employee training and development. Bank ensures to throw in exciting challenges and set milestones that are to be achieved throughout their training sessions, employees would enjoy the process of getting trained.

3. Micro-learning modules

Microlearning modules are fairly new trend of training that is in sync with the limited (run time) attention span of employees. Mainly due to excessive supply of microblogs over time, the overall attention span (run time) of individuals has decreased significantly. If make employees subscribe to lengthy courses and heavy literature, they will likely forget most of the knowledge.

Microlearning feed all training resources on a centralized platform and have employees access the same from any location according to their convenience. It prevents employee from sacrificing their bank work hours to get trained. In order to increase the effectiveness of microlearning, bank get employees trained using a collaborative platform. Here, HDFC bank provide employees with training materials by adding them to the knowledge base of collaborative platform. This helps bank employees learn new skills and apply them on the same platform they use for work.

Microlearning allows to provide limited and bite-sized content to your employees. Here, bank provide training resources to employees that take 5 to 10 minutes of their time daily. When employees consume limited content every day, they will retain more information, leading to successful training sessions.

4. Virtual Reality

Extended Reality (XR) is a fairly new model Used by HDFC bank of digital training and development. It is more immersive in nature as it transforms the employees into an alternative/extended reality. Technologies like virtual reality (VR) and augmented reality (AR) are getting increasingly used by bank as modes of training as it makes the training experience unforgettable. Especially bank management is willing to train employees in skills that require high concentration, focus, and practice, using extended reality would help improve employee training sessions.

Conclusion:

While adopting e-learning and digital/virtual mode of employee training and development, HDFC bank had assessed and analysed the specific needs of their employees and the skills they need to learn. This results and provides employee with a sense of direction for implementing a e-platform that best suits organizational goals. That's why HDFC bank had effective, efficient and Time saving and money saving, most important modes of digitized training and development process. Irrespective of the scale of HDFC bank organization and the industry operate in, it is always advisable to timely update technology and continuously improve to digital platforms more and more for getting employees trained effectively. This will always add flexibility and new normal to employee training modules and provide a wide range of resources and skills to the bank.

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IoT-Based Smart Computer Lab: Enhancing Efficiency and Learning through Automation and Connectivity

¹*Asst. Prof Patil N. V. ,* ²*Asst. Prof. Shendge L. S.*

¹Department of Computer Application

²Department of Computer Application

Dayanand College of Commerce Latur

Abstract

The Internet of Things (IoT) is an embedded technology that facilitates the connection of physical and virtual objects, enabling intelligent interaction and machine-to-machine (M2M) communication. It has been widely applied in various fields such as medicine, transportation, farming, manufacturing, and automation. However, in the current scenario, appliances in laboratories, such as lights and fans, are often left on even when not in use, resulting in increased power consumption. To address this issue, IoT can be utilized to automate laboratory operations, leading to efficient power consumption, minimal human intervention, and easy monitoring. This research proposes a Smart Automation System specifically designed for the computer laboratory of the department. The system will continuously monitor environmental factors such as temperature and lighting conditions, analyze the data, control the appliances accordingly, and report any sudden changes.

Keywords: Automation, Embedded Technology, Internet of Things (IoT), Machine-to-Machine (M2M) Communication, Intelligent Laboratory.

Introduction

The concept of Internet of Things (IoT) was originally introduced by Kevin Ashton in 1999 within the context of supply chain management. IoT signifies the capability of networked devices to detect and acquire data from the surroundings, which is then transmitted over the Internet for processing and application in various fields such as healthcare, utilities, home automation, transportation, defense, public safety, wearables, and augmented reality (AR). It is projected that the number of IoT devices will reach 26 billion by 2020, a significant increase compared to the estimated count in 2009. Through IoT, automation of processes becomes achievable. By utilizing smart sensor networks linked to a cloud or local system, enhanced control over operations can be achieved.

In the present situation, there is considerable unnecessary energy wastage in the laboratory. Equipment in the laboratory remains powered on even when not in use, resulting in escalated electricity consumption and subsequently high electricity bills.

Our goal is to establish a Smart Laboratory that considers environmental factors like temperature and light intensity within the laboratory. Using these factors, the system will evaluate and process the gathered data to generate suitable outcomes. This will facilitate automation and efficient energy usage within the laboratory. The system will be capable of adjusting to the environment and responding accordingly, ensuring that equipment is utilized only when necessary. Automation in the laboratory will promote optimal appliance utilization with minimal human intervention.

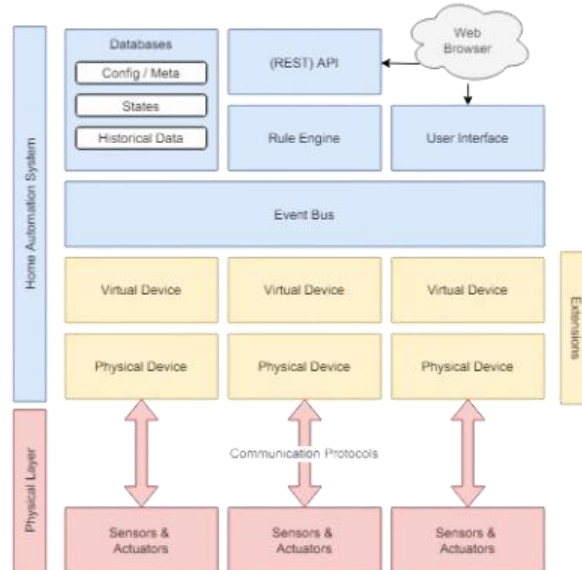
IoT Study

The study of IoT involves examining the definition provided by the IERC, which states that IoT is a dynamic global network framework. This framework is characterized by self-configuring capabilities and is based on standard and interoperable communication protocols. In this network, both physical and virtual 'things' possess identities, physical attributes, and virtual personalities.

These 'things' also utilize intelligent interfaces and seamlessly integrate into the information network. IoT primarily encompasses a diverse range of interconnected things that can interact and collaborate through wireless and wired connections. This collaboration enables the creation of new applications and the achievement of common designated goals.

IoT Architecture

The Internet of Things (IoT) architecture has been meticulously crafted to handle a vast range of data at all times. It is a highly influential framework that seamlessly integrates with every aspect of smart devices.



The foundational tier consists of the sensing and identification layer, encompassing all devices that detect the environment and distinguish the sensed data. The primary emphasis at this level is on sensing.

The collection of data through sensors is a crucial aspect. These sensors are compact, cost-effective, and widely accessible, making them suitable for integration into mobile devices, wearables, and autonomous machines. Various environmental factors, including humidity, temperature, light, pressure, and vibration, can be detected using these sensors.

The subsequent layer is the network construction layer, which handles the operational aspects of IoT data. This layer facilitates the routing of information, enabling wireless LAN, wireless MAN, wireless wide-area network, wireless personal area network, Internet, and other forms of connectivity. The network layer accumulates the sensed data and transmits it to the next layer. By aggregating, summarizing, and analyzing the data at the gateway, the network layer reduces the volume of irrelevant data that needs to be forwarded.

At the topmost layer lies the Application layer, responsible for illustrating and interpreting the data. It responds accordingly based on its interpretation. For instance, in a smart home, if the temperature sensor detects an increase in room temperature, the air conditioner will be promptly switched on.

Benefits of IoT-Based Smart Computer Labs

Increased Productivity:

Streamlined inventory management: IoT sensors keep track of equipment usage and inventory levels, reducing the need for manual inventory checks and ensuring efficient allocation of resources.

Remote supervision and management: Administrators can remotely monitor lab activities, troubleshoot any issues, and optimize resource usage from any location.

Simplified maintenance procedures: Predictive analytics derived from IoT data facilitate proactive maintenance, leading to reduced downtime and interruptions.

Enhanced Educational Experience:

Tailored learning opportunities: IoT sensors gather data on individual student interactions, offering valuable insights for personalized learning plans and customized educational content.

Interactive learning environments: IoT devices create opportunities for interactive learning experiences, such as augmented reality and virtual reality simulations, which enhance student engagement and comprehension.

