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JOURNAL GLOBAL VALUES

A PEER REVIEWED & REFEREED INTERNATIONAL JOURNAL

**“Research Skill & Entrepreneurship
Development Activities in Global Perspective”**

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Guest Chief Editor
Dr. Sanjay Kumar

Guest Co-Editor
Prof. Chatar Singh Negi
Dr. Rajpal Singh Rawat
Dr. Amit Agrawal

A Message from the Editor-in-Chief/Editors

It is given me a great feeling of pleasure to release the Special issue of A Peer Reviewed & Refereed International Journal '**Global Values**'. It is great matter of pride of happiness that eminent researchers, scholars, professionals and academicians have contributed their papers with care and sincerity for success this special issue.

Research orientation has gained a momentum for a spiring education istand professionals. New dimension have been explored in the field of different disciplines of knowledge. Another important dimension has reached to education field – the experiment of various disciplines all together orexperimenting on a field using different sciences.

Global mega trends such as the rising role of technology, climate change, demographic shifts, urbanization, and the globalization of value chains are changing the nature of work and skills demands. Our skills usually involve qualities or traits that you possess or those that you can learn or acquire through training and education. Developing skills is important because it allows you to improve attributes and qualities vital to effective workplace performance. By developing these skills, you can also begin your path to personal development, which can help you maximize your potential and achieve your career goals in record time. There are huge gaps in basic literacy and numeracy of working-age populations, as 750 million people aged 15+ (or 18 percent of the global population) report being unable to read and write, with estimates being nearly twice as large if literacy is measured through direct assessments. Large-scale international assessments of adult skills generally point to skills mismatches as well as large variation in the returns to education across fields of study, institutions, and population groups. Employers in many developing countries report that a lack of skilled workers is a major and increasing bottleneck for their operations, affecting their capacity to innovate. Today there is a need for research for skill development at the global level so that the gap between theory and practice can be bridged.

The theme of journal is multi-disciplinary in nature. They have explored the theme from differentpoint of views. Very large numbers of papers were received. After screening, sufficient number ofpapers is published in the journal. Papers from research scholars are also given space in the journal. Though they are not well knitted, yet in order to motivate them, their papers are included.

Present journal '**Global Values**' is an outcome of research papers on the theme '**Research Skill & Entrepreneurship Development Activities in Global Perspectives**'. The theme attracted the attention of intelligentsia and academia and they shared their valued views and opinions on the topic in such a grave and sincere manner thoughts an alluring share of journal In the successful completion ofJournal, we are first brimming with deep love and adoration to the divinity responsible for each andevery act and decision. We would like to place on record my deep sense of appreciation and thanks tothe research scholars and academicians for their efforts in exploring new vistas of research in diverse disciplines and making their articles original and weighty.

We express our gratitude from the bottom of our heart to our Honorable Cabinet Minister, Government of Uttarakhand Sh. Subodh Uniyal, whose encouragement has been giving us new energy and inspiration. We express our heart-felt gratitude to Prof. Rajesh Kumar Ubhan, Principal, Dharmanand Uniyal Government Degree College, Narendra Nagar (Tehri Garhwal), Uttarakhand, standing with us at every juncture from beginning to completion of the journal. We would also like to express our heart-felt gratitude to the SDM, Narendra Nagar, (Tehri Garhwal), Uttarakhand, Sh. Devendra Singh Negi, who played a crucial role in completing this task. We are greatly obliged to each and every person for extending their helping hands. We have deep credenceinour readership who would surely not hesitatein expressing their critical opinion for the betterment of present journal and our future endeavors.

Profound Regards
Dr. Sanjay Kumar
Prof. Chatar Singh Negi
Dr. Rajpal Singh Rawat
Dr. Amit Agrawal

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Impact of Homestay Tourism on Women Entrepreneurship in Bhagirathi Valley of Uttarkashi Uttarakhand

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Abstract

In view of the immense possibilities of homestay tourism in Uttarakhand, the state government started the Deen Dayal Upadhyaya Griha Awas Yojana in 2018 and has presented a lot of development opportunities to the people of this place, due to which, along with self-employment, the local economic and social Development is also being seen. In this study, through the homestay scheme, an attempt has been made to find out the impact of the homestay scheme on women entrepreneurship in the Bhagirathi valley of Uttarkashi, (northern district of Uttarakhand state). In this research, participation of women in homestay operations, increasing their morale and knowing their self-employment opportunities, with the help of convenient sampling of non-probability, was surveyed through an online questionnaire of 31 homestay operators. To fulfil the objectives, using descriptive methods with common statistical tools such as mean, mode, percentage and standard deviation were used in the study. The results of the study show that if women are given a chance to participate in the homestay scheme with some facilities, then homestay tourism can be a good tool for women entrepreneurship. Apart from this, inclusion of the entire area in research, comparative study of women and men entrepreneurs in homestay tourism, etc. can prove to be effective in the further research.

Keywords

Homestay Tourism, Homestay Operation, economic benefit, Self-dependent and Women entrepreneurship.

Reference to this paper should be made as follows:

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Introduction

Women Entrepreneurship

Women are an important part of the community and women entrepreneurship always highlights community entrepreneurship because in homestay tourism, community development is discussed keeping in mind the local development in which women entrepreneurship can be achieved. Britton (2006) introduces empowerment and related concepts of power and powerlessness in her book in the context of low female participation. She believes the concept is useful and essential in understanding tourism development at the local level. These raise issues of empowerment, such as who is allowed to participate. Often the disadvantaged (those who need it most) are excluded from the process and women are limited to low-paid service jobs such as cooking and cleaning. Tourism can be an effective tool for women's empowerment, but under what circumstances can tourism as a "tool" effectively achieve women's empowerment? (Ong Siaw Thien, August 2009). For which homestay tourism can potentially be a good medium of entrepreneurship in the present times. Entrepreneurship is an important factor in tourism development globally and regionally, and homestay tourism is making a mark in every region globally. In a broad sense, entrepreneurship is a process by which individuals, organizations and communities make empowerment possible by achieving the achievement of their own lifestyles, given their various competencies and opportunities. According to the OECD (Organization for Economic Cooperation and Development) (2000), female entrepreneurship has increased in rural areas around the world since the early 1980s. Since then, an increasing number of studies have focused on examining female entrepreneurs in microfinance companies, with several studies linking women entrepreneurs' personal characteristics, business decisions, and personal success to a range of different outcomes. Socio-economic barriers are discussed. (Started in 2000; Bruni et al. 2004; Smith-Hunter and Boyd 2004). Dr. Ajay Sharma et al. describes the role of Indian women in local economies and microenterprises as "a catalyst for India's social and economic development." She cites several examples of jobs women have created themselves through small business activities that support households, such as herb marketing, food processing, arts and crafts, and running homestays. Sharma classifies homestays as "micro enterprises", which "not only enhance national productivity, and generate employment but also help to establish economic independence, and personal and social capabilities among rural women" (Dr. Ajay Sharma et al. 2012; 120, 126).

Homestay Tourism

A homestay is a concept very similar to a bed and breakfast. In a homestay, guests are accommodated either in the host's residence or in a separate room nearby. Nowadays, most homestays have modern amenities to provide the same level of comfort as a standard hotel. Homestay tourism has become a successful alternative and approach in many developing countries, where tourism is recognized as an important aspect of poverty reduction, sustainable livelihoods, and job creation (**Binita Chakraborty; 2019**). Homestay host refers to families who provide their home for tourists to stay. And homestay guests refer to those people who stay at the hosts' homes for a fixed amount of time, paying some money. It is a door to discover possibilities, to understand a new and untapped place resulting in the government promoting it widely as a new tourist destination and being able to provide alternative sources of income for the rural host population. homestay is said to be a tourist's stay in a home run by a local family. In the homestay concept, a tourist usually stays with a host family and experiences or learns about the daily and cultural activities of the family and the local community (**Ritika Singh et. al.**) Ruchi Harish defined that a homestay is a short-term stay in a house as a paying guest, where the guest is provided with cheap accommodation and services by individual families and local communities. Homestay scheme can be made a means of self-employment and economic development for the local community in which women are also included. This idea is especially prevalent in rural areas that combine cultural and environmental resources. These types of events encourage visitors to experience and see the culture of places away from the hustle and bustle of modern life while contributing directly to the local economy.

Homestay Tourism in Uttarakhand

The Government of Uttarakhand has taken a constructive step by launching the Deen Dayal Upadhyaya

Homestay Yojana in the state, which provides comfortable homestay service to tourists with standardized world-class services to increase the availability of accommodation in rural tourist destinations. The main concept of the homestay scheme in the state is to provide a clean and economic environment for foreign and domestic tourists to learn about the customs and traditions of Uttarakhand along with the option of staying with families from Uttarakhand for foreign tourists. Apart from this, it also offers traditional Garhwali and Kumauni cuisine to enjoy. Due to which it is not difficult to say that keeping in mind the rural development, the state government is providing self-employment opportunities to the people here and the homestay scheme is proving effective in this. This research focuses on the lifestyle of female colleagues, their economic status, and their self-confidence towards entrepreneurship by obtaining information from homestay operators located in Bhagirathi Valley of Uttarkashi district of Uttarakhand Garhwal. Some assistance is provided by the state government to promote homestays registered under the homestay program on the website of the Uttarakhand Tourism Development Corporation (UTDC). In which the income earned from the registered household will not have to pay SGST for the first three years which the state The government will bear it. Loan subsidy is being provided up to 33% or Rs 10 lakh in rural areas and 25% or Rs 7.5 lakh (whichever is less) in urban areas. Also, interest subvention is being provided on loans up to Rs 1.5 lakh or 50% (whichever is less), which are playing an important role in the development of homestays in the state. The state government is looking to boost the local economy through homestay tourism and provide self-employment opportunities, local development and curb out-migration (Dilip Javelkar, Secretary, UTDC Government of Uttarakhand 2018). Uttarakhand government to develop 5,000 homestay rooms by 2020 to provide self-employment and develop local economy, introduce tourists to the state's cuisine, cultural, historical heritage, and traditional mountain style, prevent migration by creating local employment to do this, the Home Stay Scheme has been started. In which Uttarakhand Tourism (UTDC) has achieved success (<https://uttarakhandtourism.gov.in/homestay-listing>).

Literature Review

Several studies have appeared in the literature describing the role of family tourism in promoting traditional customs along with economic benefits from women entrepreneurship, improving their standard of living and their self-reliance; For whom tourism in the family is considered as a development strategy. From which it is known that a comprehensive regional development strategy can be prepared through domestic tourism. This study is being done with the aim of knowing the effect of homestay on the status of women in the local areas whether economic or social. Previous studies of homestay tourism talk about opportunities for job creation, community development, international, national, women empowerment and economic development in various other areas, but I am interested in Uttarkashi district where homestay tourism has become the main means of livelihood. I could not find any literature related to the study of this, due to which I chose Bhagirathi valley of Uttarkashi district for my research.

Women empowerment refers to the ability of women to change the economic and social development of the society in which women are empowered to participate fully in the decisions affecting their lives through leadership, training, counseling etc. As a result, the economic and social development of the society is seen (ONG SIAW THIEN 2009 and Visor Earth, 2005).

In terms of improving women's entrepreneurship, there are many activities for women in the tourism sector. As tourism industry has largest share at that area where entrepreneurs plan to start business and local women can take advantage of this and number of women entrepreneurs taking advantage of these opportunities are increasing day by day is going (Gülsün YILDIRIM et.al. 2020).

Women entrepreneurship boosts tourism development even in resource-scarce places, but little is known about why local women engage in business. The answer to which is known to us from their economic and social status, women try and achieve success even in times of crisis. Homestay tourism can be helpful for women in improving their economic and social status along with local employment (Viachaslau Filimonau, et.al. 2022).

Homestay is an important part of tourism which has a specific theme and character, and the overall atmosphere is very good. Although the quality of construction varies from region to region, room amenities are generally kept to modern standards, and the quality of service also respects local traditions, allowing women to feel comfortable and consider it a can try as entrepreneurship (Ma, H. et.al; 2022; Evaluating Tourist Experience of Rural Homestays in Coastal Areas by Importance–Performance Analysis: A Case Study of Homestay in Dapeng New District, Shenzhen, China. Sustainability 14, 6447).

Homestay tourism has advantages as well as some constraints that may reduce the community's ability to present women a consistent image in tourist advertisements from marketing efforts of private businesses in the area. Another challenge is the uncertainty about whether future generations will continue to offer a form of tourism that, by definition and scope, promises modest returns and incremental growth (Homestay Tourism and the Commercialization of the Rural Home in Thailand; Nick Kontogeorgopoulos et.al; Asia Pacific Journal of Tourism Research, 2015).

homestay operations can transform local accommodation opportunities and provide a tool for promoting rural tourism and its benefits to the local community, economy and the arts and culture of the region. Which is also motivating women for self-employment (Mr.Venkatesh.R and Mr. Mukesh.H.V; The Role of Home stays in Promoting Rural Tourism; April-2015).

Homestay Tourism is a platform for locals interested in lodging to register and tourists to book online to discover the unique lifestyle, heritage, culture and hospitality of locals that can be experienced in different countries. Platform. Celebrate diverse cultures. Locals and tourists alike gain knowledge and experience by sharing experiences with different cultures. A woman may encounter problems on her platform online, which can be resolved through internet training (Lanchenba Keisham et.al; UTILIZING HOMESTAY TOURISM WITH ONLINE TRAVEL MANAGEMENT SYSTEM; April 2022).

As pointed out by Dambar Ale Magar, host families are also considered small businesses and hosts are considered micro-hospitality entrepreneurs. Despite their low income, they contribute to the economic prosperity and community development of the region. This can be a good source of employment for women (Dambar Ale Magar; economic contribution of homestay tourism: Case study of Magar Homestay in Narwal, Lamjung. August 2021). In her research, Isabel Kanegieser identifies homestay ownership as an alternative livelihood with potential social, cultural and economic benefits for men and women in both urban and rural Darjeeling. Developed. Consequently, women also benefit from homestay tourism (Isabel Kannegieser; A Home in The Hills: To investigate the socio-economic benefits of homestay tourism for rural women and their communities in Darjeeling District. 2015). Ram Chandra Bhandari et.al. They also believe that the homestay business has provided employment opportunities to the indigenous local people. Local people, who are not homestay operators, get involved in cultural activities, and make a living by participating in small activities related to homestay and women also get economic benefits by participating in work of their worth (Ram Chandra Bhandari; Socio-Economic and Cultural Impacts of Homestay Tourism in Sirubari Village Syanja Nepal; 2022).

Binita Chakraborty has ascertained that Homestay is like a tourism product which is helpful in removing local socio-economic, political, caste and gender inequalities because it provides equal opportunities for entrepreneurship to all whether male or female (Binita Chakraborty; HOMESTAY AND WOMEN EMPOWERMENT: A CASE STUDY OF WOMEN MANAGED TOURISM PRODUCT IN KASAR DEVI, UTTARAKHAND, INDIA; 2019).

Darko B. Vukovic et. al. has considered homestay tourism as the best option for women as the best example of defining women's "empowerment" in the field of rural tourism in Serbia. She believes that a strong woman has a "power" that is proportional to the amount of confidence she has and Serbia has seen female entrepreneurship through homestays (Darko B. Vukovic et.al; Tourism development, entrepreneurship, and women's empowerment – Focus on Serbian countryside; June 2021).

As we have seen in the literatures that homestay is famous all over the world for providing self-employment and women are also taking a lot of interest in it, so homestay tourism should reach every area where needy people need it and tourists can be there. There is no main source of attraction.

Research Methodology

Both qualitative and quantitative research methods (mixed methods) were used in this study. Both primary and secondary data were collected in this study, and for data collection he used a structured questionnaire using a 5-point Likert scale. For the study, samples were collected from the Bhagirathi valley, Uttarakashi district, Uttarakhand. Primary data were collected from the Bhagirathi Valley, Uttarkashi District, Uttarakhand. It also includes secondary data collected from Uttarakhand Tourism Development Corporation (UTDC), his website, literature and other sources. Using convenience sampling, structured questionnaire has sent to 100 plus respondents out of 300 homestay stakeholders via Gmail, WhatsApp, and SMS.

But due to network, connectivity issues and lack of suitable medium in the respondent’s area, only 33 respondents were able to submit their responses but 2 responses are rejected due to incomplete and other 31 responses were collected for data analysis. The study contains dependent and independent variables in which women entrepreneurship, economic condition, and self- dependent and role in homestay operation are dependent variables while homestay scheme taken for independent variable. Statistical tools like- mean, median, standard deviation, were used to analyze the data of all variables.

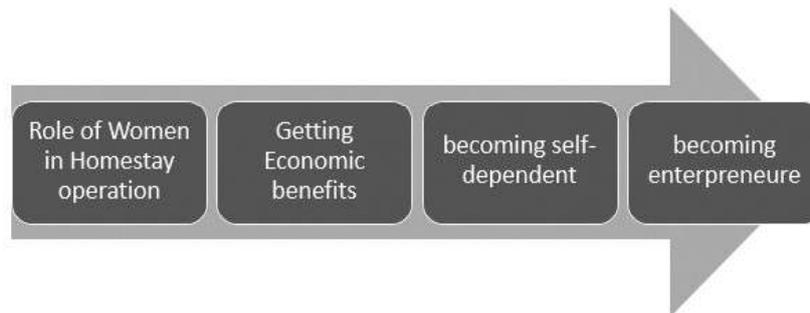


Figure 1- Process of Women Participation in Homestay Tourism.

Figure 1 shows that the benefits of women’s participation in homestay operations have been shown in the form of a process that how a woman first plays an important role by participating in homestay operations and she becomes self-dependent when she gets economic benefits and finally, they achieve entrepreneurship.