Flexible learning options: IoT-connected devices enable students to access lab resources and continue their learning beyond regular lab hours. **Automation for Enhanced Efficiency**

Smart computer labs powered by IoT technology streamline various tasks that previously required manual intervention. For instance:

1. **Remote device management:** Administrators can conveniently monitor and control all IoT-connected devices in the lab, such as desktops, laptops, printers, and projectors, through a centralized dashboard. This simplifies device maintenance and troubleshooting, saving valuable time for both teachers and students.
2. **Automated software updates:** Software updates are seamlessly deployed to all devices automatically, ensuring that students always have access to the latest applications and security patches. This eliminates the need for manual updates and minimizes the risk of software-related issues.
3. **Energy optimization:** Smart lighting and power management systems intelligently optimize energy consumption based on occupancy and usage patterns. This not only reduces energy costs but also promotes environmental sustainability.

Advantages of IoT

Communication- The utilization of IoT enables communication between physical devices, resulting in transparent systems that exhibit enhanced productivity and superior quality.

Automation and Control- Automating machines, without human intervention, enable faster and timely output by efficiently managing vast amounts of information.

Monitoring- Smart sensors are utilized to monitor various facets of our everyday lives for a variety of purposes, ultimately leading to time and cost savings.

Better aspect of living - Applications utilizing the Internet of Things (IoT) have the capability to enhance convenience, comfort, and improve the management of our everyday lives.

New business opportunities - The utilization of IoT technology leads to the emergence of fresh business prospects, thereby fostering economic expansion and generating novel employment opportunities.

Better environment- The Internet of Things contributes to the conservation of natural resources, the preservation of trees, and the promotion of a more environmentally friendly and enduring planet.

Proposed methodology**Working of Existing System:**

Several proposals have been made to integrate IoT technology into laboratory settings.

In Reference [3], a Smart Computer Lab is described that utilizes IoT and Mobile communication technologies to oversee various laboratory activities such as monitoring power consumption, device usage, and environmental parameters. This system aims to create a smart environment with efficient energy consumption and enhanced comfort. By tracking device usage patterns and sending data to a central server, the system enables remote control of appliances from any location, ultimately reducing energy wastage.

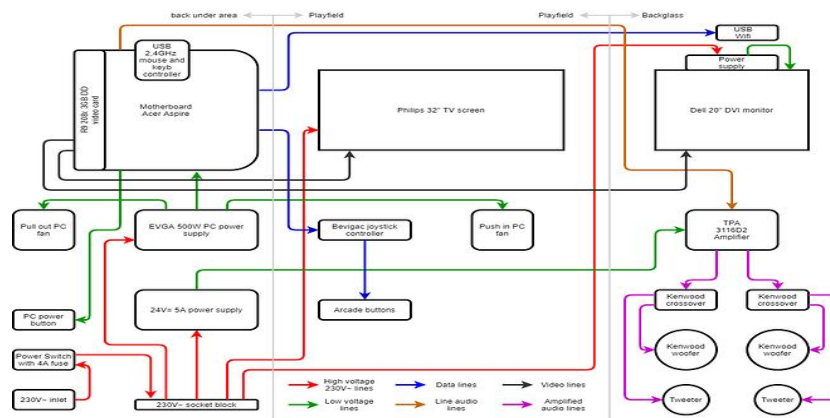
Reference [4] presents a smart laboratory implementation designed to manage different subsystems within a university setting, including lighting, air conditioning, heating, audio/video systems, switches, and security

measures. The benefits of this system for both the university and its students are emphasized, showcasing the advantages of utilizing a smart laboratory environment.

In Reference [5], a Secure and Smart Computer Labis introduced, incorporating Wireless Sensor Network (WSN) technology. This system utilizes an Ambient lighting module along with a Passive Infrared Sensor (PIR) and Environment Sensor (ES) for security purposes. However, the system faces challenges due to the limitations of WSN technology, such as restricted computational capabilities, communication resources, power supply, storage capacity, susceptibility to attacks, and limited bandwidth for data transmission.

Block diagram

The Smart Computer Lab is depicted in the block diagram. Environmental data will be collected using a motion sensor, luminosity sensor, temperature sensor, and humidity sensor. These sensor readings will then be transmitted to the microcontroller. Based on the processing, the relay board will control the switching of tube lights and fans as required.



Smart Laboratory Implementation using Home Assistance

The PIR sensor of the Smart Computer Lab will detect motion in the environment. Once motion is detected, the DHT11 temperature sensor and TSL2561 luminosity sensor will sense the temperature and light intensity of the environment, respectively. If the temperature exceeds a certain threshold, the lab fans will be turned on for a specific duration; otherwise, they will be turned off. Similarly, if the luminosity value exceeds a certain threshold, the tube lights in the laboratory will be turned off for a specific duration; otherwise, they will be turned on.

When no motion is detected, both the tube lights and fans of the lab will remain off until motion is detected again. The data collected by the sensors will be transmitted to the Home Assistance controller. The controller will process the data and initiate appropriate actions to control the tube lights and fans.

Furthermore, the controller will send the data to a cloud platform for continuous monitoring and analysis. Based on usage patterns, the threshold values for temperature and light intensity will be adjusted accordingly.

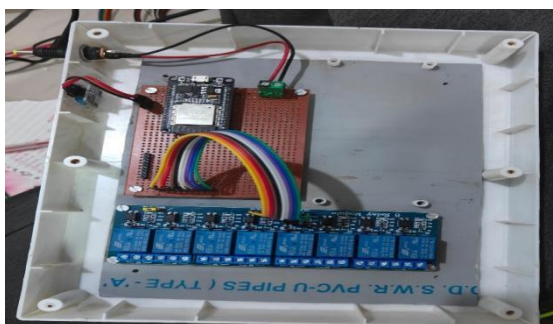


Fig 1 Circuit Diagram of the System

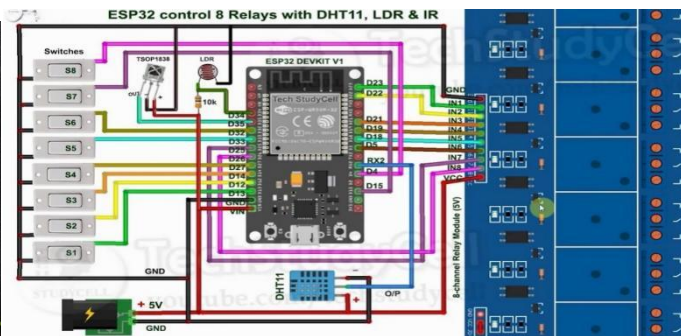


Fig2 Model Components

In fig1 depicts the circuit connections of the Smart Computer Lab Model. The components of the model comprise:

1. 8-channel Relay Board
3. TSL 2561 – Luminosity sensor
4. DHT11 – Temperature & Humidity sensor
5. Passive Infrared (PIR) Motion Sensor

Fig.2 represents the model for the Smart Computer Lab consisting of all the components as stated above.

Conclusion and future scope

The home automation technology is expanded by the system to encompass the college laboratories, resulting in the creation of a smart laboratory. By doing so, the smart laboratory effectively minimizes the power consumption throughout the day. Consequently, the system aids in the efficient management of energy. Moreover, the automation of the laboratory enhances its organization and diminishes the need for staff involvement in basic administrative duties.

The challenges faced are as follows:

Complexity: The Internet of Things is a diverse and intricate network, where any malfunction or errors in the hardware or software can result in significant problems. A power outage alone can cause numerous disruptions.

Privacy and Security: There are numerous methods through which the invasion of IoT devices can occur. These methods typically involve the use of applications that initially gain access to the IoT application and subsequently proceed to monitor, control, and manipulate the device. The advent of IoT has brought about a range of unprecedented challenges, including brute forcing, the problem of default passwords, system breaches, remote access vulnerabilities, and unreliable communication channels.

The future outlook takes into account the security issues of the IoT system and aims to enhance the security and privacy of users' data by integrating Blockchain technology with the IoT system.

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Sustainable HRM - The Way forward

Dr. Akanksha Shivaji Bhanji

Asst. Prof., Dayanand College of Commerce, Latur

Abstract:

Sustainable HRM is a novel approach to managing people that focuses on long-term Human Resource development, renewal, and regeneration. It extends the concept of strategic HRM and adopts a different approach to managing people. The management of our planet's quality of life is crucial, and this can be achieved by making decisions that support the sustainability of our immediate surroundings and environment, as well as our emotional and physical well-being. Sustainable HRM also encompasses the social and human outcomes that are interconnected with the environment, contributing to the organization's sustenance. Another key assumption of sustainable HRM is the constant replenishment of HR to achieve strategic objectives.

Sustainable HRM is considered a cross-functional discipline that takes into account both the external and internal influences on an organization's sustainability. The main themes in sustainable HRM include environmental management, socially responsible HRM, and turnover. It also addresses the sustainability of short-term and long-term effects on various stakeholders of the organization. In essence, investing in the survival of resources is economically rational for companies if their functioning is at risk.

In the 21st century, organizations face numerous challenges such as globalization, shifting societal expectations, technological innovations, and changing customer demands. However, Ehnert et al. (2014) argue that in addition to focusing on short-term performance, active engagement in the renewal, regeneration, and reproduction of organizational resources for long-term survival is often overlooked. Therefore, it is crucial to rethink resource management, including both current and potential human resources, to ensure the long-term sustainability of organizations. This research study mainly focused on the sustainable HRM practice at global level. It also highlighted the impact of these practices on overall organizational performance.

Keywords: Sustainable HRM, Globalization and societal expectations.

Introduction:

Sustainable HRM involves implementing strategies that allow a company to attain its economic, social, and ecological objectives as part of a comprehensive long-term plan, all while effectively managing any unintended consequences. This concept is rooted in the principles of environmental sustainability, which emphasizes the duty to preserve natural resources for the present and future well-being of the Earth and its diverse animal species. Human Resource Management (HRM) involves the managerial activities and responsibilities related to developing and retaining skilled employees. HRM focuses on the personnel within an organization and their impact on organizational efficiency and effectiveness. Senyucel describes HRM as a set of people-centered management practices that value employees as assets and aim to cultivate a talented and dedicated workforce to achieve organizational objectives. The HRM function within an organization is primarily concerned with managing employees at various stages of their employment, from pre-hire to post-hire. HRM practices play a direct role in influencing employee motivation, behavior, and skill enhancement to enhance organizational performance.

Organizations utilize a variety of HRM practices to reach their specific objectives. Effective human resource management practices, such as fostering a positive work environment, recognizing performance through compensation, providing feedback, implementing a fair evaluation system, conducting award ceremonies, empowering employees, offering motivational rewards, recruitment and selection, training, employee involvement, and performance evaluations, are essential for overall organizational success.

HRM practices encompass all management decisions and actions. The process begins with the recruitment of new employees, which necessitates adherence to HRM practices. Once hired, employees should be integrated into the organization through training and socialization. Subsequently, key aspects of HRM are evident in staff development efforts and the implementation of compensation and reward systems to motivate and support employees.

There are four categories of sustainable HRM:

1. **Ethical HRM:** This involves ethical and economically sound practices in the recruitment, development, deployment, and exit of employees.
2. **Environmental HRM:** Environmental HRM practices, such as environmentally friendly recruitment, training, and compensation, have been proven to positively impact sustainable success.
3. **Triple Bottom Line HRM:** This approach focuses on the economic, environmental, and social aspects of HRM.
4. **Community-Oriented HRM:** In this model, HRM skills and knowledge are utilized to contribute to the common good and address contemporary challenges, benefiting both the organization and society.

Review of literature:

HRM strategies, policies and practices may have a positive effect on employees' mindsets and actions in reaching the sustainability goals of the company, or sustainability can be built into the HRM system that fosters the employees' long-term physical, social and economic wellbeing (e.g., Ehnert, 2009). Our broader viewpoint here is to perceive sustainable HRM as an extension of strategic HRM (Ehnert, 2009), especially of the soft Harvard model (Beer et al., 1984, 2015).

Sustainable HRM has been described in several models or frameworks (see De Prins et al., 2014; Ehnert, 2009, p. 172; Ehnert et al., 2014; Kramar, 2014). In these frameworks, HRM practices are mainly linked to the broader corporate sustainability framework. Typically, the sustainable HRM models describe the stakeholders, elements, practices and outcomes, not to mention the potential paradoxes or tensions between or among the outcomes. Our theoretical base relies mainly on the practice-based model of sustainable HRM (Ehnert, 2009, p. 228).

Objectives of the study:

1. To know the meaning of Sustainable HRM.
2. To understand the sustainable HRM practices.
3. To know the impact of sustainable global HR practice.

Research Methodology:

Research Methodology is a systematic process to solve research problems. The objective of research is to find out the solution regarding research problems by using scientific and systematic technique. Data collection for this research study is collected through both the sources i.e. primary and secondary.

Sustainable Development Practices:

Sustainable Human Resource Management is planning or emerging Human Resource strategies and methods to enable financial, social, and environmental goals while simultaneously reproducing the Human Resource base over a long period. In human resource management, sustainability refers to human resources that promote a favorable environment and positive human and social outcomes, regardless of financial strategies and results.

1. **Recruitment and selection:** Companies aspiring to hire top actors are turning to innovative processes to make jobs easier. There are many different ways to gauge whether a good actor and cultural fit will fit the company or not. While not every job-related service will be suitable for your team, you can learn from the companies that have paved the way for those who want sustainability and are providing data.
2. **Training and development:** You have taken the time to find employees, but your responsibility to them is only beginning. Improving your existing workforce, focusing on skills training, investing in training and development opportunities is the best practice for an HRM. You might realize the importance that young workers place on learning. As industries multiply, you can encourage your employees to grow and develop while keeping them busy with their work and organization.
3. **Transparency:** A critical HRM practice is always to maintain transparency and be open to employees regarding business successes and failures. Organizations that promote an environment of feedback and communication that make employees feel trusted, respected, and valued.

4. **Employee benefits:** There are many benefits you can offer employees, but which ones provide the most outstanding value? Best Benefit Plans adopt strategies to meet the company's goals and retain excellent employees and help its employees understand their benefits.
5. **Termination:** This is probably the most challenging place to implement HRM best practices because it will always be difficult for those involved. One of the best HRM practices consists of learning from employees who are leaving their jobs and at the same time understanding what issues need to be sensitized for legal reasons. Matters that can be guaranteed removal should always be considered before they reach a boiling point. However, when it comes to terminating an employee, you should not wait for a decision.
 - Time-based strategies the program or policy that HRM should choose is - flextime, job sharing, part-time work, leave for new parents, close plant or offices for specific occasions.
 - This includes an information-based strategy, including an intranet or life website for employees and changes support.
 - The money-based strategy includes childcare, flexible work-life benefits, adoption assistance, paid vacation services, and more.
 - Direct service strategies, including on-site child care, emergency backup care, on-site health and beauty services, and create dinner programs for employees.
 - It is a culture change strategy that involves training managers to deal with employees' conflicts and work lives appropriately. The manager pays for employee satisfaction and focuses on actual performance, not face time.
 - They are encouraging employees through training and compensation.
 - Designing the company's HRM system to reflect equity, growth, and prosperity will contribute to the long-term health and stability of the internal and external communities.
 - Emphasize the safety of long-term employment to avoid disrupting employees, their families, and communities.

Impact of Sustainable Global HR Practices:

Sustainable HRM involves implementing strategies that allow a business to reach its economic, social, and environmental objectives over the long run, all while managing any unforeseen consequences. This idea stems from the notion of environmental sustainability, which involves the duty to preserve natural resources in order to promote the health and prosperity of the planet and its inhabitants both now and in the years to come.

Sustainable international HR practices encompass human resource management strategies that are designed to be environmentally and socially responsible, while also being economically viable, within a global context. These practices take into account the distinct challenges and opportunities that organizations encounter when conducting business internationally.