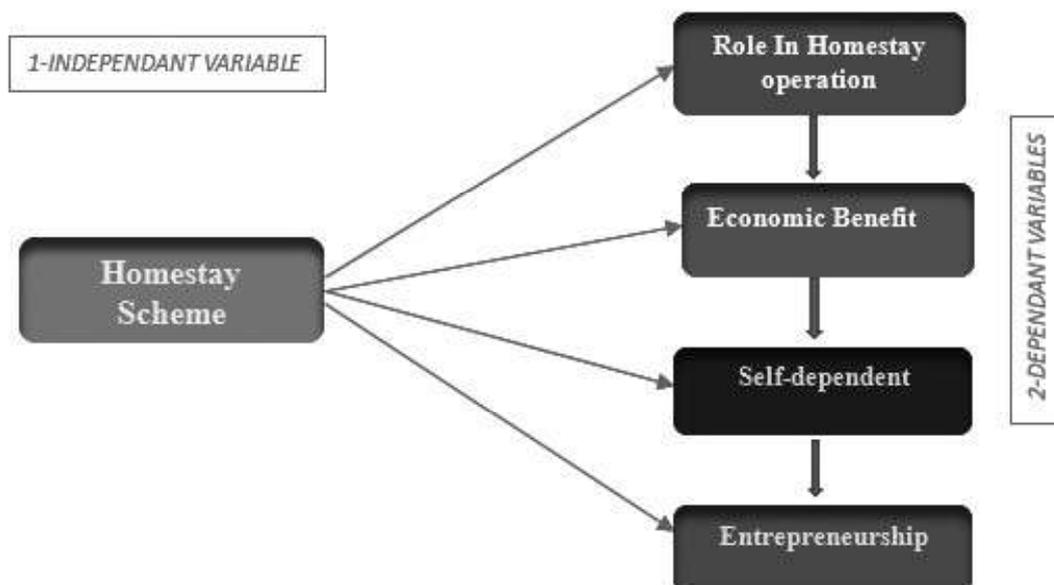


Figure 2- Conceptual Framework shows Impact of Independent variable (Homestay scheme) on dependent variables (Role of women, Economic benefit, self-dependent and Women Enterpreneuship).

Figure 2 shows the conceptual framework of the study which define effect of the independent variable (homestay tourism) on the dependent variable (women’s role in the homestay operation, their economic benefits, their self-confidence, and entrepreneurship). Here independent variable impacting on the dependent variables by a process shown in the figure 1.

Objectives

1. To find out the importance of women participation in homestay operation.
2. To evaluate the Impact of homestay tourism on women’s self-dependent.
3. To ascertain the impact of homestay tourism on women entrepreneurship.

Research Questions

1. Does participation of women in homestay tourism is helpful for stakeholders?
2. Does participating women get economic benefits from homestay tourism?
3. Does women being self-reliance to participating in homestay tourism?
4. Does homestay tourism being promoting women entrepreneurship?

Data Analysis

31 Respondents Demographic data				
SN	Characteristics	Description	Frequency	Percentage
1	Gender	Female	8	25.80
		Male	23	74.20
2	Age Group	18 - 30 years	3	9.68
		31 - 45 years	20	64.52
		46 - 60 years	8	25.80
3	Educational Level	Illiterate	3	9.68
		Primary	6	19.35
		Intermediate	10	32.25
		UG	12	38.72
4	Family Member involved in Homestay	1 to 2	2	6.45
		3 to 4	18	58.06
		5 to 6	11	35.49

Section- A, Role of women in Homestay operation				
Characteristics	Description	Frequency	Percentage	
5	Women help in operating the homestay and operate themselves if needed	Fully Agree	21	67.74
		Agree	9	29.03
		Fully not Agree	1	3.23
6	In your opinion about the ability of women to be involved in the decision making of homestay operations, are women capable of taking the right decisions	Fully Agree	12	38.72
		Agree	15	48.39
		Fully not Agree	1	3.23
		Neutral	3	9.68
7	Does women's participation have a positive impact on homestay income	Fully Agree	9	29.03
		Agree	12	38.72
		Fully not Agree	1	3.23
		Neutral	9	29.03

8	What are the tips suggested by the ladies that mostly prove helpful in running a successful homestay	Fully Agree	12	38.72
		Agree	13	42.00
		Neutral	6	19.35

Section-Ab, Women are getting economic benefits by homestay tourism

Characteristics		Description	Frequency	Percentage
9	Whether the income from the homestay is included in the female companion out of which she can voluntarily meet her personal needs	Agree	31	100
10	Has homestay tourism changed the standard of living of women	Fully Agree	12	38.72
		Agree	13	42.00
		Neutral	6	19.35
11	Has the economic condition of women improved after joining homestay tourism	Fully Agree	12	38.72
		Agree	15	48.39
		Neutral	4	13.00

Section-B, Women are becoming self-depending by homestay tourism

Characteristics		Description	Frequency	Percentage
12	Are self-reliance, self-respect as well as earning livelihood available to women through homestay tourism	Fully Agree	7	22.58
		Agree	14	45.16
		Neutral	9	29.03
		Not Agree	1	3.23
13	Leaving the old traditions, women are now moving towards self-employment by participating in all daily activities with men	Fully Agree	9	29.03
		Agree	13	42.00
		Neutral	8	25.81
		Not Agree	1	3.23
14	Seeing the interest of women in local / domestic business-like homestay, can homestay tourism be a good means of self-employment for women	Fully Agree	9	29.03
		Agree	13	42.00
		Neutral	8	25.81
		Fully not Agree	1	3.23

Section- C, Women are becoming entrepreneurship by homestay tourism

Characteristics		Description	Frequency	Percentage
15	Women entrepreneurship can bring economic and social change in the society	Fully Agree	17	54.84
		Agree	11	35.48
		Neutral	3	9.68

16	Women should be given a chance to participate in homestay tourism by promoting local employment.	Fully Agree	12	38.72
		Agree	17	54.84
		Neutral	2	6.45
17	Women should be given training/skills related to homestay tourism to the Tourism Development Authority for entrepreneurship.	Fully Agree	19	61.29
		Agree	11	35.48
		Neutral	1	3.23
18	Homestay tourism is providing local self employment, in which there should be some special discounts/concessions for women so that they too can get self-employment.	Fully Agree	16	51.61
		Agree	10	32.27
		Neutral	4	13.00
		Not Agree	1	3.23

Table 1- Demographic data and respondents' opinion on women entrepreneurship in homestay tourism.

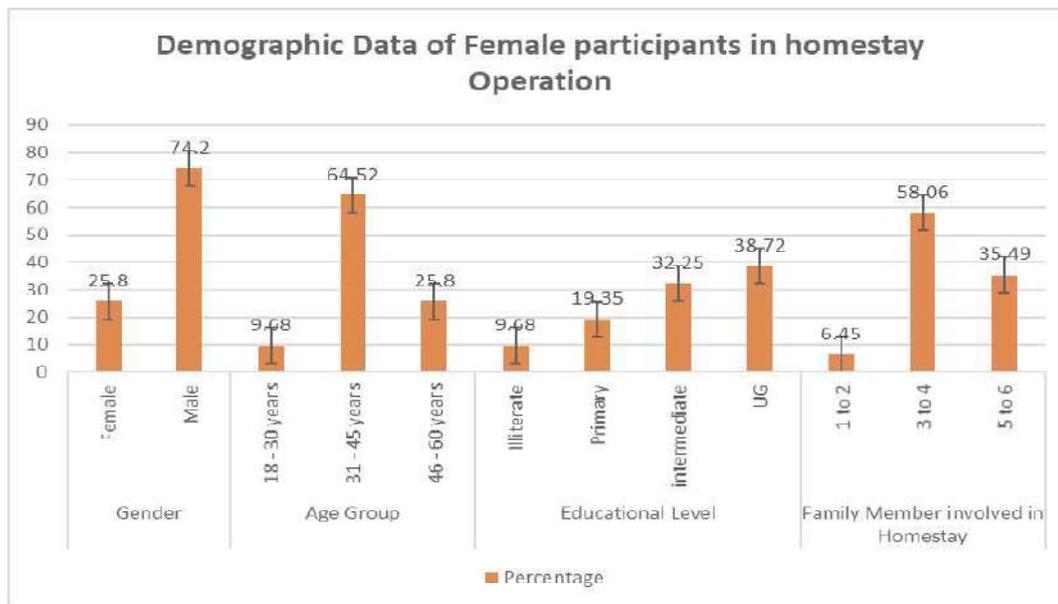


Chart 1: Demographic Data of those women who are participating in homestay operation.

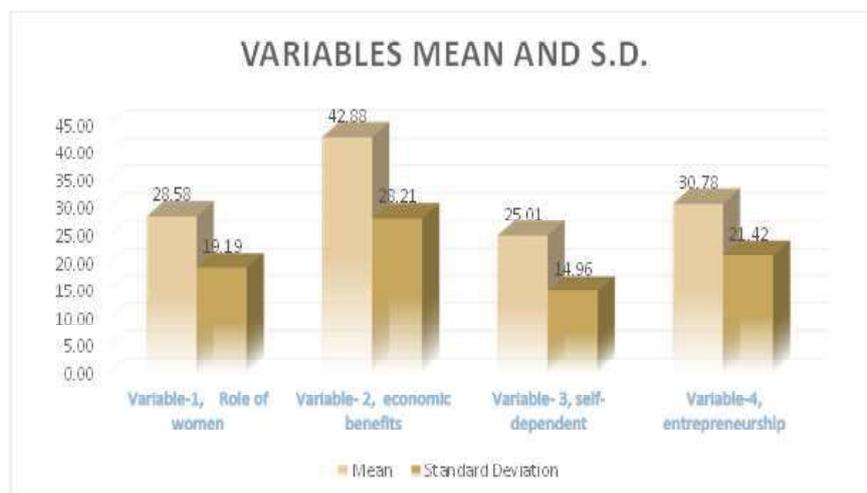


Chart 2: Relation between Mean and S.D. value of all variables.

Chart 2: Relation between Mean and S.D. value of variables.

Data Analysis				
Description	Section- A, Role of women in Homestay operation	Section-Ab, Women are getting economic benefits by homestay tourism	Section-B, Women are becoming self- depending by homestay tourism	Section- C, Women are becoming entrepreneurship by homestay tourism
Mean	28.58	42.88	25.01	30.78
Standard Error	5.13	10.66	4.32	5.94
Median	29.03	38.72	27.42	35.48
Mode	29.03	38.72	29.03	54.84
Standard Deviation	19.19	28.21	14.96	21.42
Sample Variance	35.36	76.57	21.48	44.10
Kurtosis	-0.28	3.26	-0.86	-1.61
Skewness	0.22	1.52	-0.42	-0.05
Range	64.51	87.00	41.93	58.06
Minimum	3.23	13.00	3.23	3.23
Maximum	67.74	100.00	45.16	61.29
Sum	400.10	300.18	300.14	400.12
Count	14.00	7.00	12.00	13.00
Confidence Level (95.0%)	6.75	9.93	5.27	7.54

Table 2- Data analysis by MS Excel.

Results and findings

Chart 1, shows the demographic data of those women who cooperate with the homestay stakeholders in one way or the other in the homestay operation, so that they get the opportunity to participate in the homestay, financial help, their self-confidence and give them a medium of entrepreneurship. It has been received from tourism that according to the respondents, 25.80% women are participating in homestay operation, which is a good sign and from which it can be inferred that in future, women may take more interest in this. And the results also show that maximum number of women whose age is between 31 to 45 years and their education level is mostly graduate and then intermediate level, which indicates the inclination of educated women towards homestay tourism. They are also showing that about 3-4 people from the family of homestay operators are engaged in the activity of homestay operations so that the whole family can earn their livelihood.

Chart 2 depicts the mean and standard deviation of the analysis data, in which the standard deviation value of variable 1 (role of women in homestay operation) is more than the average value of the mean value which indicates the satisfactory level. Similarly, the standard deviation value of variable 2 (economic benefits to women from participating in homestay) is also more than the mean value which is satisfactory and variable 3 (women's self-dependent) and variable 4 (Entrepreneurship) the value of standard deviation is more than the average of the mean value, it would not be wrong to say that participation of women in homestay tourism has given them self-dependent and the best option of business for earning their livelihood.

Conclusion

Keeping the objectives in mind, in this study an attempt was made to find out the impact of homestay tourism on women entrepreneurship. The results of the study show that the homestay program in the Bhagirathi Valley presents a positive outlook on the economic condition of the women who assist the operators here, on their livelihood, on their self-reliance and ultimately on the opportunity of entrepreneurship through homestay tourism. Does it so that it can be said that under the homestay scheme if women are made aware and they are given some training related to operations (such as how to operate homestay, management related, online booking and language development etc.) they should not have to face any difficulties in self-operation. On the other

hand, the state government should simplify the complicated process of starting a homestay a bit more so that the interested person can easily take advantage of it. In this study, descriptive method has used to fulfil all the objectives, in which the limited use of data only shows the problems, further in this and using good statistical tools, other research methods can also be used, not the limitation of the area. Keeping this a large area can be taken in the study and further cooperative studies can be done in homestay operators such as women and men, which can prove to be helpful in highlighting the problems related to homestay in future.

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The Factors Affecting Faculty Job Motivation: A Study from the Perspective of Royal University of Bhutan (RUB) Faculties

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Abstract

Royal University of Bhutan (RUB) is one of the premier higher education institutions in Bhutan. RUB is witnessing a sharp increase in the attrition rate of teachers. RUB's Annual Report reveals that one of the major challenges before RUB is to retain teaching staff. Despite being well compensated, a large percentage of teachers are quitting their jobs in RUB. The average attrition rate is 3.2%. The sharp increase in the attrition rate of teachers in RUB highlights the need to investigate the factors influencing RUB faculty's motivation toward teaching jobs. The current research aims to provide an in-depth analysis of the internal and external factors that are influential toward faculty's job motivation. The study employed quantitative research methods with an exploratory approach. The study findings reveal that out of 8 factors under study only three factors have a significant relationship with the faculty's motivation level. The factors which have a significant relationship with the faculty's work motivation level are faculty's accountability, professional support, and good relationship with the management. In addition, the findings reveal that faculty's motivation is of average level and there exists a significant relationship between the intrinsic factor and faculty's motivation level.

Keywords

Intrinsic Factor, Extrinsic factor, Academic staff, Motivation, Royal University of Bhutan.

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**Purnendu Basu,
Sonam Zangmo**

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Introduction

Faculty members are crucial to the success of educational institutions, as they are responsible for imparting knowledge and creating a positive learning environment. However, maintaining high levels of job motivation can be a challenge for institutions. Motivation is influenced by institutional policies, job characteristics, personal factors, and socio-economic factors. Understanding these factors is crucial for institutions to create a positive work environment that fosters faculty motivation, leading to greater job satisfaction, productivity, and retention.

Problem Statement

The Higher Educational Institute of Bhutan disseminates specialized knowledge and skills, and faculty members are the backbone of the educational institution. Research has shown that motivated and intellectual faculty members are essential in producing well-trained and knowledgeable students. However, despite being well compensated, a large percentage of faculties are quitting their jobs in Bhutan. In 2021, 353 teachers exited the education system, with an increase in the attrition rate of 3.4%. The average attrition rate is 3.2%. One of the major challenges for the Royal University of Bhutan is retaining teaching staff, particularly those in their prime age. The sharp increase in the attrition rate of teachers in RUB highlights the need to investigate the factors influencing faculty's motivation toward teaching jobs.

To the knowledge of the researchers, no constructive study is being done so far on the RUB faculties regarding the factors influencing their motivation on the job. There is no adequate research to know the source of work motivation of college faculties. This creates a knowledge gap and provides an opportunity for the researchers for researching the topic.

Significance of the Study

The proposed study aims to investigate the internal and external factors that influence faculty motivation at the Royal University of Bhutan (RUB). The study aims to address factors that have not been fully addressed in previous studies and to contribute significantly to the work motivation literature. The study's findings provided useful insights to university planners, policymakers, and decision-makers in shaping RUB's human resource practices, thereby enhancing faculties' motivation and retention. The study's overarching objective is to present a roadmap for RUB stakeholders and decision-makers to bring organizational changes by motivating the faculties towards longer stints in RUB colleges.

Research Questions and Sub-Questions

Main Research Question

1. What is the RUB faculty's motivation level?

Research Sub-Questions

1. Which is the best predictor variable influencing faculty's motivation in RUB?
2. What is the relationship between internal factors and faculties motivation?
3. What is the relationship between external factors and faculties motivation?

Literature Review

Motivation is a fundamental internal influence of employee behavior that drives the individual to come forward to give outstanding performance in the profession. The Herzberg motivation theory states that internal variables are just as important as extrinsic factors in motivating people. Herzberg's motivation theory serves as the foundation for this study's theoretical framework.

Intrinsic Factor

Accountability

The degree to which faculties are accountable to their supervisor has a significant impact on their motivation. Introducing strict accountability via Individual Work Performance (IWP) has become a systemic issue in Bhutanese education. Decreases in job security and satisfaction are unfavorable impacts of these effects (Kraft et al., 2020) whereas, the study of Asad et al. (2020) found that weak accountability has an unfavorable impact on teaching.

Faculty's Competence

A faculty member may lack essential teaching skills, which is de-motivating. Even though most faculties believe they are competent, many struggles in the classroom, which has a negative impact on their motivation (Didehban et al., 2020). Similarly, Jihae Shin (2021) proclaimed that in the beginning most of the faculty members feel insufficient in terms of knowledge and skills and thus feel de-motivated.

Professional Support

To groom faculties, universities must support them with regular training and development failing which leads to widespread dissatisfaction among the faculties. Hardre (2012); Lowenthal et al. (2013) proclaimed that the professional development of faculty members has strong linkages with motivation. Likewise, Jackson et al (2021) acknowledged that faculties are always motivated toward professional development workshops.

Faculty Management Relationship

Stankovska et al. (2017); Drukpa (2021) findings echoed that a relationship with the supervisor plays a significant role in faculty motivation. A competent management team can keep their employees for a longer period. Likewise, Mittu and Tenzin (2018) proclaimed that teachers' work motivation is highly influenced by the leadership style of the supervisor.

Extrinsic Factor

Secondary Employment

Those faculties who are unable to get income from secondary activities feel de-motivated. Das and Das, R. (2013) acknowledged that the unprecedented rate of growing private tuition is posing a challenge to the regular formal system of education. To overcome this problem it is suggested to revise the faculty's salary at regular intervals. Khojeev (2021) noted that due to socioeconomic difficulties, many faculties combine regular teaching with private tutoring.

Promotion

Faculties of RUB argue that their chances of promotion are very low. Das and Das, R(2013) recommend that revising the faculty's salary at regular interval is essential to keep them motivated. Likewise, the findings of Nzabalarwa and Nkiliye (2012); Ndijuye and Tandika (2019); Wangmo et al. (2019) echoed that timely promotion is one of the key motivational factors for the faculties.

Living Conditions

Research has shown that faculty members' living conditions have a significant impact on their motivation and job performance. Nzabalarwa and Nkiliye (2012); Dutta (2019) admitted that the living condition of the teachers is much below average standard public employees. The study findings of Dorji et al. (2019) echoed that Bhutanese teachers have poor Quality of life.

Working Conditions

Class workload, general classroom conditions, management support, location, and commute distance are all important considerations of working conditions. Ndijuye and Tandika (2019); Budiharso and Tarman (2020); Namgyal (2021) findings echoed that good working condition is a motivator for faculty members. Further, Large-scale correction work without extra compensation breeds unhappiness.