There are various examples of sustainable HR practices in international business, including:

1. Formulating global HR policies that align with the values of your organization and reflect the cultural and legal disparities of the countries in which it operates.
2. Offering cross-cultural training and support to employees who work in different countries.
3. Implementing fair and transparent processes for hiring, promotion, and performance evaluation that are consistent across all countries where your organization operates.
4. Ensuring that working conditions and employee benefits adhere to international labor standards.
5. Establishing programs to support local communities in which the organization operates, such as providing job training or contributing to local charities.
6. Developing strategies to minimize the organization's environmental impact by reducing energy consumption or implementing recycling initiatives.

By incorporating sustainable HR practices into international business operations, organizations can showcase their dedication to social and environmental responsibility on a global scale.

Sustainable global HR practices play a crucial role in attracting and retaining top talent for your business. Many individuals, especially younger employees, are increasingly seeking out organizations that prioritize sustainability and social responsibility. By implementing sustainable HR practices, your business sends a clear message to potential employees that it is environmentally and socially conscious, making it a more appealing workplace.

Global organizations are actively working towards reducing their environmental impact and carbon footprint. Sustainable HR practices, such as adopting green HR policies and promoting initiatives like reducing paper usage or implementing virtual expat assignments, help in lowering energy consumption and greenhouse gas emissions. Not only does this benefit the environment, but it also leads to cost savings for your business.

Conclusion:

Sustainability is a challenge in the current business environment. It is a strategic HR initiative needed for business in the future and long term initiative for taking forth policies for protecting both the economic and natural environments. The emerging concept of sustainable HRM practices has significant implications for both organizational performance and HRM function. HRM should assist in developing and implementing corporate sustainability strategies because unique HRM partnerships are essential for sustainable business success. HRM must recognize the new perspective of organizational stability and align its practices. For a sustainable organization, HRM needs to provide HRM solutions as well as sustainably manage HRM functions. In this context, the proposed approach aims to embed sustainability values, understand and engage HRM stakeholders, review and develop HRM policies and practices, and track and report performance and impact. This involves adopting a repetitive process. Through this process, HRM will demonstrate how its sustainability performance is aligned with a globally prominent framework and supports the overall business sustainability strategy. Now is the time for all GHRM managers to sit together and refine and renew HRM practices for the organization's sustainable growth and development. Furthermore, sustainable global HR practices can enhance relationships with key stakeholders, including employees, customers, and regulators. By embracing these practices, your business showcases its dedication to social responsibility, which in turn boosts reputation and fosters stronger connections. Ultimately, this fosters trust and support for the organization, paving the way for long-term success.

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A Study on Impact of Sustainable Development Goals in Indian Economy

Dr. Nikhil Rameshchandraji Vyas

Assistant Professor, Dayanand College of Commerce, Latur
(Affiliated to Swami Ramanand Teerth Marathwada University, Nanded)

Abstract:

The Sustainable Development Goals (SDGs) established by the United Nations provide a framework for addressing global challenges ranging from poverty and inequality to climate change and environmental degradation. India, as one of the world's largest and most rapidly developing economies, faces unique opportunities and challenges in implementing the SDGs.

This abstract aims to provide an overview of the impact of the Sustainable Development Goals on the Indian economy. It will analyze the extent to which India has integrated the SDGs into its policy framework and assess the implications for various sectors such as agriculture, industry, healthcare, education, and infrastructure.

The paper will begin by examining India's progress towards achieving the SDGs since their adoption in 2015, focusing on key indicators such as poverty reduction, gender equality, clean energy adoption, and environmental sustainability. It will also explore the role of government policies, private sector engagement, civil society initiatives, and international partnerships in driving progress towards the SDGs.

Furthermore, the abstract will delve into the economic implications of sustainable development initiatives in India, including potential costs and benefits, job creation, technological innovation, and market opportunities. It will analyze how investments in renewable energy, sustainable agriculture, and green infrastructure can contribute to economic growth, resilience, and inclusive development.

Moreover, the abstract will highlight the challenges and barriers hindering the effective implementation of the SDGs in India, including resource constraints, institutional capacity gaps, regulatory hurdles, and socio-economic disparities. It will discuss strategies for overcoming these challenges through policy reforms, capacity-building efforts, multi-stakeholder collaborations, and awareness campaigns.

In conclusion, the abstract will summarize the key findings and recommendations for policymakers, businesses, civil society organizations, and other stakeholders to accelerate progress towards the Sustainable Development Goals in India while fostering inclusive and sustainable economic growth.

Keywords: Sustainable Development Goals, Indian economy, policy framework, sectors, progress, challenges, opportunities, implications, strategies.

Introduction:

The Sustainable Development Goals (SDGs) are a set of global objectives adopted by the United Nations (UN) member states in 2015 as part of the 2030 Agenda for Sustainable Development. They build upon the earlier Millennium Development Goals (MDGs) but are more comprehensive and ambitious, aiming to address a wide range of social, economic, and environmental challenges facing the world today. The SDGs consist of 17 interconnected goals and 169 targets, designed to guide global efforts towards achieving a more sustainable and equitable future for all.

The overarching vision of the SDGs is to "leave no one behind," ensuring that all people, regardless of their background or circumstances, have the opportunity to lead dignified and fulfilling lives while safeguarding the planet for future generations. The goals cover a broad spectrum of issues, including poverty eradication, hunger and food security, health and well-being, education, gender equality, clean water and sanitation, affordable and clean energy, sustainable cities and communities, climate action, biodiversity conservation, and peace and justice.

Each SDG is interrelated and mutually reinforcing, recognizing the complex and interconnected nature of global challenges. They are essential for achieving sustainable development and preserving the planet's ecosystems. The SDGs provide a universal framework for governments, businesses, civil society organizations, and individuals to align their priorities, policies, and actions towards achieving sustainable development. They emphasize the

importance of collaboration, innovation, and transformative change at local, national, and global levels. Achieving the SDGs requires collective action, political will, adequate resources, and inclusive participation from all stakeholders.

In summary, the Sustainable Development Goals represent a shared commitment to building a more prosperous, inclusive, and sustainable world by addressing the interconnected challenges of poverty, inequality, environmental degradation, and climate change. They serve as a roadmap for global development efforts, guiding actions towards a future where every person can thrive in harmony with nature.

Objectives of the Study:

1. To study Sustainable Development Goals in detail
2. To study impact of Sustainable Development Goals in Indian Economy

Review of Literature:

1. Carol Pomare (2018), in his research paper, "*A Multiple Framework Approach to Sustainable Development Goals (SDGs) and Entrepreneurship*" revealed with the purpose of the study to discuss sustainable development goals (SDGs) and entrepreneurship from an economic and socially perceptive. To analyze the challenges faced by small & medium enterprises (SMEs) applying the goal of ensuring sustainable consumption and production patterns to their day-today operations. In this paper, Descriptive statistics is being used and data is collected from various SMEs. It is found that there is a need to make SMEs and general public aware about the healthier way of living, with a focus on entrepreneurs who believe their SME needs to act as a "good corporate citizen" with the responsibility to sustain the environment for future generations and taking care of the well-being of society at large.

2. Gayle C. Avery, in his study titled, "Blueprint for implementing the UN's sustainable development goals" purpose to explain the 17 goals in detail and to provide simple examples of how different goals provide a purpose in the lives of both ordinary and extraordinary individuals. Mini case studies and examples bring the concepts to life, making them more engaging to readers. "Designing the Purposeful World" offers a compelling journey for organizations aspiring to make a positive impact while thriving. It serves as a practical handbook, offering a plethora of exercises, activities, and actionable insights to guide readers in aligning their endeavors with the Sustainable Development Goals (SDGs).

Research Methodology:

Data collection: For this study data has been collected from secondary data sources, thus this paper is based on secondary data.

Secondary Data: Secondary data is collected by way of published sources of information regarding work life balance and all other aspects e.g. Books, Research papers, magazines, government reports, internet etc.

Sustainable Development Goals:

1. No Poverty: End poverty in all forms everywhere.
2. Zero Hunger: End hunger, achieve food security, and improve nutrition.
3. Good Health and Well-being: Ensure healthy lives and promote well-being for all.
4. Quality Education: Ensure inclusive and equitable quality education for all.
5. Gender Equality: Achieve gender equality and empower all women and girls.
6. Clean Water and Sanitation: Ensure access to clean water and sanitation for all.
7. Affordable and Clean Energy: Ensure access to affordable and clean energy for all.
8. Decent Work and Economic Growth: Promote inclusive and sustainable economic growth, employment, and decent work for all.
9. Industry, Innovation, and Infrastructure: Build resilient infrastructure, promote inclusive and sustainable

industrialization, and foster innovation.

10. Reduced Inequality: Reduce inequality within and among countries.
11. Sustainable Cities and Communities: Make cities and human settlements inclusive, safe, resilient, and sustainable.
12. Responsible Consumption and Production: Ensure sustainable consumption and production patterns.
13. Climate Action: Take urgent action to combat climate change and its impacts.
14. Life Below Water: Conserve and sustainably use the oceans, seas, and marine resources.
15. Life on Land: Protect, restore, and promote sustainable use of terrestrial ecosystems.
16. Peace, Justice, and Strong Institutions: Promote peaceful and inclusive societies, provide access to justice, and build effective institutions.
17. Partnerships for the Goals: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Each goal is interconnected and aims to address various aspects of sustainable development to create a better world for present and future generations.

Findings on Impact of SGDs in Indian Economy

1. Poverty Alleviation:

According to the World Bank, India's poverty rate declined from 21.9% in 2011 to 13.4% in 2016. The percentage of people living below the national poverty line decreased from 55% in 1973 to 22% in 2011-12, as per India's Planning Commission data.

2. Healthcare:

India has achieved significant progress in healthcare, with the maternal mortality ratio declining from 167 per 100,000 live births in 2011-2013 to 113 per 100,000 live births in 2016-2018. Immunization coverage for children under 1 year increased from 61% in 2009 to 84% in 2019.

3. Education:

Net primary enrollment ratio in India increased from 86.8% in 2006 to 94.3% in 2019. Literacy rate in India increased from 64.8% in 2001 to 77.7% in 2011, with higher rates among males (82.1%) compared to females (72.7%).

4. Gender Equality:

Despite progress, gender disparities persist. The female labor force participation rate in India is relatively low, at around 23.3% in 2020. The sex ratio at birth in India improved slightly from 919 girls per 1,000 boys in 2015-2017 to 929 girls per 1,000 boys in 2018-2020.

5. Clean Energy and Environmental Sustainability:

India's renewable energy capacity reached 94 GW in 2020, accounting for around 24% of the total installed capacity. The percentage of households with access to clean cooking energy increased from 56% in 2011 to 82% in 2019.

6. Economic Growth:

India's GDP growth rate averaged around 7% per year from 2015 to 2019. Despite economic growth, income inequality remains a challenge, with the top 1% of the population holding around 22% of the total national income.

7. Infrastructure Development:

India has made significant investments in infrastructure, with the total length of national highways increasing from 91,287 km in 2014 to 142,126 km in 2021.

The Swachh Bharat Mission (Clean India Mission) has resulted in the construction of over 110 million household toilets since its launch in 2014.

8. Partnerships and Collaboration:

India has actively engaged in partnerships and collaborations to achieve the SDGs, including initiatives like the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI).

These figures demonstrate both the progress made and the challenges that persist in achieving the SDGs in India. Continued efforts and partnerships are essential to accelerate progress and ensure sustainable development for all.

Suggestions:

1. Invest in job creation and skill development to alleviate poverty.
2. Expand healthcare infrastructure and focus on preventive measures, particularly in rural areas.
3. Enhance the quality of education by improving school infrastructure and providing teacher training.
4. Enforce gender equality laws and support women's participation in the workforce.
5. Accelerate the adoption of renewable energy sources and implement measures to mitigate pollution.
6. Foster a conducive environment for entrepreneurship and innovation to drive economic growth.
7. Prioritize infrastructure development, especially in transportation and sanitation.
8. Strengthen partnerships between government, industry, and civil society to promote sustainable development initiatives.

Conclusion:

In conclusion, the study highlights the significant impact of Sustainable Development Goals (SDGs) on the Indian economy across various sectors. It underscores the progress made in poverty alleviation, healthcare, education, gender equality, clean energy, economic growth, infrastructure development, and partnerships. While there have been notable achievements, challenges remain in achieving the SDGs comprehensively. Addressing these challenges requires sustained efforts, policy interventions, and collaborative actions from government, civil society, private sector, and international organizations. By leveraging the momentum generated by the SDGs, India can continue its journey towards sustainable development, ensuring a prosperous and equitable future for all its citizens.

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Hadoop Ecosystem

Siddika Patel, Khadira Patel

Dayanand College of Commerce, Latur , Shivaji College Udgir

Abstract— The Hadoop ecosystem is a comprehensive framework of open-source tools and technologies designed to process, store, and analyse large volumes of data in a distributed and scalable manner. It is widely utilized in various industries to harness the potential of big data for insights and decision-making. This abstract provides an overview of the key components and concepts within the Hadoop ecosystem. At the core of the Hadoop ecosystem is the Hadoop Distributed File System (HDFS), which enables the storage of data across a cluster of commodity hardware. HDFS divides large files into smaller blocks and distributes them across nodes, ensuring fault tolerance and efficient data retrieval. Apache Hadoop ecosystem has different components of the Apache Hadoop software library. It also has open source projects as well as a complementary tools. Hadoop Ecosystem is a platform that provides various services to solve the big data problems.

There are four main parts of Hadoop i.e. HDFS, MapReduce, YARN, and Hadoop Common. All these tools work together to provide various services. Following are the components that collectively form a Hadoop ecosystem:

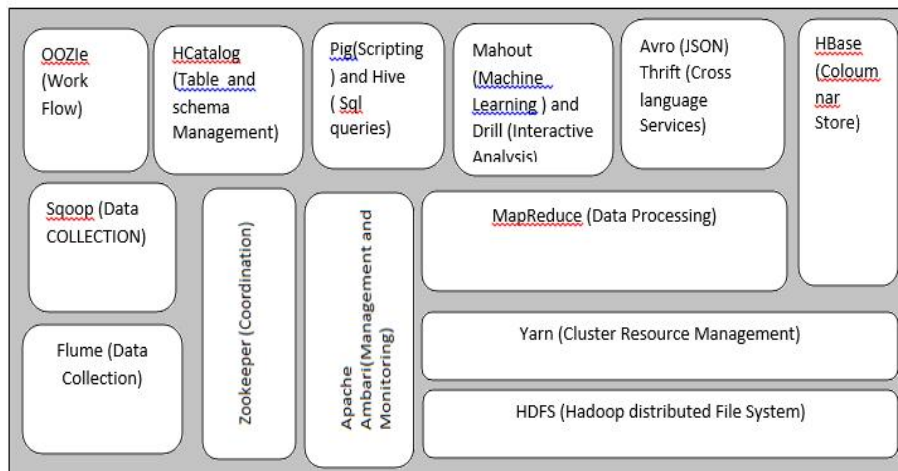
HDFS, YARN, MapReduce, Spark, PIG, HIVE, HBase, Mahout, Spark MLLib, Zookeeper, Oozie. You can consider it as a suite which encompasses a number of services like inserting, storing, analyzing and maintaining properly inside it.

Index Terms—*Hadoop Distributed File System (HDFS) MapReduce, Apache Spark, Hive, Pig, HBase, YARN (Yet Another Resource Negotiator), Flume, Sqoop, Avro, Parquet, Oozie, Ambari, Big Data, Data Processing Scalability, Distributed Computing, Fault Tolerance In-Memory Processing, NoSQL Database, Data Ingestion, Data Serialization, Data Workflow Orchestration, Cluster Management, Data Analytics, Data Storage, High-Performance Computing Real-Time Data, Batch Processing, Resource Management*

INTRODUCTION

Hadoop Ecosystem Components

The objective of this **Apache Hadoop** ecosystem components tutorial is to have an overview of what are the different components of Hadoop ecosystem that make Hadoop so powerful and due to which several **Hadoop job roles** are available now. Hadoop ecosystem components are **HDFS** and HDFS components, **MapReduce**, **YARN**, **Hive**, **Apache Pig**, **Apache HBase** and HBase components, **HCatalog**, **Avro**, **Thrift**, **Drill**, **Apache mahout**, **Sqoop**, **Apache Flume**, **Ambari**, **Zookeeper** and **Apache Oozie**.