Research Methodology

The research framework adopted for the study is presented in Figure 1. There are four indicators by which external factors will be assessed. Similarly, there are four indicators through which internal factors will be assessed. The indicators associated with the extrinsic factors are secondary employment, promotion opportunities, working conditions, and living conditions. In a similar direction indicators associated with the intrinsic factor are accountability, faculty competence, professional support, and faculty management relationship.

Sampling Framework

The faculties of RUB were contacted to participate in the study. In total 551 academic staff are working in RUB (RUB Annual Report, 2020-21). The sample size determined for academic staff selection is 226 (Krejcie

& Morgan, 1970). The researchers selected 226 academic staff respondents from 9 colleges under RUB. A proportionate sampling technique was employed for selecting academic staff respondents from each college. The number of staff selected from each college is determined based on the total academic staff of each college. The sample selection is performed using the simple random sampling method.

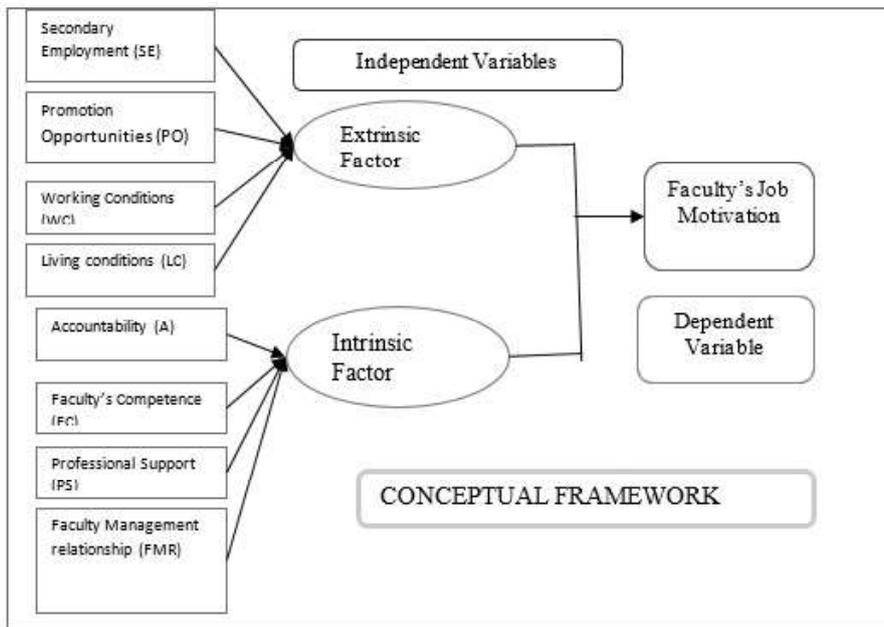


Figure 1: Conceptual Framework

Source: Modified and Adapted from Rahim and Daud (2013)

Research Approach

The present study is primarily based on quantitative and exploratory research approaches. Researchers are assuming that the high attrition rate among RUB faculties is because of the low level of their motivation. Thus, the research is exploratory. In the case of exploratory, the survey method seems to be appropriate for the data collection and analyzing it.

Twenty academic staff are selected from the College of Language and Cultural Studies (CLCS), 25 are selected from the College of Natural Resources (CNR), 30 from the College of Science and Technology (CST), 27 from Gedu College of Business Studies (GCBS), 11 from Gyelpozhing College of Information Technology (GCIT), 25 from Jigme Namgyel Engineering College (JNED), 28 from Paro College of Education (PCE), 18 from Samtse College of Education (SCE) and 40 staff are selected from Serabtse College respectively.

Survey Questionnaire

Primary data was collected with the help of a structured questionnaire. The survey questions covered eight indicators as highlighted in the research conceptual framework. Respondents were addressed with statements using a five-point Likert-type response set: 1=strongly disagree, 2=disagree, 3=undecided (neither disagree nor agree), 4=agree, 5=strongly agree.

Data Analysis and Findings

The gender distribution of the respondents under study is as follows. Thirty percent of the respondents are male in CLCS and 70% are female. In CNR 48% of the respondents are male and 52% of the respondents are females. In CST 70% of the respondents are male and 30% of the respondents are female. Similarly, in GCBS 33.3% of the respondents are male and around 68% of the respondents are female. In GCIT 36% are male and around 64% are female. In JNEC 44% of the respondents are male and 56% are female. In PCE 46% are male and 53% are female. Likewise, in SC 50% of the respondents are male and another 505 are female. In SCE 69% of the respondents are male and 31% are female.

The motivation index is calculated to ascertain the motivation level of the faculty members working in RUB colleges.

Table 1: Motivation Index

Sl. No	Items	Score
A	Sum of the actual score	6786
B	Maximum score	8880
	Motivation level	A/B =76%

Source: Prepared by the Researchers

Table 1 illustrates the motivation index value of the faculty members toward their job. The motivational index score is around 76%. This indicates that faculty members of the RUB colleges are motivated toward their job. However, the level of motivation is not very high.

Table 2 shows the coefficient value of the regression model employed in the study. SE and Motivation level is not positively associated. The coefficient value is -.090. Likewise, promotion opportunities, working conditions, living conditions, and faculty competence are not significantly associated with the motivation level. The correlation coefficients between promotion opportunities, working conditions, living conditions, and faculty's competence with motivation level are .146, .015, .059, and 0.123 respectively. A significant relationship is observed between accountability, professional support, and faculty management relationship with the motivation level. The correlation coefficients between accountability, professional support, and faculty management's relationship with motivation level are -0.161, 0.162, and 0.486 respectively.

Table 2: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.092	.291		3.756	.000
SE_Mean	-.077	.066	-.090	-1.170	.243
PO_Mean	.125	.071	.146	1.756	.081
WC_Mean	.012	.072	.015	.165	.869
LC_Mean	.051	.076	.059	.669	.504
A_Mean	-.125	.065	-.161	-1.933	.055
FC_Mean	.127	.075	.123	1.698	.091
PS_Mean	.167	.071	.162	2.359	.019
FMR_Mean	.454	.057	.486	7.950	.000

Source: Prepared by the Researchers

Table 3: Research Hypotheses

	Researcher's Hypotheses	P Value	S/NS	Accepted/ Not Accepted
H1	Secondary employment has a positive association with faculty job motivation.	.243	NS	Null Accepted
H2	Growth and promotion opportunities provided by the University increase faculty motivation toward the job.	.081	NS	Null Accepted
H3	There is a positive association between good working conditions and faculty job motivation.	.869	NS	Null Accepted
H4	There is a positive association between good living conditions and faculty job motivation.	.504	NS	Null Accepted
H5	There is a negative association between faculty accountability and job motivation.	.055	S	Alternative Accepted
H6	Professional support positively affects faculty job motivation.	.019	S	Alternative Accepted
H7	Faculty competence influences motivation toward the job.	.091	NS	Null Accepted
H8	A good relationship with management positively affects faculty job motivation.	.000	S	Alternative Accepted

Here, S= Significant, NS= Not Significant

Source: Prepared by the Researchers

Table 3 illustrates the results of various hypotheses that are examined to ascertain the factors that significantly influence the motivation level of the faculty members. Findings show that the faculty’s accountability, professional support, and cordial relationship with the management are the significant factors that influence the faculty’s motivation level.

Table 4: Correlation

		Motivation_Mean	Extrinsic_Mean	Intrinsic_Mean
Motivation_Mean	Pearson Correlation	1	.015	.532**
	Sig. (2-tailed)		.827	.000
	N	226	226	226
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: Prepared by the Researcher

Table 4 depicts the correlation between intrinsic factors, extrinsic factors, and motivation levels. A significant relationship is observed between intrinsic factors and motivation level. The value of the correlation coefficient is 0.532 and p=0.00. The findings show that intrinsic factors are inextricably connected with motivation level. Contrary to that, a non-significant relationship is observed between the extrinsic factor and motivation level. Thus, it is concluded that RUB faculties are more motivated by intrinsic factors.

Conclusion

Various factors influence faculty job motivation. These factors include autonomy and control over their work, support, and recognition from the institution, work-life balance, and opportunities for professional growth and development. Institutions that prioritize these factors are more likely to retain motivated and engaged faculty members who are committed to advancing their institutions’ goals and mission. The study found that out of the eight factors under consideration, only three had a significant relationship with faculty motivation: accountability, professional support, and a good relationship with management. Other factors did not have a significant relationship with motivation. The study also found that intrinsic factors had a significant relationship with faculty motivation, while extrinsic factors did not. In addition, the study revealed that faculty members at the Royal University of Bhutan have an average motivation level, with a motivation index score of 76%. The study concludes that faculty members at the Royal University of Bhutan are not fully motivated, and their motivation level is affected by several internal factors of motivation. External factors were found to not play a significant role in faculty motivation. Overall, it is concluded that it is important to understand and address the various factors that influence faculty motivation to create a positive and supportive work environment that promotes faculty success and fulfillment.

Recommendations

Based on the conclusion that factors affecting faculty job motivation include autonomy, support, work-life balance, and professional growth, the following are 15 recommendations for institutions to consider:

1. Increase faculty members’ accountability by setting clear expectations and performance metrics, and providing regular feedback and evaluations.
2. Provide professional development opportunities and support to enhance faculty members’ competence in their respective fields.
3. Strengthen the professional support network within the institution by encouraging collaboration and mentorship among faculty members.
4. Improve the relationship between faculty members and management by promoting open communication, transparency, and shared decision-making processes.
5. Conduct regular surveys and assessments to monitor faculty members’ job satisfaction and motivation levels, and use the feedback to improve institutional policies and practices.

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Gig Economy: A Sea of Opportunities for the Youth of India

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Abstract

The mass availability of information technology has brought about a new work-regimen in force globally. Millennials are now looking for the jobs that provide them greater flexibility along with a chance to use their creativity. This has led to tremendous growth in Gig and Platform economy especially in India, where a young demographic forms a major part of its population. In a country like ours, where there is a dearth of jobs in the Regular economy, Gig and Platform economy can provide a great channel to absorb the huge population. Furthermore, to add to growth of Gig economy the pandemic of COVID-19 has played a significant role. Necessity is the mother of invention that's how the rapid growth of the Gig-economy can best be described. This is a win-win situation for all: Cost-cutting for employers & work-life balance for the employees. Independent work with no visible boss, is replacing full time employment. This is good news. The new generation is no longer interested in life-time employment, rather they look for challenge, autonomy and a sense of fulfilment. Gig workers enjoy a lot of such benefits like flexi timing, work-life balance, alternative career choice and many more, yet it is not free from shortcomings. In this paper we focus on the role of Gig economy in providing the employment and entrepreneurship opportunities and the need for authorities to devise the necessary checks and balances to safeguard the interest of Gig work-force.

Keywords

Gig economy, platform economy, flexibility, youth employment, digital inclusion, employment and entrepreneurship.

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Ms. Akriti Krishnatray**

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Introduction

There has been a dynamic shift in work culture in the past few years. People are now looking out for newer ways of working; this dynamic shift in the work culture has given rise to a new phenomenon known as “Gig Economy”. The term Gig economy was coined by a former New Yorker editor Tina Brown in 2009. After the global crisis hit the USA in 2008 millions of people lost their jobs. Even the skilled labour started to look out for the options to earn their livelihood and started to carry out short term jobs. Therefore, the gig economy came into being. Gig economy is the set of working conditions where a person gets into a contract with a company or an individual to perform a certain task; their contract ends as soon as the job is done. Since the workers have greater flexibility, they are able to maintain better work life balance. There are many disadvantages that are faced by the workers in the gig economy like lack of benefits, inconsistency in finding regular work, etc. Nonetheless more and more workers are engaging in the gig economy in the present scenario, especially millennials. According to a 2020 study by the Michael and Susan Foundation and Boston Consulting Group (BCG), India has 8 million gig economy jobs. In around 8 to 10 years, this might grow to about 90 million jobs in the non-farm sector, with USD 250 billion in transactions at 1.25% of India’s GDP.

In a country like ours where there is an urgent need to absorb the ever-growing population in meaningful and productive work gig and platform economy can become a saviour. Our government has taken various measures for the digital inclusion of its citizen. Schemes like Digital India has helped millions of people becoming digitally aware. Anyone with a smartphone and access to internet can become a part of gig or platform economy. People working in the gig economy can be classified into two categories- the **platform workers** and the **non-platform workers**. Platform workers are the ones that use online platforms to find work opportunities like the people associated with Ola, Uber, Dunzo, TaskRabbit, etc. On the other hand, non-platform workers are the ones that do conventional part-time work like casual labourer.

The gig workers fall outside the purview of regular employer employee relationships. Gig work is different from the regular work in the terms of number of working hours, flexible schedule, level of education, etc. In gig economy a person is himself responsible and can decide the number of hours he wishes to work and the kind of work he wishes to engage himself in. Despite these advantages gig workers face many disadvantages like lack of laws for their protection, inconsistency in finding regular work, lack of social security benefits, precarity, algorithm management practices and performance evaluation amongst others. Nonetheless, gig economy if utilised to its full extent can open a door of opportunities for the younger generation either in the form of employment or entrepreneurship. The pandemic of Covid 19 has also speed up the process of new work-regimen in force globally. Globally the world has faced the lockdown and as a consequence, gig-economy has emerged as the new paradigm of work, this new paradigm is an inherent dislike for the conventional nine to five job that curtails individual freedom and autonomy. The emphasis of youth is on living a satisfied life rather than mindless pursuit of wealth as an end in itself. Creativity, innovative out of the box thinking and living with dignity are the defining values responsible for the emergence of gig work-force. Clearly a new world order more aligned with the values of the millennial generation is emerging. The authorities need to devise the necessary checks and balances to safeguard the gig work-force and use them as an agent for rapid transformation of the humanity aligned with sustainable development goals. The need of the hour is to regulate the phenomenon for the advantage of the nation and ensuring equity, justice, fair-play, protection and motivation for this sector so that it can permeate all sectors of the economy and contribute to the growth of GDP.

Literature Review

Technological advancements and the widespread use of smartphone have altered the commercial scene. The gig economy, a set of markets that link service providers to consumers of on-demand services on a gig (or job) basis, is one such innovation (Donovan, Sarah A Et. Al.,2016). Social media and apps that provide instant information about the location and availability of products to consumers and companies helps them in overcoming temporal limitation and fixed geographical obstacles giving more employment opportunities to the people (O.C. Ferrell Et Al.,2017) This has led to spatial unfixing of the work. “As an economic system, the gig economy

can be viewed as consisting of intermediary platform firms, gig workers and requesters, which jointly bring about the request, management and execution of platform-enabled gig work.” (Meijerink and Keegan,2019) As more individuals in low per capita income countries gain access to the Internet, a new type of outsourcing has emerged: digital labour platforms, where clients list jobs and employees bid on them. Many competent professionals from emerging economies have joined the gig economy as a result of the launch of prominent digital outsourcing platforms (G Roy Et. Al.,2020). Gig economy might prove to be the dawn of what we call a new day where the youth of our country will not have to face the problems of unemployment. Gig workers in parts of the world where good jobs are hard to come by could gain significantly from this but there are also a number of dangers and costs that have an undue impact on digital workers’ livelihoods. (Graham Et. Al.,2017).

Advantages of Gig Economy in India

More employment Opportunities

A latest report by Niti Aayog (published in June,2022) estimates that there were around 68 lakh (6.8 million) gig workers in India in 2019-20, constituting 2.4% of the non-farm workforce or 1.3% of the total livelihood in India. This represents the current scenario as well as shows the potential of gig economy to provide a sea of opportunities for the younger generation. UBER, Ola, Zomato, Swiggy, AirBNB, Big Basket, Dunzo, Taskrabbit, Delhivery, Amazon, Urban Company are the few of many platforms that have been actively providing the jobs opportunities to a larger section of the society this does not only includes men but women and PWDs as well. Due to the flexibility of work hours and work freedom, the gig economy has seen an increase in the number of women working as independent contractors. Therefore, the gig economy portends a shift in the dynamics of labour management, cultural diversity, and access to resources around the world (G Roy Et. Al.,2020).

Specialization and Standardisation of Work

Apart from providing the benefit of flexibility, because of the increased specialisation and standardisation of work brought on by higher labour force participation rates, the emergence of the gig economy is projected to boost total productivity. (N Banik Et. Al.,2021).

Gig economy is particularly relevant to India as its half a billion population belong to the working age. The gig workers can be engaged in many vocations as the follows to name a few Data entry, transporter, delivery personal, plumber, electrician, travel agents, guides, personal care, helpers, technicians, etc.

Opportunities for Entrepreneurialism

Gig economy provides the capacity of peer-to-peer connections to weaken the hold that the traditional business paradigm has over society. The claim is that platforms provide a number of benefits above the conventional business form. Platforms lower transaction costs and remove barriers that have limited the labour force participation of rural residents, persons with impairments, or those with caregiving responsibilities by minimising the need for bureaucratic intermediaries (Vallas and Schor,2020). Additionally, owners of vehicles, houses, equipment, and other items might monetize these possessions to release their latent worth and lessen their reliance on wage labour like in the case of AirBNB. Especially in a country like ours models like these can benefit a lot of people.

Ease in Entry and Exit

The platforms are upending how economic activity is currently organised by lowering entry barriers, altering the logic of value creation and value capture, engaging in regulatory arbitrage, repackaging labour, or shifting the balance of power within the economy (Kenney and Zysman,2016). Platform economy allows people to grab earning opportunities as there are very little to low entry barriers, anyone with a smartphone and access to internet can join the platform economy and become a gig worker.

Inclusive of Marginalised

Platform work can provide better job opportunities to different groups of employees, such as women and Persons with Disabilities (PwDs), due to the flexibility of work hours and workspace that it affords (Niti

Aayog,2022). Women and PwDs who usually are forced to leave their regular jobs, due various difficulties they face, can easily become the part of gig economy as it provides the worker flexibility to choose their work timing and the number of hours they would like to devote to their jobs. There is no extra pressure or rigid working hours that has to be maintained by this category of workers.

Gig economy if managed properly can provide a solution for India's ever-growing problem of unemployment. It can not only be proven to be the best way to take in the young population of India but it can also give employment opportunity to retired people, women on career breaks, PwDs, people with low skills who usually are the part of casual labour. This will increase their ability to earn livelihood and improve their living standard.