2. Introduction to Hadoop Ecosystem

2.1. Hadoop Distributed File System

It is major component of Hadoop Ecosystem. **HDFS** is the primary storage system of Hadoop. Hadoop distributed file system (HDFS) provides scalable, fault tolerance, reliable and cost efficient data storage for **Big data**. The first file stores data and second file stores metadata of block. Large clusters configuration is needed most of the time. Hadoop use Shell-like commands to interact directly with HDFS.

HDFS Components:

There are two major components of Hadoop HDFS-

i. NameNode

ii. DataNode

i. NameNode

It is also known as *Master* node. NameNode does not store actual data or dataset. NameNode stores Metadata.

Tasks of HDFS NameNode

- Manage file system namespace.
- Regulates client's access to files.
- Executes file system execution such as naming, closing, opening files and directories.

ii. DataNode

It is also known as *Slave*. HDFS Datanode is stores actual data in HDFS. Datanode performs read and write operation. HDFS Metadata includes checksums for data. At the time of mismatch found, DataNode goes down automatically.

Tasks of HDFS DataNode

- DataNode performs operations like block replica creation, deletion, and replication according to the instruction of NameNode.
- DataNode manages data storage of the system.

This was all about HDFS as a Hadoop Ecosystem component.

2.2. MapReduce

Hadoop MapReduce is the main part of Hadoop ecosystem . It helps data processing. MapReduce is a software framework that develop applications which are used to process the vast amount of structured and unstructured data stored in the Hadoop Distributed File system.

Working of MapReduce

Hadoop Ecosystem component 'MapReduce' divides the processing into two steps

- Map phase
- Reduce phase

Each phase has **key-value pairs** as input and output. Programmer defines two functions : **map function** and **reduce function** **Map function** accepts data and converts it into another set of data, where individual elements are broken down into tuples (key/value pairs).

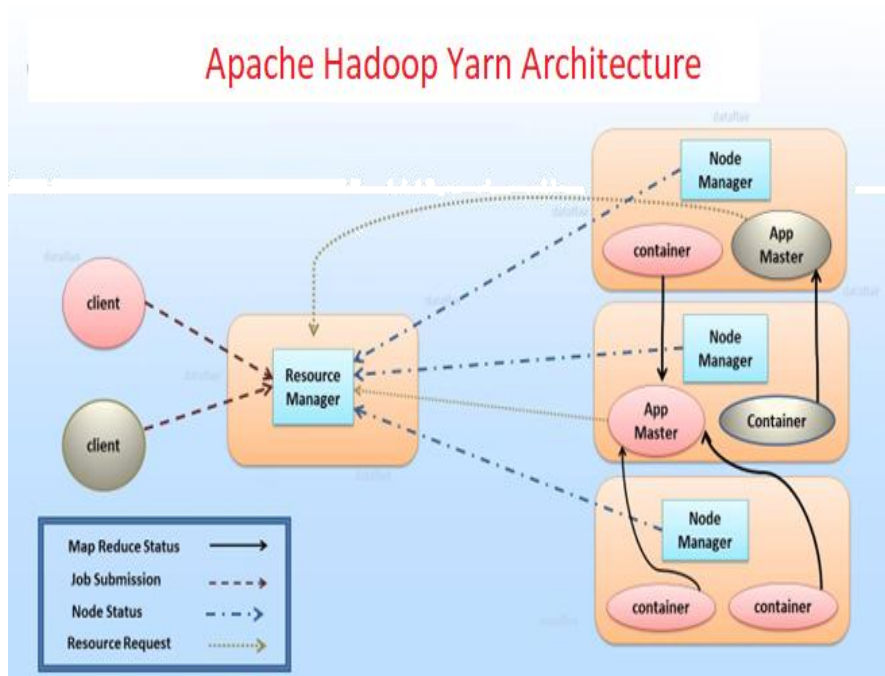
Reduce function accepts the output from the Map as an input and combines those data tuples based on the key and accordingly modifies the value of the key.

Features of MapReduce

- **Simplicity.**
- **Scalability**
- **Speed**
- **Fault Tolerance.**

2.3. YARN

Hadoop YARN (Yet Another Resource Negotiator) is the resource management. YARN is like The first file stores data and second file stores metadata of blocks. The operating system of Hadoop as it is responsible for managing and monitoring workloads. Data stored on a single platform can be handles by YARN. Platform like real time streaming and batch processing.



Hadoop Yarn Diagram

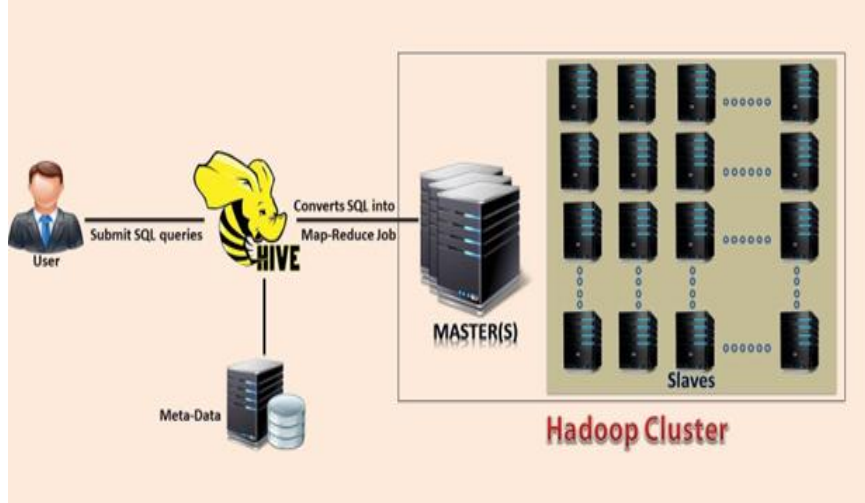
YARN has been projected as a data operating system for **Hadoop2**.

Main features of YARN are:

- **Flexibility**
- **Efficiency.**
- **Shared**

2.4. Hive

Apache Hive, is an open source data warehouse system for querying and analyzing large datasets stored in Hadoop files. Hive perform three main functions: *data summarization, query, and analysis*. **HiveQL** (HQL) language. it is same as SQL. HiveQL translates SQL-like queries into **MapReduce jobs** that can be executed on Hadoop.



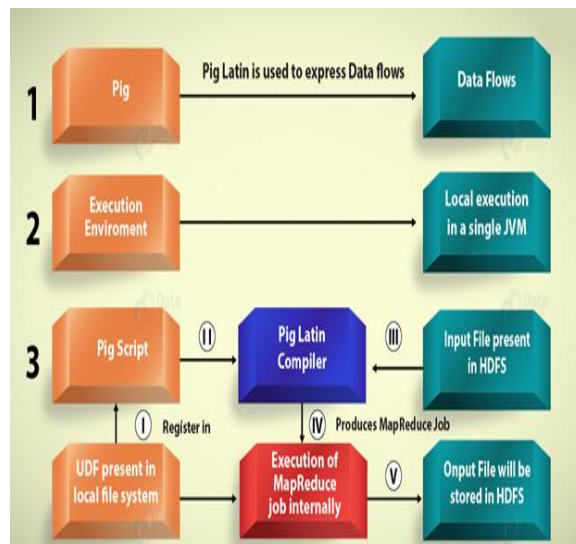
Hive Diagram

Main parts of Hive are:

- **Metastore** – It stores the metadata.
- **Driver** – Manage the lifecycle of a HiveQL statement.
- **Query compiler** – Compiles HiveQL into Directed Acyclic Graph(DAG).
- **Hive server** – Provide a thrift interface and JDBC/ODBC server.

2.5. Pig

It is very similar to SQL. For Programs execution, pig requires Java runtime environment.



Pig Diagram

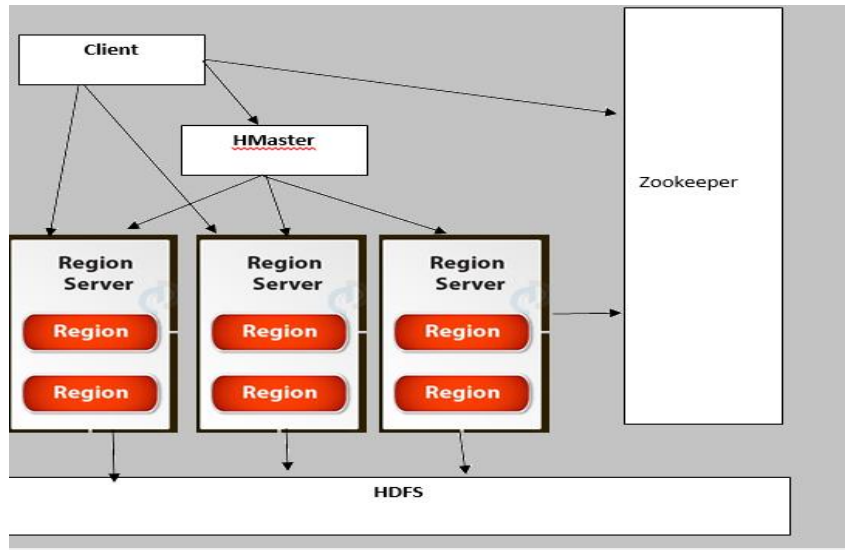
Apache Pig Features:

- Extensibility.
- Optimization opportunities

- Handles all kinds of data.

2.6. HBase

It store structured data in tables. that could store large volume of data.. HBase is scalable, distributed, and NoSQL database that is built on top of HDFS.



HBase Diagram

Components of Hbase

There are two HBase Components namely- HBase Master and RegionServer.

i. HBase Master

- It Maintains and monitors the **Hadoop cluster**.
- It provides interface for creating, updating and deleting tables.
- It controls the failure.
- HMaster handles DDL operation.

ii. RegionServer

It handles requests from clients. Region server process runs on every DataNode node in Hadoop cluster

2.7. HCatalog

HCatalog supports MapReduce, Hive, and Pig to easily read and write data from the cluster.

Benefits of HCatalog:

- Provides notifications of data availability.
- Due to table abstraction, HCatalog keeps the user free from overhead of data storage.

2.8. Avro

Big data can exchange programs written in different languages using Avro.

It stores data definition and data together in one message or file it makes easy for programs to dynamically understand information stored in Avro.

Avro schema – Avro needs the schema for data read/writes. When Avro data and its schema is stored with it.

Dynamic typing – It refers to serialization and deserialization without code generation. It complements the code generation which is available in Avro for statically typed language as an optional optimization.

Avro features:

- It has rich data structures.
- It can use remote procedure call.
- It provides compact, fast, binary data format.
- It provides Container file which store persistent data.

2.9. Thrift

It is a software framework for scalable cross-language services development.

2.10. Apache Drill

The drill is the distributed SQL query engine.

Application of Apache drill

Cardlytics use drill to quickly process large amount of record and execute queries.

Apache Drill features:

The drill eliminates garbage collection and optimize memory allocation and usage..

- **Extensibility**
- **Flexibility**
- **Dynamic schema discovery**
- **Drill decentralized metadata**

2.11. Apache Mahout

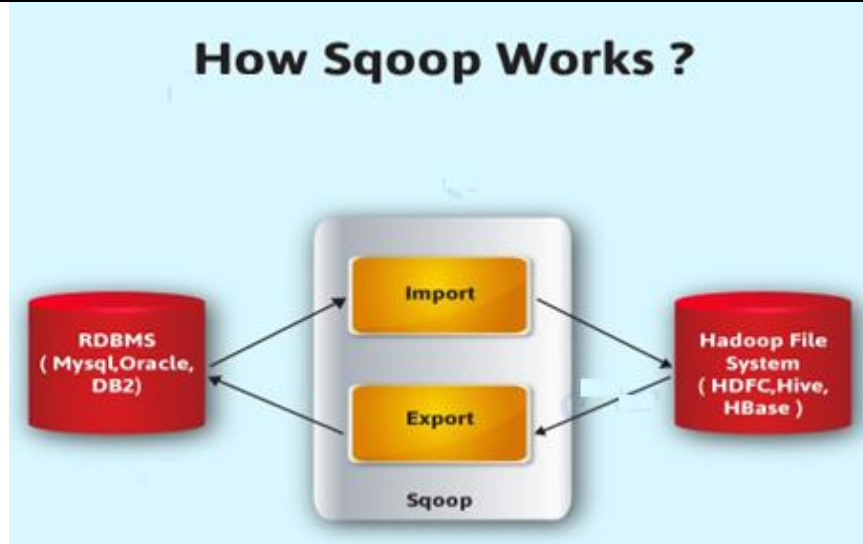
Mahout framework is used for creating scalable **machine learning** algorithm.

Mahout Algorithms:

- **Clustering** – Here it takes the item in particular class and organizes them into naturally occurring groups, such that item belonging to the same group are similar to each other.
- **Collaborative filtering** – It mines user behavior and makes product recommendations
- **Classifications** – It learns from existing categorization and then assigns unclassified items to the best category.
- **Frequent pattern mining** – It analyzes items in a group.

2.12. Apache Sqoop

Sqoop imports data from external sources. It also exports data from Hadoop to other external sources.



Apache Sqoop Diagram

Apache Sqoop features:

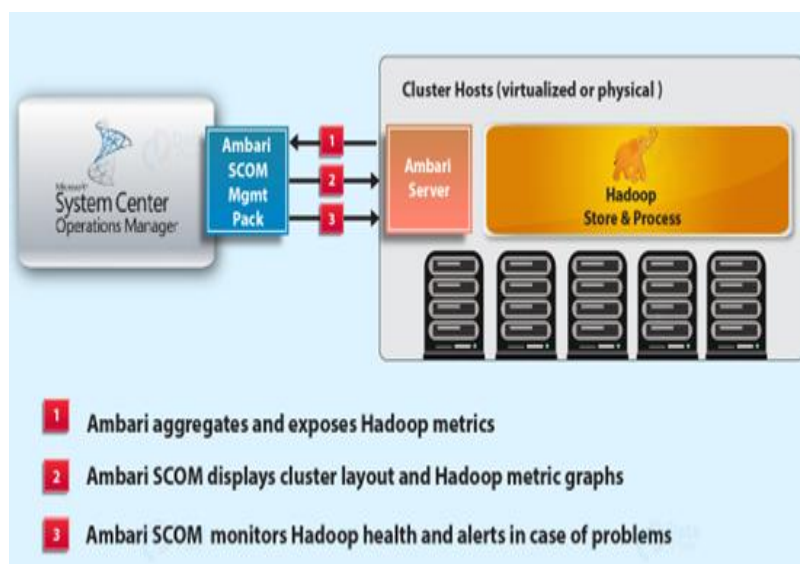
- Import sequential datasets from mainframe Import direct to ORC
- Parallel data transfer
- Efficient data
- Fast data copies

2.13. Apache Flume

Flume collects, aggregate and moves a large amount of data from its source and send it to HDFS. It is fault tolerant and reliable mechanism. This Hadoop Ecosystem component allows the data flow from the source into Hadoop environment.

2.14. Ambari

Ambari, is a management platform for provisioning, managing, monitoring and securing apache Hadoop cluster.