Challenges Faced by the Gig Workers

Lack of Social Security Benefits and Legal Protection

Despite the fact that their relationships with their workers are similar to those of an employer and an employee, gig platforms have attempted to avoid legal and financial duties and hence lower operational costs by classifying their employees as self-employed, independent contractors. Consequently, compared to other workers performing comparable work as formal "employees," gig workers have significantly fewer legal, social, and economic rights, including advantages like overtime pay, a minimum wage that is guaranteed, employment rights against discrimination and collective bargaining (unionisation), and health and insurance benefits. This absence of social and legal protection makes gig workers more insecure, unstable, and vulnerable.(Tan,Aggarwal,*et al.*,2021).

Lower Wage Rates

The median wages of gig workers are low in low-income countries, this happens because of the downward spiralling of wages. This results in the low bargaining power of the gig workers. "Skill arbitrage" and "Labour arbitrage" plays a major role in this downward spiralling of wages. "Skill arbitrage" is the phenomena where labour is sold to the person who pays the highest on the other hand "Labour Arbitrage" is when labour is hired from the source where it available at the cheapest. (Graham *et al.*,2017) These actors of demand and supply pulls the wages downwards especially in India where there is abundance of labour people agree to work even at lower wage rate.

Algorithm Management and Performance Evaluation

Employees working on digital platforms may experience stress because intermediation of algorithmic management methods and performance evaluation based on ratings. (Niti Aayog,2022) usually the workers involved in platform economy face this problem their performance is evaluated on the basis of the ratings customer give them. Due to the intervention by the algorithm even a few bad ratings can deeply affect the overall wage rate of that worker. This leads to a building huge mental pressure on the gig workers.

Precarity

In discussions on the gig economy, precarity and economic dependency stand out as two issues. While economic dependency refers to the influence platform companies maintain over these individuals through algorithmic management and their access to consumers, precarity indicates the externalisation of risks onto self-employed workers.(Bunders,*et al.*,2022). Oxford dictionary defines precarity as the state of being precarious or uncertain. Gig workers are constantly under the feeling of insecurity in regards to the regularity in finding jobs and their income.

Measures to be Taken to Improve the Conditions of Gig workers

- Similar to the hugely successful "Startup India" Scheme, platformization should be simplified, funding support and incentives, skill development, and social financial inclusion may be implemented.
- Self-employed people with lower skill sets should be made digitally literate. By introducing them to the advantages of internet and smartphones,they should be included in the platform economy.

- Gig workers should be given unsecured loans on easy terms and should be included in the Priority Sector Lending.
- Self-help groups of women working in the rural areas of India should be recognised and incentivized under the gig economy.
- To foster skilled employees and micro-entrepreneurship, platforms can cooperate with the Ministry of Skill Development and Entrepreneurship and the National Skill Development Corporation (NSDC).
- Partnerships between platform firms and nongovernmental organisations (NGOs) and civil society organisations (CSOs) can be formed to advance gig workers' legal and economic rights.
- Gig workers should be made aware about government incentives like Code on Social Security, 2020 which talks about their welfare and protection.
- Platforms should collaborate with both public and private players in the insurance sector to provide medical and life insurance to the gig workers.
- Lastly, platform and gig economy businesses must implement policies that provide old age and retirement benefits as well as additional insurance coverage for unforeseen events like workplace injuries that could result in loss of employment and income.

Conclusion

In an economy like India where there is abundance of manpower and paucity of jobs in the regular economy, gig economy can help the workers in gaining employment opportunities. The youth of our country face many challenges in finding jobs even after gaining formal education. They can be benefitted many folds with the proper implementation and protection of the rights of gig workers. The government of our country has introduced various schemes such as “Digital India”, “Startup India”, “E-Shram portal”, “Code on Social Security, 2020”, etc still there is a long road ahead. The platforms and government should work hand in hand to achieve the full potential of employment and entrepreneurship that can be created in gig economy. Gig work-force can be used as an agent for rapid transformation of the humanity aligned with sustainable development goals. The need of the hour is to regulate the phenomenon to the advantage of the nation and ensuring equity, justice, fair-play, protection and of this section so that it can permeate all sectors of the economy and contribute to the growth of GDP as also personal happiness quotient of the workers.

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Popularity of Online Food Delivery Applications Amongst the Next Gen with Respect to the City of Mumbai

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Abstract

Online Food Delivery Applications, in the digital era, have become popular amongst the next generation. It is not only an impact of digitization of services, but also various clichés like long waiting hours at restaurants, traffic jams, overburdened transportation systems, etc; which has influenced for calling restaurant's food at home and enjoy without any hassle. Online Food Delivery Applications like Swiggy or Zomato, which are the leading companies providing various wide range of alternatives in restaurants and dishes, discount offers, timely delivering food in standard packaging through their Delivery Partners, maintaining hygiene. A primary data is collected distributing a structured questionnaire based on Likert's Seven Point Scale amongst 90 respondents between the age group of 18 - 25 years. The researcher has categorized preferences on the NextGen into nine parameters to rank between 1-7 on Seven Point Likert's Scale. Also, the researcher has tried to identify the popular Online Food Delivery Application/s amongst the youth which has responded as Swiggy and Zomato by the respondents.

Keywords

Online Food Delivery, NextGen, popularity, Swiggy, Zomato.

Reference to this paper should be made as follows:

**Dr. Vibha Batra,
Ms. Akriti Krishnatray**

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The next generation in the metropolitan city of Mumbai is well acquainted with the electronic gadgets and adapting digitization in their routine lifestyle. Mobile Applications providing various services like booking of tickets, taxis, online payments and so on have created a notable impact on the consumption behavior of today's youth. Online Food Delivery Applications, in this digital era, have become popular amongst the next generation. It is not only an impact of digitization of services, but also various clichés like long waiting hours at restaurants, traffic jams, overburdened transportation systems, etc; which has influenced for calling restaurant's food at home and enjoy without any hassle.

There has been an era in which food was been ordered using traditional phone calls from a particular restaurant and to be delivered by the Delivery Boys of the same restaurant. But over a period of time, even though some of the restaurants have attracted the next gen digitally, today's youth prefers to use Online Food Delivery Applications like Swiggy or Zomato, which are the leading companies providing various wide range of alternatives in restaurants and dishes, discount offers, timely delivering food in standard packaging through their Delivery Partners, maintaining hygiene. These Online Food Delivery companies are providing specialized services to their customers and the young generation, having craze of digital utilities, is getting more and more fascinated. Hence, notable impact of the Online Food Delivery Applications is noticed on the NextGen.

Objectives

1. To study the popularity of the Online Food Delivery Applications amongst the young generation.
2. To find out reasons of popularity of Online Food Delivery Applications.
3. To analyze the factors influencing the popularity of Online Food Delivery Applications.

Research Methodology

Universe

Research is done restricted to the geographical boundaries of Greater Mumbai city. The age group is taken as 18 to 25 years.

Sample Size

A primary data is collected distributing a structured questionnaire based on Likert's Seven Point Scale amongst 90 respondents between the age group of 18 - 25 years. The respondents have given appropriate responses based on the parameters and their preferences.

Hypothesis

H_0 : Online Food Delivery Applications aren't so popular amongst the NextGen.

H_1 : Notable popularity of the Online Food Delivery Applications is noticed amongst the NextGen.

Significance of the Study

This study will generate an important output for the Companies managing the Online Food Ordering Applications in terms of knowing their performance and popularity amongst today's youth and benefit masses to get information about the popularity of the Online Food Delivery Applications.

Analysis of Data

The researcher has categorized preferences on the NextGen into nine parameters to rank between 1-7 on Seven Point Likert's Scale. Also, the researcher has tried to identify the popular Online Food Delivery Application/s amongst the youth which has responded as Swiggy and Zomato by the respondents. The respondents are using these Online Food Delivery Applications frequently atleast one to three times a week and spending amount of INR 500 to INR 1000 for the same. It is noticed that the Online Food Delivery Applications are more popular than the traditional phone call ordering and Applications developed by particular individual restaurants. The youth today is preferring to order almost all sort of food ranging from snacks to lunch and dinner including beverages and other food items using these Applications. As an impact of digital era, even the payments are made through other payment applications like GPay, Paytm however, this generation also prefers to pay Cash on Delivery as to get more security and safety.

The respondents have given their responses as follows:

Sr. No.	Parameters	Mean (x)	Sr. No.	Parameters	Mean (x)
1	Convenience	5.89	6	Discount offered	5.61
2	Quality of Food	5.58		Ease of Payments	5.40
3	Healthy Food Choices	5.24	8	Availability of Restaurants	5.89
4	Speed of Delivery	5.89	9	Interaction through Interface	6.00
5	Price of Dishes	5.38			

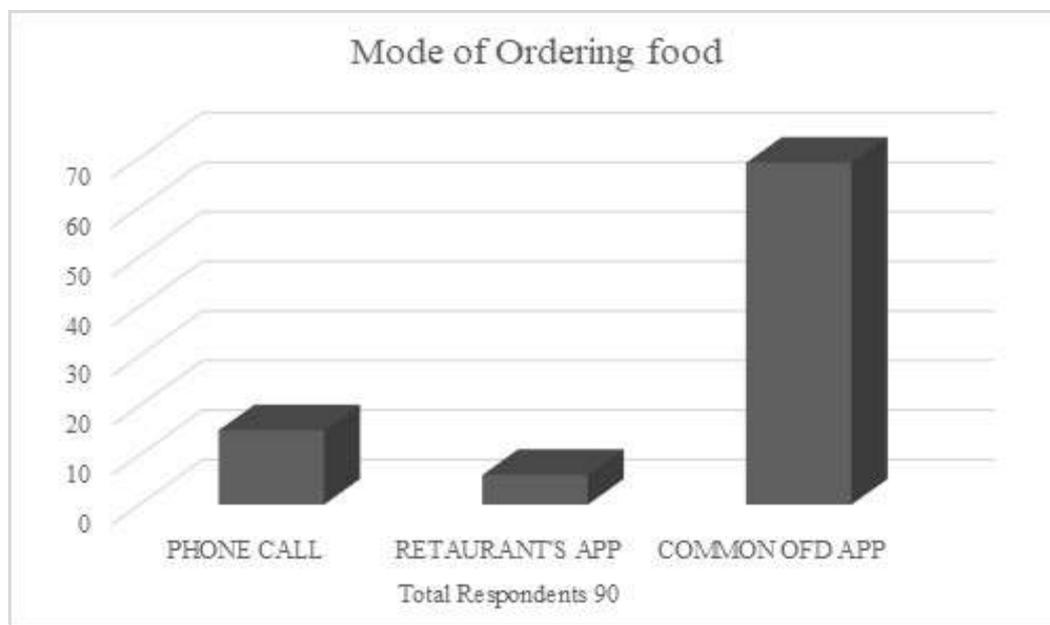
The overall Mean (x) of all the parameters is derived as 5.46 which also shows the satisfaction level of the NextGen above average and lies between 'Somewhat Satisfied' and 'Mostly Satisfied' on the Seven Point Likert's Scale. The young generation today, is mostly satisfied with the performance of the Online Food Delivery Applications and hence, they have become popular amongst the NextGen.

Graphical Representation of Data

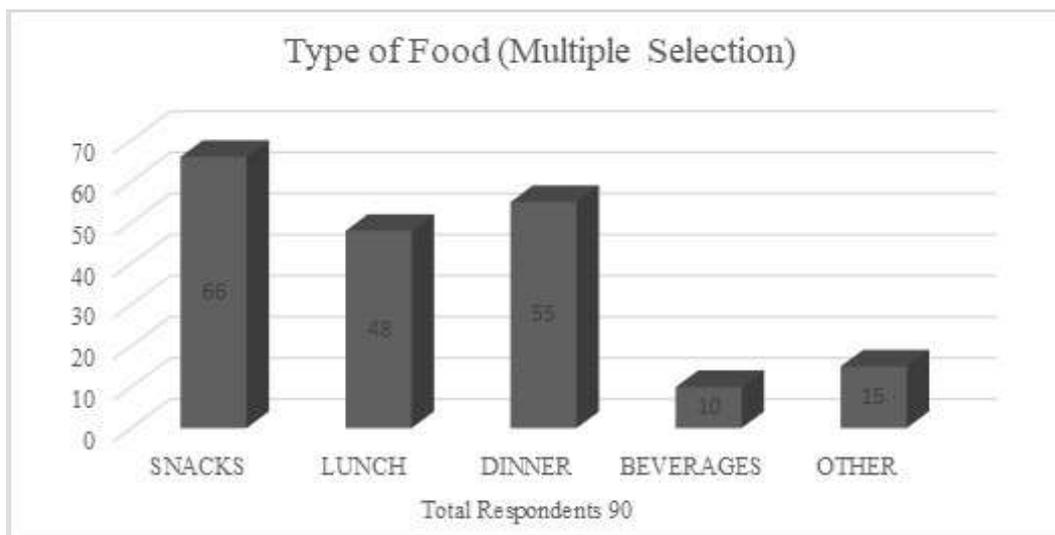
Most of the NextGen spends on an average INR 500 to INR 1000 on their Online Food Orders.



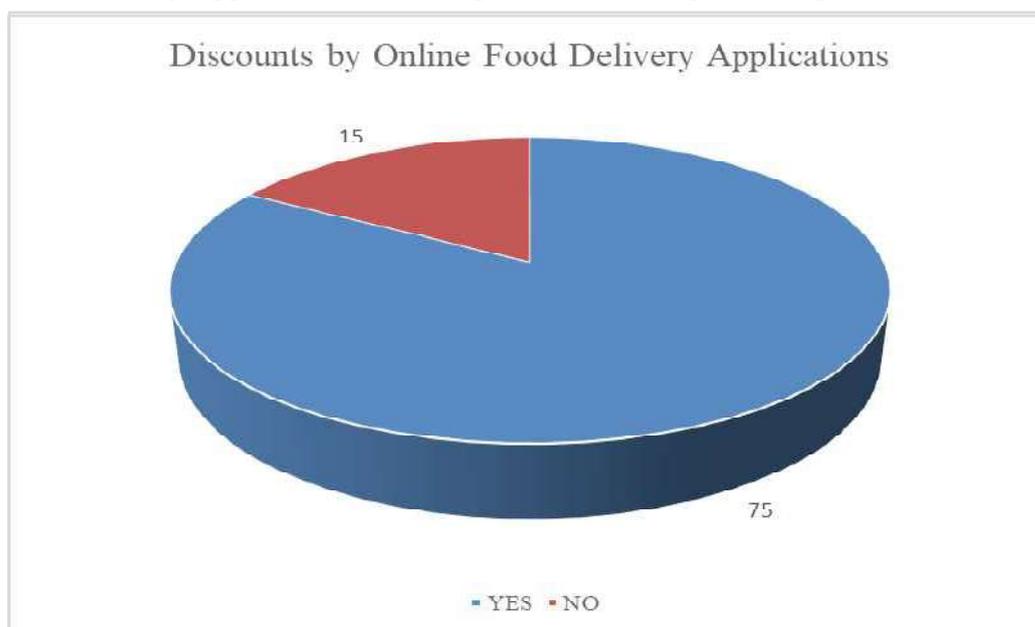
Mode of Ordering the Food has shifted from the traditional phone call system. The young generation is preferring the Online Food Delivery Applications even over some of the Applications developed by the individual restaurants.



The young generation today prefers to order all types of Food ranging from Snacks to Lunch and Dinner along with Beverages and other food items.



Important parameter to attract the youth towards Ordering their food online is the discounts offered by the Online Food Delivery Applications. 84% respondents have a positive opinion for the same.



Statistical Analysis through SPSS

The Kolmogorov-Smirnov Test of Normality

Distribution Summary

Count: 9 Mean: 5.45556 Median: 5.4 Standard Deviation: 0.255642

Skewness: 1.183578 Kurtosis: 1.662894

Result: The value of the K-S test statistic (D) is .14972.

The p-value is .96992. Your data does not differ significantly from that which is normally distributed.

Homogeneity of Variance Calculator - Levene's Test

Summary of Data			
	Sample Variances		
	c	d	Total
N	9	9	18
$\sum X$	9.3333	8	17.3333
Mean	1.037	0.8889	0.963
$\sum X^2$	14.2222	14	28.2222
Std.Dev.	0.7536	0.928	0.8236

Result Details				
Source	SS	df	MS	
Between-treatments	0.0988	1	0.0988	F = 0.13823
Within-treatments	11.4321	16	0.7145	
Total	11.5309	17		

The f-ratio value is 0.13823. The p-value is .714926. The result is not significant at $p < .05$.

The requirement of homogeneity is met.

Standard Error Calculator

N: 9

M: 5.46

SS: 0.52

$s^2 = SS/(N - 1) = 0.52/(9-1) = 0.07$

$s = \sqrt{s^2} = \sqrt{0.07} = 0.26$

$SE = s/\sqrt{N} = 0.26/\sqrt{9} = 0.09$

The standard error is 0.08521

Conclusion

Today's youth is fascinated about the digitization of their routine lifestyle and Online Food Delivering Applications have become a part of it. With various attractive offers and specialized performance, these applications have succeeded to being popular amongst the NextGen today.

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Modern Trends in Sport Psychology

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Abstract

Sports Psychology is not a theory but a collection of many overlapping concepts and concepts that seek to understand what it takes to be a successful athlete. Indeed, in many sports, especially endurance sports, many disciplinary and interdisciplinary approaches have emerged that look at the interaction of psychological, biomechanical, physiological, genes, genetics and education (Meijen, 2019). With this in mind and considering the many psychological factors that affect sports, the following areas are some of the most studied areas: Behavior Motivation Self-Esteem Body image Stress Emotions

Keywords

Physiology, genetics, educational factors.

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Introduction

Our body is a complex work of many organs. It works with the coordination of body and mind balance (nerve-muscle coordination). Today's sports are very difficult. Players use the best strategies and the best training to achieve the best results in the tournament. However, they are not satisfied with the results. For this reason, the necessity and importance of mental health is accepted in order to give the best results to the athletes in sports and games.

Psychology

Crooks and Stein (1988) define psychology as “the study of the behavior and psychology of humans and other animals”.

Sports Psychology

“Sport psychology is the ability to use psychological knowledge and skills to address the improvement of the quality of performance and well-being of athletes and the relationship between sports participation and sports-related problems and organizations”- *According to American Psychological Association*

Depression, biomechanics, It is an interdisciplinary research language that draws knowledge from many disciplines, including physiology, kinesiology, and psychology. It includes the examination of psychological effects on performance and participation in sports, and exercise on psychological effects.

History of Sports Psychology

The birth of sports psychology took place in Europe, especially in Germany. The first psychiatric clinic was established in Berlin in the early 1920s by Dr. Carl Diem. The laboratory measured physical ability and intelligence in sports, and in 1921 Schulte published “Body and Mind in Sports.” A number of professional sports programs were created as a result of military competition between the Soviet Union and the United States between 1946 and 1989 and an attempt to win an Olympic medal.

Factors Affecting Sports Psychology

Factors Affecting Sports Psychology are:

Attitude

Motivation

Self-Esteem

Body Image

Anxiety

Emotions

Stress

Attitude is a typical patterns, thought and personality is a human-specific man. Personality is defined as the characteristics of a person. There are two types of personality:-

(a) Introverted Personality

(b) Extraverted Personality

The Role of Personality in Sports Psychology

Mental Behavioral Development

Personality Development

Self-Esteem

Self-Confidence

Creativity and development management skills

Motivation

Motivation is an internal force that leads to sustained efforts, The process by which a person receives inspiration, motivation, direction and behavior to perform well There are two types of motivation:-

- * Intrinsic Motivation
- * Extrinsic Motivation

Intrinsic Motivation

Intrinsic Motivation is activated in the player and his leads to betterment and satisfaction with his own thoughts. It depends on basic needs such as biological needs (thirst, hunger), social needs (family and friends) and emotional needs (love, hate, love, etc.). . ,

Extrinsic Motivation

Extrinsic Motivation depends upon Rewards, Punishment, Active Participation, Playing environment. Teaching method ,Teacher-student relationship, Playing.

Role of Motivation in Sportive Thinking

Improves positive attitude Enjoys goals Improves mood Reduces stress and increases energy

Self-esteem

Self-esteem is used to describe a person's overall sense of self-worth or self-worth. Self-esteem can include many beliefs about oneself, such as self-evaluations, beliefs, thoughts, and behaviors. Self-esteem is a basic human need necessary for survival.

Body Image

Body image in psychology is how we think about our bodies for many people and is a big issue that affects how they think and feel about themselves as a person. With a good or healthy body, everyone can feel comfortable and confident with that body, see your body and shape clearly, and understand that appearance does not determine your personality and is necessary.

Opinion

Opinion is a strong feeling about someone or something. Emotions are conscious experiences expressed through thoughts, expressions, biological responses, and emotional states. Emotion is the quality of consciousness in which happiness, sadness, hatred, or similar experiences are different from consciousness experience and emotion.

Stress

Stress can be defined as physical stress. It is a psycho physiological phenomenon in which our body creates a primitive and automatic response that prepares it to attack or avoid a perceived injury or attack. Many behaviors and reactions occur in stress that increase the level of physical activity and affect the mind of the person.

Anxiety

Anxiety is a reaction to stimuli that disrupt our balance between mind and body. Anxiety is a physiological response to situations that make us feel threatened, uncomfortable, or unstable in some way.

There are two main types of Anxiety-

Anxiety-related Anxiety

Anxiety is a feeling of anxiety that results from negative expectations of success or negative self-evaluation.

Somatic Anxiety

Expresses the psychological and beneficial effects of anxiety related to emotional stress. It is reflected in responses such as increased heart rate, clammy hands, shortness of breath, and muscle tension.

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Modeling the Determinants of Thriving at Workplace After Work from Home: A SEM based Validation and Reliability Approach

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Abstract

Remote working (from anywhere) across knowledge organizations has already been a practice and this molded into a typical acceptable form of working in view of COVID-19. The remote working entails the focus on usage of ICT tools and technologies to work over cloud services and software to accomplish the usual work duties. The research is required on the exploration of the perceptions of remote workers with regard to career competencies and their acquisition in post pandemic state of affairs. The factors considered were extracted and were then ranked by the experts. The factors were screened from across the skills and capabilities embarked by experts on subject matter. The sample frame comprises the working from home individual in age group 20 to 25. The study is based on the perceptions of the individual who were working from home with aid of laptops, desktops or other similar digital assets. Secondly these individuals must have a daily work count of more than five hours. Further the sample frame comprises the youngster working from home that operates in any of the pre decided sectors or the clusters spread across modern India. The responses exhibited a collective reliability measure of 0.893 which points to satisfactory reliability across scale items. The respective model fit indices were calculated by making use of AMOS along with confirmatory factor analysis. The career harnessing abilities and contextual awareness were observed to shape the role salience abilities and thriving capabilities.

Keywords

Working from Home, Role Salience, Thriving, Lockdown, India, Digital tele working.

Reference to this paper should be made as follows:

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Modeling the Determinants of Thriving at Workplace After Work from Home: A SEM based Validation and Reliability Approach

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Introduction

The work from home constituted the most transformative way of working in midst of pandemic evolution. The work from home comprised an altogether different way of accomplishing the role salience and accomplishing the assigned tasks in comparatively new work environment. The remote working (from anywhere) across knowledge organizations (Choudhury, 2020) has already been a practice and this molded into a typical acceptable form of working in view of COVID-19. The organizations (Vyas, Butakhieo, 2021) are reported to reduce the real estate costs, whereas global talent utilization becomes possible with ICT leverage. The employee on the other hand works more, talent mobility is visible and lesser wastage of efforts and energy on movement and immigration hassles. The geographic flexibility (Choudhury, 2020), better work life balance and productivity gains (Xiao, Roll, 2021) are some of the evident forms of benefits. The literature on work from anywhere (Bailey, Yeoman, 2019) reflects on the aspects that are driving harnessing of human capital and career resources by working from anywhere. The harnessed career capital (Battisti, Alfiero, Leonidou, 2022) and intent to learn and share varied significantly across the lock down phase and the subsequent social distancing based working norms. The global studies (Amico, 2021) equivocally point to the incidence of remote working as enabling the building up of career competencies and capabilities that are hard to develop across daily mobility and at usual traditional work places.

Understanding Remote Working and Career Transformation

The remote work was previously reckoned as telework or telecommuting. The future of work and associated revolution (Koren, Peto, 2020) has transformed the manner in which work is being conducted. The work from home constitutes a distinct form of influence on career development and career trajectory. The remote working identifies as bearing characteristic impact on the career cycle and career growth over the time perspective. The remote working (Berg, Bonnet, Soares, 2020) involves extensive reliance on the digital and virtual channels to interact, to meet and to accomplish the role playing over large distances without engaging into actual mobility. The remote working entails the focus on usage of ICT tools and technologies to work over cloud services and software to accomplish the usual work duties. The subjective 'human ingrained knowledge competence' at work is all that matters and shapes remote worker's 'work readiness' and 'employer's sense of satisfaction or dissatisfaction' across organizational domain (Bailey, Yeoman, 2019) and across virtual modes of work. The conceptualization identifies various dimensions (individual-employee driven, institutional-mechanisms driven, systematic and contextual) which contributes to the remote working phenomenon in question. The construct conceptualization is observed as involving multiple inter-lapping themes. The construct operationalization as mentioned here borrows from the earlier studies (Messenger, 2019) that postulates the construct as involving distinct dimensions of 'individual remote worker's own capability to gain meaningful corporate employment', 'remote worker's interest in maintaining such an employment' and inclination to 'seek new employment' (Marins, Muniz, 2020) as well. Such an approach has been observed as contingent upon the possession of specific competencies or assets (skills, knowledge, domain expertise, attitudes and strategic dynamic capabilities), manner of leverage of such mentioned assets (Jakada, 2019) and subsequent deployment in undertaking job role salience, as well as distinct manner of presentation of such assets to prospective employer in labor markets. As per International Labor organization's latest report (ILO, 2020) on the global prospects for teleworking, the variations seem to exist across the high to low income earning countries (Figure 1). The managerial tasks across non-government privately owned companies seem to be most favorable telework across the pandemic phase. The management of operations, of marketing and of the human resources as well as financial resources was feasible and workable from across distance. The self-employed professional across chartered accountancy, company sectorial practices, the architects and other niche professional exhibited the comfort level working from home. The clerical support staff, technicians and associate professionals exhibited the next class of comfort while working from home. As per the data analyzed by World Economic Forum in post COVID times (Kretchmer, 2020), the areas exhibiting remote working, experiencing least risk proneness and cushioning the career transformation were limited more to working with ICT. The skills or workforce

associated with ICT proficiency and ICT based working(Figure 2), researchers, engineers, specialized technology exhibited least susceptibility to threats posed by pandemic. Whereas in contrast, those associated with assisting, caring, hospitality, media relations, delivery of personal services and arts and humanities exhibited maximum reduction in scope for working from home on account of prevailing social distancing norms.

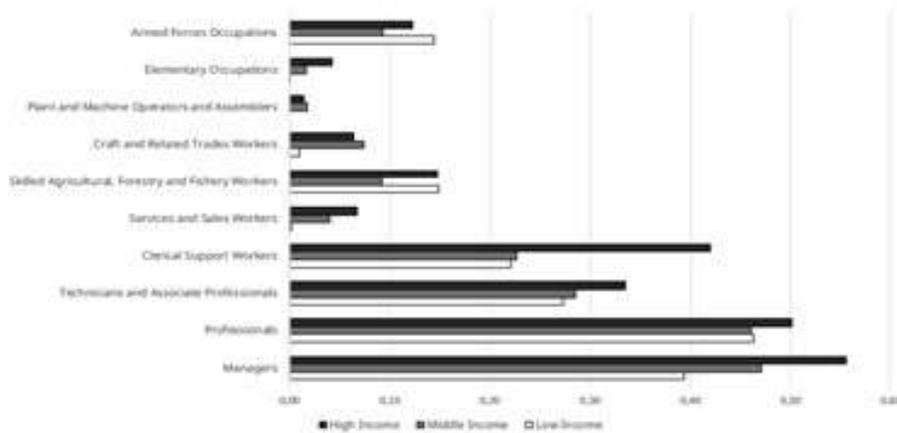


Figure 1: Profession wise likelihood of shifting to telework mode

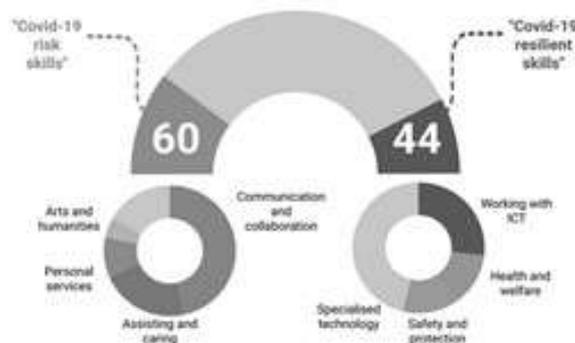


Figure2: Skills and susceptibility to social distancing norms

It is self-evident that the work from home or teleworking or remote working prospects transformed radically during the onset of pandemic and altered the career capital development (Boeri,Paccagnella, 2020), human resource management paradigms as well as changed the career resource cycles. The remote working and career transformation (Vyas,Butakhieo, 2021) exhibited the rapid change over in wake of pandemic induced social distancing and other measures. The traditional interpretation of remote working borrows from the ILO conceptualization of phenomenon (ILO, 2020) as involving the aspects of home-based work. The notions seem to overlap each other and differ nominally (Figure 3) in terms of place of work and place of worker being stationed. The remote work from home is the act of workers as carrying out usual work from their fixed place of residence. The home identifies as the location of work from where the worker accomplishes the work. The term telework from home constitutes the tele distance accomplished work and remote working phenomenon. As per ILO classification, the term home based teleworker identifies as home resident workers who are carrying out the usual telework. The terms seem to overlap as mentioned in figure below.

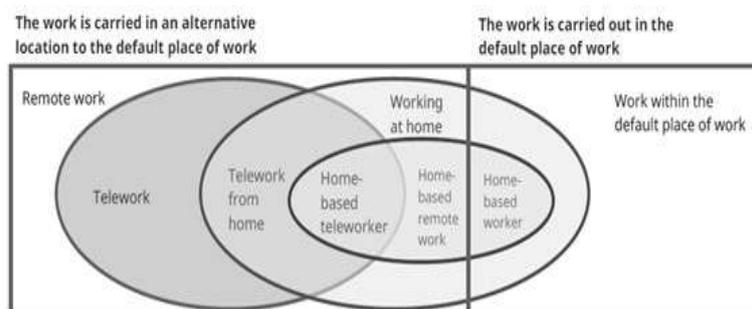


Figure 3: ILO categorization of remote work

The individual driven dispositions can be interpreted from bio-psychological individualistic’ attributes (Griffin, 2001) to develop their own careers, to adapt to career changes, sense of career self-awareness (Bridoux, n.d.), resource harnessing potential and social career capital (Kerdpitak,Jermsittiparsert, 2020). The possible processes (Insa, 2016) covering workers have been identified as the individual based activities to acquire or to enhance the current level of personal knowledge attributes. The ‘contexts’ (Insa, 2016) vis a vis conceptualization of ‘remote working’ in organizational perspective could possibly include discrete home, discrete work place, organizational aspects, institutional and vocational learning as well as employer-based supports (Kerdpitak,Jermsittiparsert, 2020) and current external labor market conditions. The possible indicators (table 1) of telework generated literary reviews are mentioned here in this table below.

Table 1: Indicators of telework and role salience and thriving prospects

	Occupational Mastery	Revising Job Knowledge	State of Motivation	Extended Career	Workplace Adaptation	Communication Management	Situational Awareness	Proactivity	Role Salience
(Amico, 2021)	*	*		*	*		*	*	*
(Battisti,Alfiero,Leonidou, 2022)		*	*	*	*	*			*
(Bailey,Yeoman, 2019)	*		*				*	*	
(Berg,Bonnet,Soares, 2020)	*	*	*		*	*	*		
(Vyas,Butakhieo, 2021)	*		*	*	*	*	*	*	
(Xiao,Roll, 2021)	*		*	*	*	*		*	*
(Choudhury, 2020)	*	*	*			*		*	*
(Ganakrishnan,Gopalakrishnan, 2017)	*	*	*	*		*	*		

Current State of Affairs in India

A study by Gartner (Goasduff, 2021) vindicated that Indian teleworkers were among the top four segments that are witnessing massive change while working from home. In comparison with 2019 (figure 3), the study reported that a sizable 30 percent of the work force is teleworking and is expected to increase to nearly 40 percent by 2025. The another research (Nayak,Pandit, 2021) on telecommuting (figure 4) observed that Indian remote working or telecommuting prospects altered across the national lockdown and post lockdown phase yet predicted that the trend is likely to stabilize on account of rising chunk of partial telecommuters across Indian economy.

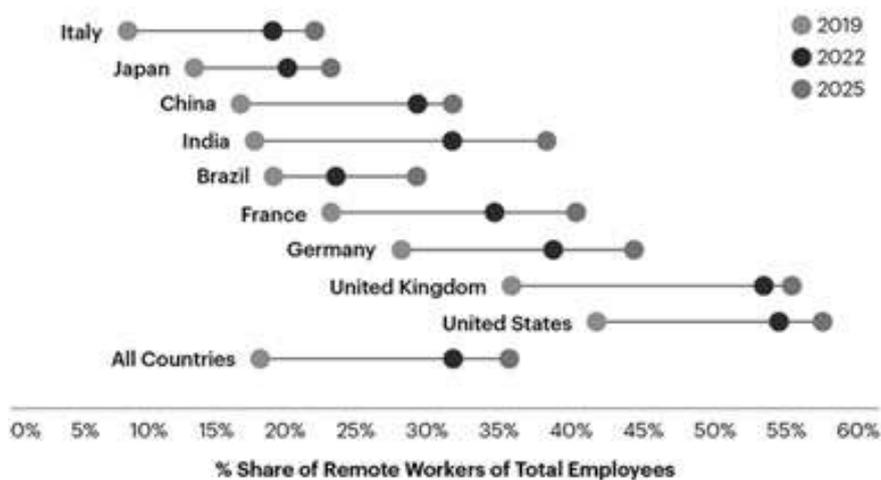


Figure 3: Evolving remote working potential

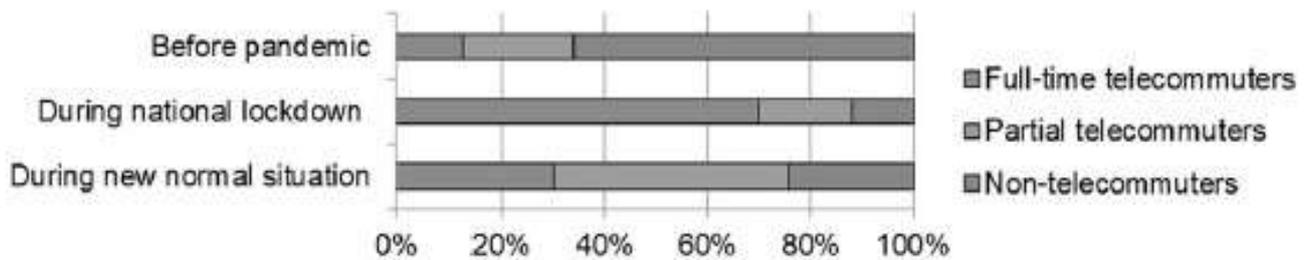


Figure 4: Expected transformation of telecommuting and remote working

Research Questions

RQ 1: What are the perceptions of remote workers with regard to career competencies and their acquisition in post pandemic state of affairs?

RQ2: What factors constitute the construct of role salience in post pandemic phase?

Research Objectives

- To classify the factors contributing to work role salience in post pandemic phase.
- To ascertain the nature of relationships between the career harnessing efforts, contextual awareness and implications for work role salience

Research Hypothesis

The literature (Xiao, Roll, 2021) on the subject was leveraged to explore and support the cross-factor linkages as visualized and hypothesized. The literature provides extensive literary support for the influences as shaping the career clarity and employer satisfaction. The proposed conceptual model as shown below (in figure 5) includes three distinct types of influences namely the remote worker's personal career competency harnessing in terms of occupational mastery, intent to revise job market knowledge, extended career involvement, state of motivation; in terms of institutional awareness(from employer involving communications, workplace adaptation ability, situational awareness, communications management). The first possible influence is being hypothesized from remote worker's own competencies in form of possession of a passion for occupational mastery, intent to revise existing job market knowledge, possession of extended career involvement and state of motivation. The next potential influence on workplace role salience is being hypothesized from worker's institutional association in terms of supports provided by the employer. The next possible influence on career clarity and employer satisfaction is being hypothesized from 'employer's situational awareness, employer's communication management perspective, patterns of workplace adaptation; altogether constitutes the impetus to evolve and change. These factors have been observed as registering a considerable impact on retention of remote worker's as well as their career development and exhibition of workplace role salience.

The study hence proposes set of conjugated hypotheses that collectively capture the impact of perceptions of the working from home professionals in assessing their own levels of thriving and role salience in post pandemic phase in Indian perspective.