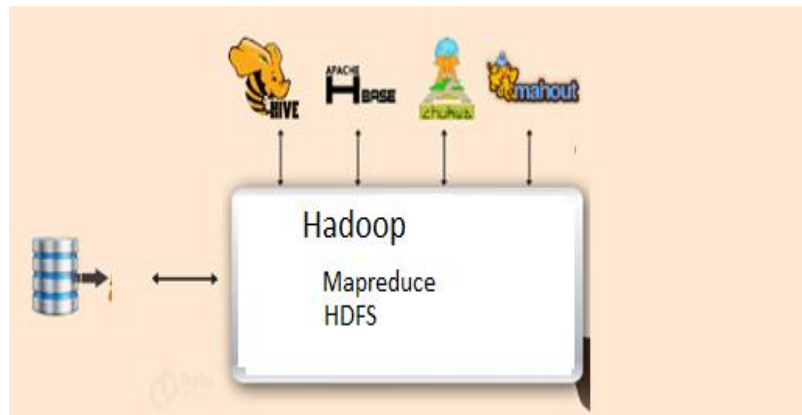


Ambari Diagram

Ambari features:

- Simplified installation, configuration, and management
- Centralized security setup Highly extensible and customizable –
- Full visibility into cluster health
- 2.15. Zookeeper

Apache Zookeeper manages and coordinates a large cluster of machines.



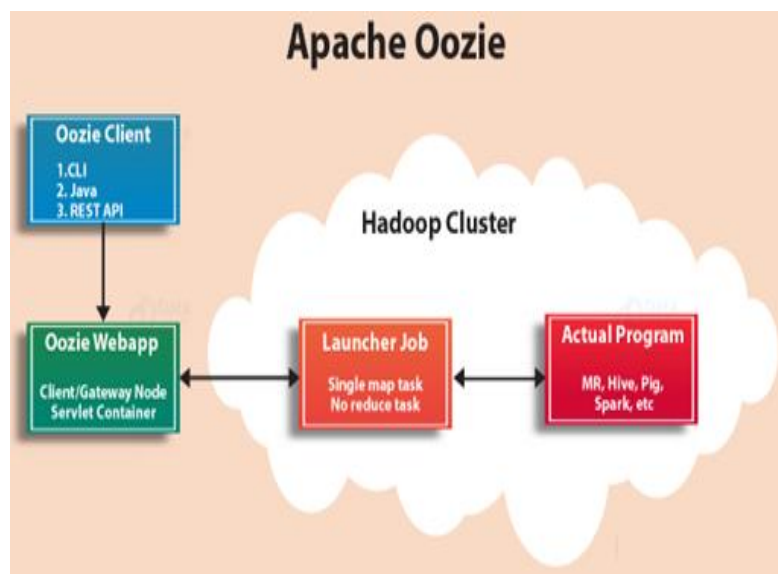
ZooKeeper Diagram

Features of Zookeeper features:

- Fast
- Ordered

2.16. Oozie

It is a workflow scheduler system for managing apache Hadoop jobs. Oozie combines multiple jobs sequentially into one logical unit of work..



Oozie Diagram

In Oozie, users can create Directed Acyclic Graph of workflow, which can run in parallel and sequentially in Hadoop. Oozie is scalable and can manage timely execution of thousands of workflow in a **Hadoop cluster**. Oozie is very much flexible as well. One can easily start, stop, suspend and rerun jobs. It is even possible to skip a specific failed node or rerun it in Oozie.

There are two basic types of Oozie jobs:

- **Oozie workflow** – It is to store and run workflows composed of Hadoop jobs e.g., MapReduce, pig, Hive.
- **Oozie Coordinator** – It runs workflow jobs based on predefined schedules and availability of data.

Uses of Hadoop ecosystem

I. Hadoop in the Financial Sector

Identify customers across different sources along with accurate risk assessment

I. Hadoop in Healthcare Sector

Health insurance

II. Hadoop for Telecom Industry

The following verticals of telecom industry get benefitted the most, with Big Data and Hadoop usage:

- Call Data Records Management
- Servicing of Telecom Data Equipment
- Advanced Telecom infrastructure planning
- Creating new products and services
- Network traffic analytics

III. Hadoop in Retail Sector

Big Data and Hadoop is being used in the retail industry for the following use cases:

- i. Retail analytics for inventory forecasting.
- ii. Retail analytics for dynamic pricing of products.
- iii. Retail analytics for supply chain efficiency.
- iv. Retail analytics for targeted and customized promotion and marketing.
- v. Retail analytics in fraud detection and prevention.

IV. Hadoop for Building Recommendation System

The Hadoop ecosystem offers a diverse set of tools and frameworks that can address various big data challenges across different industries. Here are some common use cases where the Hadoop ecosystem is employed:

Data Warehousing and Analytics:

Use Case: Storing and analyzing large volumes of structured and unstructured data to derive insights.

Tools: Apache Hive, Apache Spark, Apache HBase.

Real-time Data Processing:

Use Case: Handling high-velocity data streams and performing real-time analytics for applications like fraud detection, IoT, and monitoring.

Tools: Apache Kafka, Apache Storm, Apache Flink.

Machine Learning and Predictive Analytics:

Use Case: Building and deploying scalable machine learning models to make predictions and recommendations.

Tools: Apache Spark MLlib, Apache Mahout, TensorFlow on YARN.

Log and Event Analysis:

Use Case: Analyzing logs and events generated by systems, applications, and devices for troubleshooting, performance monitoring, and security analysis.

Tools: Apache Flume, Apache NiFi, Apache Drill.

Recommendation Systems:

Use Case: Creating personalized recommendations for users based on their preferences, behaviors, and historical data.

Tools: Apache Mahout, Apache Spark, Apache HBase.

Genomics and Bioinformatics:

Use Case: Processing and analyzing large genomic datasets for research, drug discovery, and personalized medicine.

Tools: Hadoop-BAM, Genome Analysis Toolkit (GATK), Apache Spark.

Supply Chain Optimization:

Use Case: Analyzing supply chain data to optimize inventory management, demand forecasting, and logistics.

Tools: Apache Pig, Apache Hive, Apache Hadoop.

Social Media Analysis:

Use Case: Mining social media data to understand customer sentiment, identify trends, and improve marketing strategies.

Tools: Apache Hadoop, Apache Spark, Apache Pig.

Healthcare Analytics:

Use Case: Analyzing electronic health records (EHRs), medical images, and other healthcare data to improve patient care, outcomes, and operational efficiency.

Tools: Apache Hadoop, Apache Spark, Apache Flink.

Risk Management and Compliance:

Use Case: Identifying and mitigating risks, detecting fraud, and ensuring regulatory compliance by analyzing large volumes of financial and transactional data.

Tools: Apache Hadoop, Apache Spark, Apache Drill.

These are just a few examples of the diverse range of use cases where the Hadoop ecosystem is applied to tackle big data challenges and drive value for organizations. Depending on the specific requirements and objectives, different combinations of tools and frameworks from the ecosystem may be used to address these use cases effectively.

3. Conclusion:

As you have learned the components of the Hadoop ecosystem, the Hadoop ecosystem helps to solve big data problems. The Hadoop ecosystem presents a versatile toolkit for addressing a myriad of big data challenges across various

industries and domains. From data warehousing and real-time analytics to machine learning and genomics, the ecosystem's rich array of tools and frameworks empower organizations to derive valuable insights, make informed decisions, and drive innovation.

By leveraging components such as Apache Hive, Spark, Kafka, and Mahout, businesses can efficiently store, process, and analyze massive datasets, enabling them to uncover hidden patterns, trends, and correlations. Whether it's optimizing supply chains, enhancing healthcare outcomes, or mitigating risks, the Hadoop ecosystem provides scalable and flexible solutions to meet diverse needs and objectives.

Moreover, the versatility of the Hadoop ecosystem extends beyond traditional use cases, encompassing emerging fields such as IoT, social media analysis, and personalized medicine. As organizations continue to grapple with the complexities of big data, the Hadoop ecosystem remains at the forefront, empowering them to harness the power of data and drive competitive advantage.

In essence, the Hadoop ecosystem stands as a testament to the transformative potential of big data technologies, offering a robust foundation for organizations to navigate the data-driven landscape and unlock new opportunities for growth and innovation.

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