H1: There is significant impact of occupational mastery on work role salience

H2: There is significant impact of revising job market knowledge on work role salience

H3: There is significant impact of extended career involvement on work role salience

H4: There is significant impact of state of motivation on work role salience

H5: There is significant impact of situational awareness on work role salience

H6: There is significant impact of communication management on work role salience

H7: There is significant impact of workplace adaptation on work role salience

Research Methodology

The review of existing literature also points towards the prevalence of uni-dimensional and multidimensional along with formative and reflective measures of working from home and thriving prospects.

The scale items for factors were screened from across the expert review and the respective literature review of post pandemic studies on working from home worldwide. The factors considered were obtained from the list and were ranked by experts based on their appropriateness. The factors were screened from across the skills and capabilities embarked by experts on subject matter. The sample frame comprises the working from home individual in age group 20 to 25. The study is based on the perceptions of the individual who were working from home with aid of laptops, desktops or other similar digital assets. Secondly these individuals must have a daily work count of more than five hours. Further the sample frame comprises the youngster working from home that operate in any of the pre decided sectors or the clusters spread across modern India. Various criteria were used to segregate the most suitable for the research study. The study relied on random sampling and attracted a valid sample size of 350 work from home young respondents. The sample frame comprises the 350 individuals in age group 20-25. The study is based on the perceptions of the individual who were with aid of laptops, desktops or other similar digital assets. Secondly these individuals must have a daily work count of more than five hours. Further the sample frame comprises the working from home strata that operate in any of the pre decided sectors or the clusters spread across modern India. Various criteria were used to segregate the most suitable for the research study. The study relied on random sampling and attracted a valid sample size of 350 respondents. The exploratory factor analysis methodology comprising KMO Test (For data adequacy), EFA, Reliability Assessment with Cronbach Alpha, Correlation Assessment were used. The study made use of the IBM software SPSS version release 24.0 for the running of empirical calculations, validity assessment and reliability testing. The factor analysis was done with aid of factor analysis and subsequently tests like variance examination, scree plot and pattern matrix determination were done. The study used the factor analysis methodology as a tool for exploring the representing dimensions of the factors. The exploratory factor analysis helps the evaluation of the dimensions as well as leads to dimensional validity assessment with regard to data as collected from the Likert based scales.

Reliability of Scale Elements

The reliability assessment is essential for the evaluation of the internal consistency of the responses collected. The reliability is made essential to find out the nature of responses that have been received. For the ascertainment of the data based internal consistency, internal reliability analysis is to be done. Cronbach alpha figures are to be used as the most prominent tool for the achievement of internal reliability assessment. The responses exhibited a collective reliability measure of 0.893 which points to satisfactory reliability across scale items.

Dimensional Validity

The KMO measure for elements was observed to be 0.863 that comes in the satisfactory range of 0.7 to 0.99. This is in accordance to saying that data collected with regard to factors comprising theme A based scale; is factorable. The Bartlett test of data sphericity showed a p-value of 0.000(<0.05) which comes under a satisfactory presence of statistically significant variance cross the data collected with regard to scale representing scale items. The significant “p-value” in other words points towards the significant utility of the data and suitability of the data for consideration with regard to factor analysis. Such a measure of KMO revealed the suitability of the data for factor analysis and dimensional validity assessment. KMO in ideal terms is the measure of proportion of variance amongst the variables as undertaken for the research. The KMO satisfactory observation with regard to scale point towards the satisfactory presence of data-based factorability. This is essential to ascertain weightage of factors across scale composition. This enables the research in comprehending the variance that is exhibited by each scale constituent. As observed, the factor ‘occupational mastery’ and ‘extended career involvement’ exhibited maximum reported variance. The “variance examination” as mentioned in sections above, established the factor wide variations as observed across the Scree plot (mentioned in sections below). As per existing literature, the traditional Scree plot shows the Eigen values on the y-axis and the various factors on the x-axis respectively. The scree plot captures the total number of factors to be considered for further analysis. The downward curve slopes to right and number of factors considered are to be classified from the

slope till elbow point. The rationale for the usage of extractive factor analysis lies in the fact that this methodology for examination of the construct validity and ascertains whether the factor is representing the phenomenon or not. The literature reflects on the need for segregating the loading and non-loading items in order to establish the empirical dimensional validity of the factors. In empirical literature, factor analysis identifies as a technique for the establishment of the data validity.

Discriminant and Convergent Validity of Scale Elements

The table below presents the loading of sub scale dimensions representing the factors used in this research. The reliability examination revealed the incidence of differences in Cronbach measure across respondent effectiveness propositions. The loading aspects (Table 2) indicate the factor strength and respective AVE and CR as well as MSV measures which are all in satisfactory range. All the reported values hence confirm the significant reliability. The composite reliability (Table 2) in table below illustrates 'occupational mastery' with 0.905, 'job market knowledge' with 0.889 and 'extended career involvement' with 0.898 value. Since all the reported values are well above .70 hence it confirms the significant composite reliability for factors concerned. The respective convergent validity in table below (in Table 3) shows the factor loadings values varies maximum with item statement 'OM3' 0.834 to minimum with item statement '.786'. All factor loadings (Table 2) are good and above .70 or very close to that. Hence confirms the convergent validity. All reported AVEs value in table are more than 0.5 and are above MSV and ASV. Hence confirms discriminant validity also. CFA measure for career resources and situational awareness signified good model fit indices with the values $\chi^2 / df = 2.8$, CFI = .903, GFI = .942, AGFI = .908, NFI = .952 and RMSEA = .05. Hence CFA model of career resources and situational awareness can further be tested for structural relationship. The dimensional validity (Table 3) is being represented by factor loadings next to column representing items, convergent validity being represented by measure of CR and discriminant validity with measures of AVE (average value extracted) and MSV respectively.

Table 2: Dimensional and Convergent and Discriminant validity of measures

Factor Representing Sub Scale Items	Item	Load	CR	AVE	MSV
Factor: Occupational Mastery					
Others see me as an expert in my occupation	OM1	.786	0.905	0.657	0.227
I have a very high level of expertise	OM2	.822			
I possess profound knowledge in my occupation	OM3	.834			
My level of expertise has increased post lock down	OM4	.804			
Whatever comes my way in my job, I can usually handle it	OM6	.808			
Factor: Job Market Knowledge					
knowledge of the job market is good	JMK1	.839	0.889	0.616	0.101
knowledge about the current labor market is good	JMK2	.812			
Knowledge about employment trends in the labor market is good	JMK4	.836			
I am consistently skilling myself as per evolving skill requirements	JMK5	.786			
I am consistently seeking new options	JMK7	.786			
Factor: Extended Career Involvement					
My work is a central part of my identity	ECI1	.809	0.898	0.639	0.203
My studies are a central part of my identity	ECI2	.793			
I feel strongly attached to my work	ECI3	.806			
I feel belongingness to work culture	ECI4	.786			
I feel embedded in my current work	ECI5	.779			
Factor: State of Motivation					
I know what I like in my work	1	.804	0.840	0.568	0.112
I know what is important to me in my career	2	.823			
I can clearly see what my passions are in my work	3	.788			
I know my strengths in my work	4	.721			
I am aware of my talents in my work	6	.771			

Factor: Situational Awareness					
I am able to identify the risks posed by pandemic in job environments	SA1	.882	0.920	0.698	0.040
I am able to pay adequate attention to details post lock down	SA2	.881			
I am able to monitor situation	SA3	.847			
I am able to predict the possible evolution of hazard posed by COVID-19	SA4	.842			
I am able to assess the possible fallout of hazard posed by COVID-19	SA6	.866			
Factor: Communications Management					
I am aware about changes in pattern of communication with leader	CM1	.863	0.934	0.740	0.129
I know about the changes in communication pattern with supervisor	CM2	.840			
I have information/feedback regarding effective communication post pandemic	CM4	.847			
I know about effective social distance based communications at workplace	CM5	.892			
Factor: Workplace Adaptation					
My supervisor takes the time to learn about my career goals and aspirations	WA1	.719	0.883	0.559	0.227
I get the necessary time and means to further develop my competencies	WA2	.781			
My career continuity depends on organizational provision of systematic program that regularly assesses employee's skills and interests	WA3	.764			
My career trajectory depends on my learning curve	WA4	.729			
Factor: Thriving Prospects					
I feel alive and vital	TP1	.797	0.831	0.622	0.069
I feel so alive just want to burst	TP2	.824			
I am looking forward to each new day	TP3	.847			
I am experiencing considerable personal growth	TP4	.826			
I see myself continually improving	TP5	.833			

Table 3: Discriminant Validity and correlations

	Occupational Mastery	Job Knowledge	Career	Motivation	Situational	Communications	Adaptation	Thriving
Occupational Mastery	0.810							
Job Knowledge	0.219	0.785						
Career	0.450	0.224	0.799					
Motivation	0.246	0.318	0.334	0.754				
Situational	0.082	0.043	0.143	0.159	0.836			
Communications	0.221	0.228	0.359	0.231	0.092	0.860		
Adaptation	0.476	0.288	0.432	0.292	0.201	0.304	0.748	
Thriving	0.079	0.214	0.263	0.188	0.027	0.245	0.192	0.789

Source: AMOS version 23.0

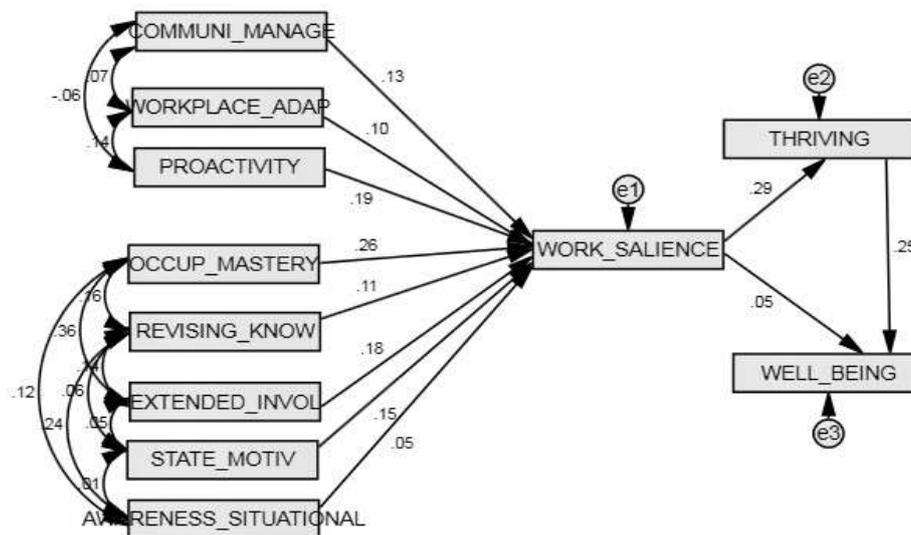
The correlation (Table 3) above categorically points to state of extensive and statistically significant correlation across the assumed measures or factors of the phenomenon.

Structural Relationships

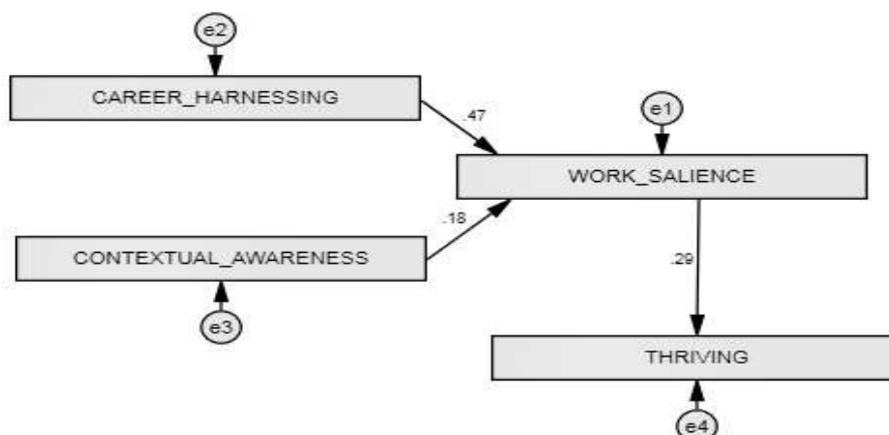
The respective model fit indices as calculated in the AMOS with confirmatory factor analysis are presented here. The calculations point towards the satisfactory outcomes. The study made use of the IBM AMOS software in order to do evaluation of cross factor impact, path-based influence, and thus respective assessment of the structural relationships. The evaluation of structural relationships is necessary to indicate the vindication of the assumed hypothesis and the respective assessment of the cross-factor impact. The AMOS version release 23.0

was used to do the evaluation of structural relationships amongst the concerned factors. SEM modeling platform was used to find the causal and path-based hypothesis testing. The outcomes of hypothesis testing are illustrated in table below.

			Estimate	
H1	WORK_SALIENCE <---	COMMUNI_MANAGE	.128	Supported
H2	WORK_SALIENCE <---	WORKPLACE_ADAP	.099	
H3	WORK_SALIENCE <---	OCCUP_MASTERY	.258	Supported
H4	WORK_SALIENCE <---	REVISING_KNOW	.114	Supported
H5	WORK_SALIENCE <---	EXTENDED_INVOL	.183	Supported
H6	WORK_SALIENCE <---	STATE_MOTIV	.148	Supported
H7	WORK_SALIENCE <---	AWARENESS_SITUATIONAL	.054	
H8	WORK_SALIENCE <---	PROACTIVITY	.195	Supported
H9	THRIVING <---	WORK_SALIENCE	.285	Supported
H10	WELL_BEING <---	WORK_SALIENCE	.045	
H11	WELL_BEING <---	THRIVING	.252	Supported



When assessed for the aggregate modeling in SEM, the career harnessing tendencies were observed as leading to 0.47 times significant change in the work salience abilities of those working from home. When assessed for contextual awareness as influencing role salience abilities, the impact was found to be 0.18 times. The role salience abilities in other words seem to impact the thriving capabilities as 0.29 times. Thus, one can deduce that role salience is critical to thriving capabilities and the outcomes are well represented and supported by earlier studies (Boeri, Paccagnella, 2020), (Battisti, Alfiero, Leonidou, 2022).



Implications for Work Role Salience in Post Pandemic Phase

The preparation for talent acceptance rather remote working acceptance across organizational perspective would be the trickiest aspect of organizational development with remote workers as sheer workforce. The inertia to change could be rampant and presumptions with regard to native remote worker's under ability to perform may be dominant. This stage involves the most challenging stage with regard to sense making with remote workers in evolving HR practices. Warren Buffet like approach in selecting the stocks can be implemented in making the existing top management adopt and adore the change with remote working in focus. Buffet like approach emphasizes the retention of focus on key essentials and valuing every remote working opportunity as novel till it gels well with the business model. The intent on value investing could be filtered across HR practices a swell. Modern HR practices need to focus on work rather than people. Such a focus will accord centrality to work being done rather than on people. In such a perspective, fresh remote workers could readily be accepted across organizations and rise up ladder on account of merits and result based inclination. Experimentation with Buffet philosophy in HR could be wild card entry yet could guarantee affective acceptance of the remote workers and their role efficacy across digitalizing and lean organizations and work cultures.

Limitation

The research relied only on the existing literature and the publications that surfaced with key word search. The primary data was incorporated in form of closed ended 5 point likert scale. The deducing of general underlying perceptions across working from home professional; could be subject to inherent biases and selection errors. The primary data analysis with SEM yielded more real time and on ground inputs for the research to lead to meaningful implementable action plans yet the errors could creep in form of data collection biases. The current research exercise experienced numerous limitations in terms of time, geography of coverage, approach and selection of factors and control variables. The study was time bound but a longitudinal perspective could have given good results and enabled mapping of influences over a larger time frame. The control variable inclusion criterion was marked by review of literature which could be biased in approach.

Directions for Future Research

The section summarizes further areas of research which could probably enhance and enrich the prospects for working from home assessment, development and ascertainment. The further research could be conducted across the areas of professional's behavioral change prospects, skilling aptitude, remote working intent, inertia to change mindset change management across multiple segments, role salience development abilities, use of local languages in influencing and creating worker's awareness, pan-national perspective and role of media in shaping university librarian's cognitions for skilling. The research could be conducted across skill perspective in India and across Asian economies where the similar challenge is cropping up fast. The further research could be conducted across demographically diverse groups, across ICT employed and non-ICT employed employees across Indian states and across diverse sections of economic institutions.

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Study to Measure the Impact of Ethical Leadership on Organizational Performance: A Meta-Analysis

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Abstract

The present study explores, meta-analytically, the impact of ethical leadership on organizational performance. The organizational performance was measured based on individual-level performance measurement consisting of five variables i.e., Job Satisfaction, Organizational Commitment, Personal fulfillment, Turnover Intention, and Employee's Well-Being. Based on our inclusion criteria, we include 86 primary empirical studies with 127 effect sizes and 53,761 individuals. We find a positive impact of ethical leadership on organizational performance.

Keywords

Ethical Leadership, Meta-analysis, Organizational Performance.

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Introduction

Largely the organization's success depends upon a Leader who shapes organizational strategies and is responsible for execution and effectiveness. (Houghton et al., 2016; Lagowska et al., 2018; Lee et al., 2018; Medina et al., 2013; Orr et al., 2019; Rego et al., 2015; Swain, 2016; Vandenberghe, 2011; Zhang et al., 2017). In addition, leadership is also viewed as a social influence process (Omolayo, 2007), where leaders seek the voluntary participation of subordinates to achieve organizational goals. Scholars have identified different styles of leadership addressing two axes; concern for people and concern for the task (Blake & Mouton, 1976). Tannenbaum and Schmidt (1973) find leadership style a blend of autocracy and democracy suiting to the context to achieve organizational success. House (1996); and Hersey & Blanchard (1982); and Charan (2011) have also found leadership responsible for achieving organizational success.

At first glance, there is little difference between the terms leader, leadership, and leadership styles. However, the relationship between these terms is intrinsic since a leader is defined in its ability to influence others, delegating or influencing others to act to carry out specified objectives (Mullins, 2004). Similarly, leadership is exercised to influence, motivate, direct and make others find a purpose (Army, 1983) to accomplish organizational goals. Leadership style is the relatively consistent pattern of behavior that characterizes a leader (DuBrin, 2001). Lewin, Lippit, and White (1939) investigated the first significant study to identify three different styles of leadership; authoritarian or autocratic, participative or democratic, and delegative or laissez-fair. Tannenbaum and Schmidt (1973) extended the work of Lewin, Lippit, and White (1939), to draw seven leadership styles. Stogdill (1974) and Blake and Mouton's (1985) added two approaches, 'consideration' and 'structure', to further leadership styles. In the last two decades, new leadership styles have emerged like spiritual leadership (Fry, 2003, 2005), authentic leadership (Avolio et al., 2007; Walumbwa et al., 2008; Neider & Schriesheim, 2011; Emuwa, 2013; Bowen & Schneider, 2014), ethical leadership (Brown et al., 2005; Pelletier & Bligh, 2006; Hoogh & Hartog, 2008; Dedeoglu et al., 2015), and empowering leadership (Arnold et al., 2000; Amundsen & Martinsen, 2014b).

In the present study, we meta-analytic examine the impact of ethical leadership on organizational performance. We covered individual level variables i.e., job satisfaction, organizational commitment, personal fulfillment, turnover intention and employees well-being, to measure organizational performance. Ethical behavior is a key component in a number of leadership theories (Bedi & Alpaslan, 2015) and along with this researchers have also argued that the essence of effective leadership is ethical behavior (Brown & Treviño, 2006). Many leadership styles, such as transformational leadership (Bass & Avolio, 1994), authentic leadership (Avolio & Gardner, 2005), servant leadership (Greenleaf, 1977) and spiritual leadership (Fry, 2003), include aspects related to ethical behaviours in their definition and description (Zappalà, Salvatore, 2020). However, Brown et al. (2005) have identified three constructs in organizational behavior that have the potential to overlap with ethical leadership; ethical leadership and transformational/charismatic leadership, ethical leadership and leader honesty, and ethical leadership and considerate or fair treatment. To provide a deductive theoretical basis for understanding ethical leadership and its outcomes, Brown et al. (2005) integrate two theoretical frameworks: social learning theory (Bandura, 1977) and social exchange theory (P. Blau, 1964). The field of ethical leadership benefited significantly from Brown & Treviño's (2006) conceptual model of ethical leadership and form the Ethical Leadership Scale (See Table 1) developed by Brown et al. (2005), which is one of the widely used scale to measure ethical leadership.

Table 1 - Scale used in primary studies to measurement - Ethical Leadership

Variables	k	N	The scale used in primary studies to measurement - Ethical Leadership											
			Brown et al., (2005)	Pelletier & Bligh, (2006)	Turhan, (2007)	Hoogh & Hartog, (2008)	EmadiFar, (2009)	Kalshoven, (2011)	Borsa et al. (2012)	Meral et al. (2012)	Yukl et al. (2013)	Yang, (2014)	Dedeoglu et al., (2015)	Not Found
EL→ Job Satisfaction	43	20,852	35	01	-	02	-	01	01	-	01	01	01	-
EL→ Organization Commitment	50	17,683	41	01	02	01	01	-	02	01	-	-	01	-

EL→ Turnover Intention	21	10,543	20	-	-	-	-	-	-	-	-	-	-	01
EL→ Employee's well -being	13	4,683	13	-	-	-	-	-	-	-	-	-	-	-
Total	127	53,761	109	02	02	03	01	01	03	01	01	01	02	01

Note: EL = Ethical Leadership

Other scholars (Spangenberg & Theron, 2005; Yukl et al., 2013) contribute in the ethical leadership definition and measurement. Resick et al. (2006) described ethical leadership consisting of six different dimensions: character and integrity, ethical awareness, community/people-orientation, motivating, encouraging and empowering, and managing ethical accountability. Kalshoven et al. (2011) used seven dimensions to define ethical leadership: fairness, power sharing, role clarification, people-oriented behavior, integrity, ethical guidance and concern for sustainability. Banks et al. (2021) argued that the definition of Ethical Leader behavior (ELB) should also be included the expression of moral emotions and they described the role of seven theories in ethical leadership: signaling theory (Connelly et al., 2011), stakeholder theory (Harrison et al., 2010), attribution theory (Kelley & Michela, 1980), social learning theory (Bandura, 1977), social identity theory (Brewer & Gardner, 1996), social exchange theory (P. Blau, 1964), and role congruence theory (Ritter & Yoder, 2004). Further, Banks et al. (2021), conceptualized definition of ELB as “signaling behavior by the leader (individual) targeted at stakeholders (e.g., an individual follower, group of followers, or clients) comprising the enactment of prosocial values combined with expression of moral emotions.” The Ethical leaders always do the right things; therefore, their subordinates feel about them as honest, trustworthy, people of integrity, credible and predictable. Ethical leaders are role models of ethical conduct who lead by example (Treviño et al., 2003)

It is worth investigating the relationship between leadership styles and organizational performance (Houghton, Neck, & Krishnakumar, 2016). In the past, attempts have been made to look into the relationship between leadership and team performance (Burke et al., 2006), test for redundancy in leadership theories (Banks et al., 2016), active and passive forms of destructive leadership (Fosse et al., 2019), comparison of leadership styles (Hoch et al., 2018), emotional intelligence (Miao et al., 2018), and employee engagement (Peikai Li et al., 2020). A conceptual model has been proposed by Houghton et al. (2016) in regard to examine the relationship between leadership styles and organizational performance. However, there are insignificant literature available to validate model proposed by Houghton et al. (2016). We humbly attempt in the present study to examine meta-analytically the relationship between ethical leadership and organizational performance based on the individual level measured as depicted in figure 1. To understand the impact of ethical leadership style on organizational performance, there is a need to recognize the multi-faceted nature of the organizational performance (OP) construct (Hult et al., 2008; Luo et al., 2012; Venkatraman & Ramanujam, 1986). Different shades of OP are found in the extant literature like; economic and operational (Luo et al., 2012), individual level (Houghton et al., 2016; Koopmans et al., 2011; Krishnakumar & Neck, 2002), team level (Kendall and Salas, 2004), and organizational level (Hubbard, 2009). The present study, focusses only individual-level measurements of organizational performance in terms of job satisfaction, organizational commitment, personal fulfillment, turnover intention, and employees well-being (Houghton et al., 2016; Krishnakumar & Neck, 2002). The contribution of the present study to the existing literature can be measure as it help to validate organizational performance as an outcome of leadership styles.



Figure 1 – Proposed Model

EL and Research Hypotheses

The principles of ethical leaders are related to attitudes that generate a positive effect on employees job satisfaction (Kaffashpoor & Sadeghian, 2020; Tafolli & Grabner-Kräuter, 2020; Özden et al., 2019), organizational commitment (Negis Isik, 2020), personal fulfillment (Shakeel et al., 2019), employees well-being (Freire & Bettencourt, 2020), and negatively associated to turnover intention (Nejati et al., 2020; Shafique et al., 2018). Shakeel et al. (2019) describe that the ethical leadership process is related to leadership behavior that is predominantly focused on employees’ self-actualization and how the leader can help them achieve their goals of personal fulfillment. Mostafa, Farley, & Zaharie (2020) argued that ethical leaders reduce disengagement, which promotes higher level of job satisfaction and organizational commitment and lower turnover intentions, which have positive consequences for organization’s performance. Ahmad & Umrani (2019) suggest that employees’ job satisfaction, key antecedent of other important behaviors such as turnover intention, enhanced job performance, etc., can also be achieved by demonstrating ethical behavior at work. Bormann et al. (2018) drew from leader distance theory and social exchange literature to develop a model in which span of control was negatively related to unit job satisfaction via increasing ethical leadership variability. Wang & Xu (2017) explored that ethical leadership is positively related to employees’ work meaningfulness, which transmits the effect of the interactions on employees’ job satisfaction, organizational commitment, and turnover intention. Güngör (2016) suggested that ethical leadership positively relates to all dimensions of job satisfaction, and job satisfaction increases when ethical leadership increases, which is directly associated with organizational performance. Evans, Allen, & Clayton (2016) find that ethical leadership is particularly appealing to those with more benevolent orientations that evaluate their outcomes and have empathetic concern for others. Ahmad & Saima (2020) explored the relationship between ethical leadership and employee well-being and suggested that the occurrence of unethical behavior plays a more potent role than ethical behavior in shaping employee well-being and they find a positive effect of ethical leadership on employee well-being. Well-being at work is one dimension of EWB and Zheng et al. (2015) defined well-being at work as “employees’ perceptions and feelings of work satisfaction, their psychological experiences and satisfaction level at work, and work-related positive and negative emotions”. Li et al. (2013) and Muhannad (2019) highlighted the positive relationship between ethical leadership and employees’ well-being, which ultimately improves organizational performance. Based on the above literature, we proposed that

Hypothesis 1a.

Ethical leadership improve the organizational performance, which can be measured though positive relationship between ethical leadership, and (i) job satisfaction, (ii) organizational commitment, (iii) personal fulfillment, and (iv) employee’s well-being.

Hypothesis 1b.

Negative relationship between ethical leadership and turnover intention leads to improve organizational performance as lower and negative turnover intention leads to less inclined to an employee to leave organization, which reducing high costs associated with recruiting and training new employees.

Method

Study Inclusion Criteria and Literature Search

To include a primary study in our meta-analysis, we decided inclusion criteria as (i) Primary study must be empirical and quantitative, (ii) Correlation value of variables covered in the present study must be available in primary study. (iii) Sample size of the participants in the primary study must be available, (iv) Primary study must be available in the English language.

We further decided March 22nd, 2021 as cutoff date and we had concluded our search for required literatures for the period from 2011 to 2021. For a meta- analysis study, it is very much required that we must include in our analysis based on our inclusion criteria all kind of studies whether published and unpublished. Therefore, we conducted an extensive search to identify a relevant study for the present study from various source such as journal, book section, book, conference proceedings, thesis, web page, reports, newspaper articles, and magazine articles. Mendeley, Scopus, and Google Scholar were all used to find out key word combinations of predictor and outcome variables like EL and JS, then EL and OC and so on and lastly EL and EWB, see figure 2 PRISMA (Page et al., 2021) flow diagram for Meta-analysis.

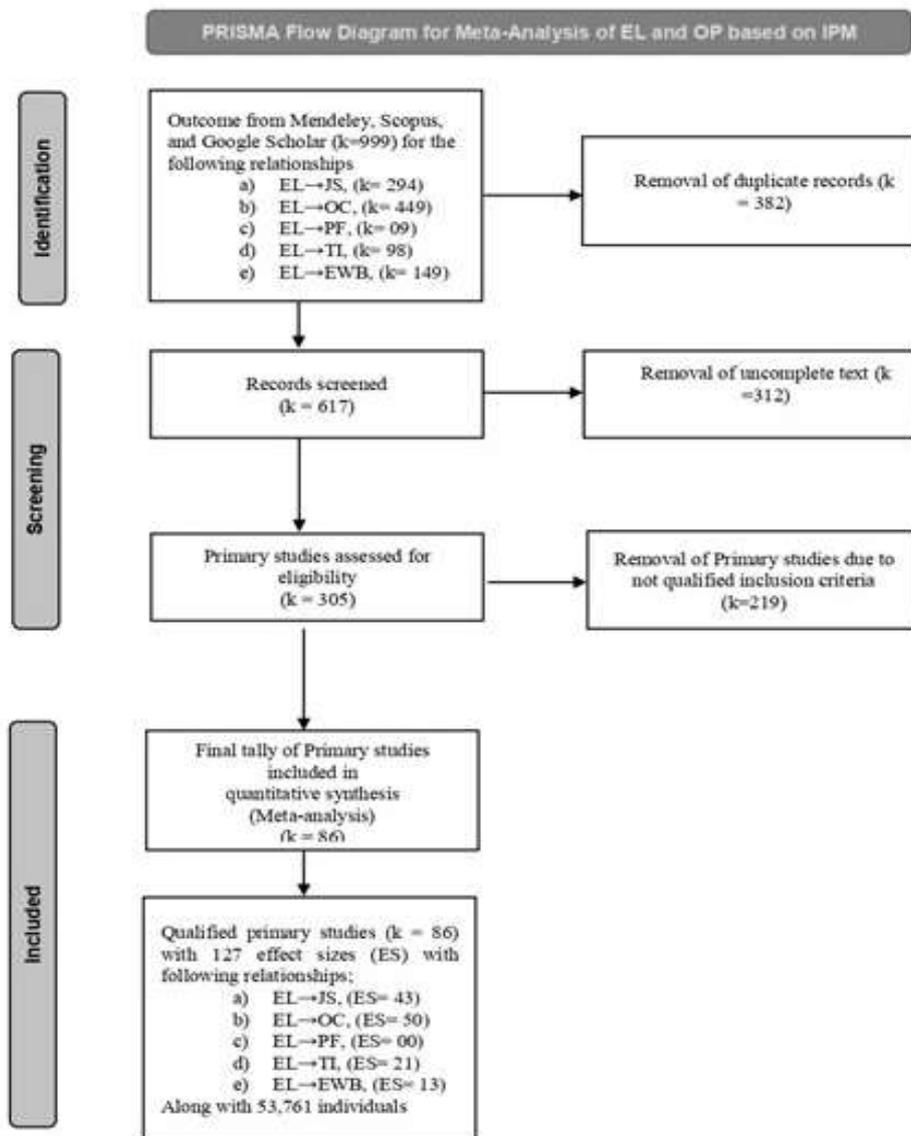


Figure 2 - PRISMA flow diagram for Meta-analysis

Note: PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses; EL = Ethical Leadership; JS = Job Satisfaction; OC = Organization Commitment; PF = Personal Fulfillment; TI = Turnover Intention; EWA = Employees well-being; k = Number of Studies, ES = Effects size in primary study; OP = Organizational Performance; IPM; Individual Performance Measurements

We able to trace k = 999 primary studies on completion literature search. Thereafter, we starting cleaning the data and we removed k=382 primary studies on ground of duplicates. Further, we removed k = 312 primary studies because of uncomplete text. After doing above mentioned task, out of available k=305 primary studies, we implied our inclusion criteria and excluded k = 219 primary studies, which were failed to qualify our inclusion criteria. Hence, k = 86 primary empirical studies with 127 effect sizes as shown in Table 2 qualified in present study with inclusion of 53,761 individuals.

Table 2 – Details of Primary Studies and Effect Size Qualified in the Analysis

Primary Studies	Effect Size included in Analysis						
	Outcome →	Job Satisfaction	Organization Commitment	Personal Fulfillment	Turnover Intention	Employees well-being	Total Effect Size
	Predictors ↓						
86	Ethical Leadership	43	50	Not found	21	13	127

we searched k = 09 primary studies relating to the relationship between ethical leadership and personal fulfillment, however, all these studies failed to qualified our inclusion criteria therefore, we dropped this relationship. Therefore, finally, we initiated our analysis by taking four relationships consisting of ethical leadership and their four outcomes.

Meta-Analysis Methods and Tools

A Random-Effects Model was used for all meta-analysis calculations using the R Meta Packages (Balduzzi, Rücker, & Schwarzer, 2019; Schwarzer, Carpenter, & Rücker, 2015; Schwarzer, 2007). Since we were using correlation data in our meta-analysis, therefore, we choose “Metacor” statistical methods for random effects estimates for meta-analyses with correlation provided by this package in RStudio (Team, 2020). We also used Meta-Essentials Tool - Workbook 5, which is designed to meta-analyze correlation coefficients, (Suurmond, Rhee, & Hak, 2017) to analyzed our data. Random effects models typically provide a more conservative estimate of the effect with a slightly wider confidence interval and higher standard error (Shadish, Cook, & Campbell, 2002; Burke et al., 2006). Borenstein et al. (2009, p.74) suggested that in the Random-Effects Model, the effect sizes in a population may vary and that other factors besides sampling error may influence the observed effect sizes, such as type of sample, measurement instrument, or study design. Fishers’ Z transformation was used to transformed the correlation effect sizes. Correlations were classified in Cohen’s terminology (Cohen, 1988) as small (.10), moderate (.30), and large (.50). To test our hypotheses, we performed an exhaustive meta-analysis for all the relationships covered in our analysis after the removing artifacts due to sampling errors and measurement errors as methods suggested by Hunter & Schmidt (2004, p 74-95).

We decided for missing Cronbach’s alpha by taking the mean of Cronbach’s alpha (see Table 3), which were calculated based on the Cronbach’s alpha values of concern variable extracted from the remaining primary studies included in our meta-analysis (Mackey et al., 2015; Peikai et al., 2020).

Table 3 - Mean of Internal Consistency Reliabilities for All Study Variables

Variables	Reliabilities (α)
Ethical Leadership (EL)	0.89
Job Satisfaction (JS)	0.75
Organization Commitment (OC)	0.83
Turnover Intention (TI)	0.84

To test the null hypothesis that all studies in the analysis shared a common effect size, was measured with the value of Q-statistics. A significant result of it, indicates heterogeneity and a need further to examine moderators (Borenstein et al.,2009). I^2 value cannot be used as an indicator of heterogeneity as low, medium, high (Borenstein, 2021). The value of prediction intervals that tell us how much the effect size varies (Borenstein et al., 2017). To assess the variance of true effect sizes in Fisher’s Z unit, we used the tau² statistic. The 95% prediction interval indicates the range in which the true correlation of any single population falls within a 95% probability (Borenstein et al.,2009).

Results

Meta-Analysis Results

Table 4 presents a summary of results under taken in the present study. After the removal of sampling error and measurement error from observed correlation, we able to find out the value of correct correlations (r_{+C}). Results shows that ethical leadership positively influencing Organizational Performances through Job satisfaction ($k = 43, r_{+C} = 0.55, N = 17,683$), organizational commitment ($k = 50, r_{+C} = 0.57, N = 17,683$), employees well-being ($k = 13, r_{+C} = 0.36, N = 4,683$), and negatively correlated in case of turnover intention ($k = 21, r_{+C} = - 0.08, N = 10,553$). Meta-analysis shows that ethical leadership has positive influences on the organizational performances, which validate that organizational performance as an outcome of leadership styles. The negative association between ethical leadership and turnover intention is of the small and medium magnitudes.

Table 4 - Meta-Analysis results

Variable	K	N	r	ρ_+	ρ_{+C}	CI _{LL}	CI _{UL}	PI _{LL}	PI _{UL}	Q	P _Q	I ²	Tau ² (z)	Tau (z)	z	P _z
EL →Employees behavioral & attitudinal outcomes																
EL→JS	43	20,852	0.49	0.48	0.55	0.54	0.56	0.54	0.56	32.13	0.864	0.00%	0.00	0.00	101.11	0.000
EL→OC	50	17,683	0.47	0.48	0.57	0.55	0.58	0.51	0.61	70.50	0.024	30.50%	0.00	0.04	66.63	0.000
EL→TI	21	10,553	-	-	-	-0.08	-0.08	-	-0.08	0.10	1.000	0.00%	0.00	0.00	-	0.000
			0.18	0.07	0.08			0.08							115.40	
EL→EWB	13	4,683	0.33	0.32	0.36	0.35	0.38	0.35	0.38	2.49	0.998	0.00%	0.00	0.00	57.09	0.000

Note:

- a) k = No. of Studies; N = Sample Size; r = observed correlation based on sample-size-weighted mean; r_+ = Adjusted correlation mean after removing the artifacts of sampling error; r_{+C} = Corrected correlation after removal of sampling error and measurement error from observed correlation, CI_{LL} and CI_{UL} = 95% Confidence interval lower and upper level bound, around the mean true score correlation; PI_{LL} and PI_{UL} = 95% Prediction interval lower and upper level bound.
- b) Q = Heterogeneity test statistics; P_Q = p value <0.001 of Q test; I^2 = Statistics use as the percentage of variability in effects sizes that are due to true differences among the studies; Tau^2 = Statistics use to measure the variance of the true effect sizes and further, weights assigned to the studies assuming random effects; Tau = Statistics used to computing the predicted interval and measured standard deviation of the distribution of true effect size.
- c) EL = Ethical Leadership; JS = Job Satisfaction; OC = Organization Commitment; TI = Turnover Intention; EWA = Employees well -being;

Discussion

The aims of the present study to see the impact of ethical leadership on organizational performance based on individual level performance measurement. To achieve this aim we conducted a meta-analysis of a total of four relationships consisting of one leadership styles, i.e., ethical leadership, with five individual level performance measurement outcome variables like JS, OC, PF, TI, and EWB. However, we extracted the useable data for the present meta-analysis study only for four relationships. Therefore, we had dropped one relationship i.e., Personal Fulfillment. As suggested by Derue & Humphrey (2011), we also advocated that the present

study intends to contribute to the literature and theory development in leadership based on the meta-analysis results. Results show that ethical leadership has positive influences on organizational performances. The findings of present study for all four relationships are inconsistent with previous empirical work, as discussed below:

Ethical Leadership (EL) '!' Job Satisfaction (JS)

First result of the present study shows there is a positive relationship between EL and JS ($r_{+C} = 0.55$). The meta-analytic results support our hypothesis 1a (i) that EL improved the organizational performance, which can interpretate from the a positive relationship between EL with JS. This result is consistent with the work of previous research (Kaffashpoor & Sadeghian, 2020; Tafolli & Grabner-Kräuter, 2020; Özden et al., 2019). These results show that employees feel about EL as honest, trustworthy, people of integrity, credible and predictable. The study conducted by Mostafa, Farley, & Zaharie (2020) argued that EL reduces disengagement, which promotes higher levels of job satisfaction. Ahmad & Umrani (2019) suggest that employees' job satisfaction, a key antecedent of other important behaviors such as turnover intention, enhanced job performance, etc., can also be achieved by demonstrating ethical behavior at work through EL. The study conducted by Güngör (2016) suggested that EL's positive relation to all dimensions of JS and JS increases when EL increases, which is directly associated with organizational performance. These results provide a light to open up a space that EL is related to attitudes that generate a positive effect on employees' JS.

Ethical Leadership (EL) '!' Organizational Commitment (OC)

The second result of the present study shows there is a positive relationship between EL and JS ($r_{+C} = 0.57$). The meta-analytic results support our hypothesis 1a (ii) that EL improved the organizational performance, which can interpretate from the a positive relationship between EL with OC. This result is consistent with the work of previous research (Negis Isik, 2020; Mostafa, Farley, & Zaharie, 2020; Wang & Xu, 2017). These results show that the EL style help in reducing disengagement at the workplace, which promotes higher levels of OC. Employees feel committed toward the organizations in which they work because EL always keeps them motivated through their participation in decision-making, reinforcement of two-way communication among the follower and personal actions and interpersonal relationships. In the study conducted by Wang & Xu (2017), results showed that although EL would lead to high OC when employees' core self-evaluation was high or perceived organizational support was low, it would have null or even adverse effects under other circumstances. Based on these results, we can say that EL inculcates sense among the employees to identify themselves with organizational goals and to promote them to achieve these goal.

Ethical Leadership (EL) '!' Turnover Intention (TI)

According to the third result of the present study shows there is a negative relationship between EL and TI ($r_{+C} = -0.08$). The meta-analytic results support our hypothesis 1b that EL style is negatively associated with TI, reducing the high cost associated with recruiting and training new employees and improving organizational performance. This result coincided with the previous studies (Ahmad & Umrani, 2019; Nejati et al., 2020; Shafique et al., 2018). Furthermore, these results show that EL is closely associated with demonstrating ethical behavior at work, which is a crucial antecedent for success and failure of an organization.

Ethical Leadership (EL) '!' Employee's Well-being (EWB)

The fourth result of the present study shows there is a positive relationship between EL and EWB ($r_{+C} = 0.36$). Results support our hypothesis 1a (iv), which show that positive results between the relationship EL and EWB, enhance organizational performance. This result is consistent with the work of previous research (Freire & Bettencourt, 2020; Li et al., 2013; Muhannad, 2019; Ahmad and Saima, 2020). The study conducted by Ahmad and Saima (2020) explores a positive relationship between EL and EWB and suggests that the occurrence of unethical behavior plays a more potent role than ethical behavior in shaping EWB. Li et al. (2013) and Muhannad (2019) highlighted the positive relationship between EL and EWB. The study conducted by Fu et al. (2020) observed that EWB at work is related to the satisfaction in work achievement, and when the satisfaction in work achievement is reduced, their well-being may also be reduced. We can conclude based on these results

that EL positively influences EWB, which ultimately taken care off genuinely employee's family happiness, work-life balance, emotional health, and personal growth.

Recommendations for Future Research

We suggest the future researcher must work to development of specific scale for measurement personal fulfillment variable. As we unable to find any specific scale to measure personal fulfilment . Goñi et al. (2011) developed Structure of the personal self-concept (PSC) questionnaire with four dimensions: self-fulfillment, autonomy, honesty and emotional self-concept, However,. Banks et al. (2021) argued that the definition of Ethical Leader behavior (ELB) should also be included the expression of moral emotions, which open up the opportunities for future researcher to empirically testing moral emotions dimension in the ethical leadership behavior. Further, on the line of suggestion given by Houghton, Neck, & Krishnakumar (2016), we also suggest that in the future, researchers should investigate the role of workplace spirituality as possible mediators and moderators between ethical leadership style and organizational performance. Finally, although in the present study we covered the measurement of organizational performance at the individual level (Houghton et al., 2016; Koopmans et al., 2011; Krishnakumar & Neck, 2002), we recommended that future research should measure organizational performance at the team level (Kendall and Salas, 2004) and organizational level (Hubbard, 2009).

Conclusion

A leader takes all the decisions in an organization about objectives, planning, strategies, goal, motivating personals, and vision. These tasks can be achieved with the coordinated efforts of all personnel. In the 21st century, every leader, by following ethical behavior style, has to play a vital role to save the organization from challenges. A leader has to reassess and reevaluate how they work incessantly and to understand, adopt and implement changes in their business model in response to changing trends to enhance organization performance at the individual level, team level (Kendall and Salas, 2004), and organizational level (Hubbard, 2009). Meta-analysis finding of the present study shows that all ethical leadership styles positively impact organizational performance. As discussed in the previous section, negligible empirical studies relating to the personal fulfillment relationship were held; therefore, in the future, researchers should investigate this relationship empirically. Organization's future performance depends upon the decision taken by the leader in the present and if such decision will be based on the ethical behaviors, then, we can ensure the success of an organization. In the last, we must advocate based upon our finding that as ethical leadership enhance organizational performance, therefore, each organization must adopt ethical leadership in their organization for their success.

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Data Availability

Online data for current study is available through Mendeley Data Base

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Women Entrepreneurs in Uttarakhand and Their Contribution to Society

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Agrora (Dharmandal), Tehri Garhwal, Uttarakhand

Abstract

The term women entrepreneurs came into enlightenment within the nineteenth century. According to the United Nations agency women entrepreneurs are referred to as “Women who innovate, imitate or adopt a business activity”. In India, the participation of women in economic development was primarily noticeable when the introduction of liberalization, privatization, and global economic policy in 1991. The economic policy resolution highlighted the necessity to grow women’s entrepreneurship programs to come forward into the arena of business and entrepreneurship. Women are currently occupying corporate positions with antecedents thought to be masculine and are overtaking their male counterparts in some areas. The gender stereotypes about occupational roles are breaking slowly. In the state of Uttarakhand, women have always been considered the backbone of the rural economy because of their total involvement with farming and related activities. In 2015 the government of Uttarakhand launched a special incentive scheme for the empowerment of women in hilly remote areas of the state, to become self-reliant by establishing their enterprises and emerge as employment providers in society. Therefore, the present study aims toward the women entrepreneurs in Uttarakhand and their contribution to Society. The study concluded that in the past few years, the role of women in our society has changed swiftly for the betterment of society. Women are recognized as an entrepreneur and a vital source of social and economic development. They are making themselves self-reliant, and increasing employment opportunities for others.

Keywords

Women Entrepreneurs, Contribution, Participation, Empowerment.

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Aaradhana Bandhani

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Introduction

The Government of India states that a business owned and operated by women that save at least 51 percent of the organization's capital and give at least 51 percent of the jobs produced in the industry to women are considered a women entrepreneur [1]. In other words, a group of women or a woman who establishes, organizes, and runs a business enterprise are known as women Entrepreneurs. In this global era of development process women are considered the equal partner for the overall development of a country. Slowly but gradually, women entrepreneurs have emerged across the globe as successful entrepreneurs in different fields and received several awards for themselves [2]. A few decades back in India, barring a few exceptions, women were not liberally associated with economic activities, management, and ownership of business firms. However, due to urbanization, globalization digitalization, and start-up booms, numerous women courageously stepped into entrepreneurship and are participating in the present business world. Nowadays, women are finally standing on their feet to celebrate the idea of entrepreneurship and are making rapid strides in becoming effective entrepreneurs. [3]. The government of India formulated various policies and programs and in- introduced special incentives and campaigns to promote the development of women entrepreneurs [1]. In the state of Uttarakhand, women are considered the backbones and revenue generators for their family community and society due to their complete involvement in agriculture, forest production, animal husbandry, or dairy farming. Most of the women in Uttarakhand are employed in one way or the other [4]. They are actively engaged in all activities from home to the field. They work in every field like medicine, engineering, education, corporate, media, etc., and contribute to society's development. Nowadays she is also emerging as an accomplished entrepreneur in the field of entrepreneurship. This changing status of women entrepreneurs cannot be improved without the active interference of the government [5]. In the state of Uttarakhand, the government launched a special incentive scheme for women entrepreneurs on 15 August 2015 under the MSME policy. Under this scheme, investments are made in women's enterprises by way of capital and interest subvention. The main objective of the special incentive scheme was to utilize local resources, generate employment opportunities, promote entrepreneurship, and skill development among women so that they become self-reliant by establishing their enterprises and emerging as employment providers in society [6]. Entrepreneurship among women in Uttarakhand has come a long way. Various past experiences have shown that entrepreneurship is an important instrument for women's empowerment and economic development. According to a news report from Jagran, in the last five years, 189 women in the state have taken steps toward becoming entrepreneurs by setting up their industries. In the view of Industry Director Sudhir Nautiyal, the government is working on five schemes for entrepreneurship development. In three years, two thousand women will be linked with entrepreneurship [7].

Hence in view of the above, the present study is an attempt to assess the women entrepreneurs in Uttarakhand and their contribution to society. The information used for this study was based on secondary data that had been collected through various websites, newspapers, and research articles.

The Study Findings

The present study was an attempt to assess the women entrepreneurs in Uttarakhand and their contribution to society. In recent years, there has been a startup boom in our country. Due to globalization, digitalization, and start-up growth, India is seeing a revolution for women entrepreneurs. With increased awareness of women's roles and economic standing in society, their hidden entrepreneurial potential has been rising. From the small, rural level to big cities,

women are making their mark everywhere. In the state of Uttarakhand, energetic women are leaving government jobs and other better professions and now grooming their careers in the industrial sector. They have taken steps toward becoming entrepreneurs by setting up their ventures and are showing their dominion in the field of entrepreneurship as well.

Women Entrepreneurs and their Contribution to Society

Here are some entrepreneurial women from Uttarakhand who have turned their ideas into reality, braving

all odds and challenges. And, are also bringing change in society. They are making themselves self-reliant, and increasing employment opportunities for others.

Divya Rawat: Divya Rawat is known as the Mushroom Lady of Uttarakhand and belongs to Kandara village in Ukhimath. She has renewed the mushroom cultivation concepts and brought a revolution in this sector. She started cultivating mushrooms at a very young age and is now redefining livelihood options in Uttarakhand. Divya has taken up mushroom cultivation as a mission. She aims to expand mushroom cultivation to every household in Uttarakhand. Divya today runs the Soumya Foods Private Limited Company and provides employment and livelihood to women as well as the youth of the region. Because of her unprecedented work, she became the brand ambassador of Uttarakhand and was also awarded the Naari Shakti award, presented to her by the President of India Pranab Mukherjee himself.

Tanya Kotnala and Tanya Singh: Tanya Kotnala and Tanya Singh, are running a social enterprise titled Bhuli for reviving and protecting endangered local art, culture, food heritage, nutrition, and healthcare of Uttarakhand. The Bhuli organization was founded by Tanya Kotnala in 2016 through a social networking site. While working with the Ministry of Textiles for communities of Assam, she realized that there is no space for art in Uttarakhand compared to the advanced work of arts and crafts in Assam. When she returned home, she met nutritionist Tanya Singh again. These two young women and family friends first collaborated on a breastfeeding awareness project initiated by the Ministry of Women Empowerment and Child Development, Uttarakhand. The ideology of this organization is based on Swadeshi and simplicity. It aims to provide relevant education and awareness to underprivileged children, youth, and women, to promote culture, nutrition, and proper health care in a traditional and sustainable manner. These two young women are engaged in creating several calendars to promote the cultural diversity of India moreover the lesser-known dance forms of the country. The ideas of Bhuli organizations bring concrete social change and also inspire many young girls in the region to become self-reliant.

Purkal Stree Shakti Samiti (PSSS): Purkal Stree Shakti Samiti was founded in 2003 by three young designers Bunny Batta, Aastha Giri, and Aishwarya Enola Patri. Purkal Stree Shakti Samiti is a group of women in Uttarakhand, who are motivated and dedicated to empowering underprivileged rural women through hand embroidery, embroidery, patchwork, and appliqué (a traditional sewing method). This organization had made a positive impact on the lives of more than 170 women coming from more than 40 villages. PSSS aims to make village women self-sufficient, by training them in entrepreneurial activities and skills. The organization seeks to train and skill women so that they can produce handmade products and sell them in the open market. As a result, trained and skilled women can earn money, become more empowered and independent, and develop leadership skills within themselves. Purkal organization is not only encouraging rural women to become entrepreneurs but also making a significant contribution to making them empowered and successful entrepreneurs.

Ms. Hiresha Verma: Hiresha Verma is Hanzen Technologies Pvt. managing director and CEO. Ltd. She changes the lives of more than 2,000 women in the Doon Valley of Uttarakhand. Hiresha applied his entrepreneurial enthusiasm to start a successful social activity a mushroom growing company. She also tried to grow up medicinal mushrooms such as Shiitake, Ganoderma, Cremini, and Enoki varieties, which are anti-cancer, anti-viral, and anti-oxidant. She learned about mushroom cultivation and varieties in Krishi Vigyan Kendra, Dehradun, Uttarakhand, and trained in the ICAR department of Mushroom Research situated in Solan, Himachal Pradesh. Hiresha is now helping farmers grow mushrooms in the hilly region of Tehri and Pauri Garhwal. In 2019, she founded Han Agrocare to help farmers get a better commercial and business platform to sell their products. For her efforts, she also received the female entrepreneur award in 2011 and the “Popular Women of the Decade Award in 2014”. Hiresha’s efforts are truly commendable, she helped so many women to gain a sustainable livelihood and a better standard of living.

Minakshi Khati: The founder of Minakriti, Minakshi Khati is popularly known as the Aipan girl of Ranikhet in Uttarakhand. Aipan is a traditional art painting made of organic materials such as red paint (geru) and white rice paste, which is done on walls and floors. This art was mainly done by women to decorate the

entrance of the house and places that should bring good luck and ward off evil. Their house tiles are particularly in demand. They also design various decorative items like rakhi, mandala paintings, candle lamps, etc. Meenakshi not only strives to revive the art form but also motivates women through her initiatives. In accordance with this goal, it gives opportunities for rural women to become independent. She runs workshops to educate these women about the art form and effective commercialization. His journey created ripples wherever his work took place. He encouraged others from the country to practice this art form. The founder of Minakrit, Minakshi Khati is popularly known as the Aipan girl of Ranikhet in Uttarakhand. Minakriti uses Aipan patterns in many ways. Aipan is a traditional art painting made of organic materials such as red paint (geru) and white rice paste, which is done on walls and floors. Mainly, women made this art to decorate the entrance of the house and places that were supposed to bring good luck and ward off evil. Their house tiles are particularly in demand. They also design Rakhi, Mandala paintings, candle lamps, and various decorative items. Meenakshi not only strives to revive the art form but also motivates women through her initiatives. In accordance with this goal, it gives opportunities for rural women to become independent. She runs workshops to educate these women about the art form and effective commercialization. Her journey created ripples wherever her work took place.

Shashi Bahuguna: Shashi Bahuguna started her venture named Naamakavali in 2018, to bring to the world the healthy and organic flavors of Himalayan villages and continue his family's legacy. namakvalli prepare a scented salt with Himalayan herbs in traditional Sil-Batta. A group of about 10-11 women makes a variety of salted rock which is called 'Pisue Lun' i.e., rock salt, which has been made for centuries. She supplies this salt to different cities of the country through online marketing and courier services. Today, Namakwali has a range of products from flavored salts to chutney powders and ghee. Through its initiative, Namakwali uses traditional kitchen knowledge to provide employment opportunities and outreach to rural women. It is an effort to save our culture and hand it over to future generations and make ourselves self-reliant.

Shikha Prakash: Shikha Prakash and Robin Nagar co-founded an agritech Start-up "Val- ley Culture" to build a healthy sustainable lifestyle. They are working with farmers from across the state, to ensure fair prices and supply pure, traditional, and nutritious farm produce to the world. Working hand in hand with the farmers and community women Valley Culture India empowers women workers to grow, pound, and harvest food using traditional methods, and it ensures that the nutrients in the traditional food offered are retained. Valley Culture India has a community of over 500 women across the state to whom it is providing hope, support, and livelihood.

Saina Siddiqui and Anila Siddiqui: Saina Siddiqui and Anila Siddiqui, residents of Doon, not only started self-employment on the basis of their skills but also provide employment for 23 housewives around them. In the year 2015, both sisters took a loan from the Industry Department under the Prime Minister's Self-Employment Scheme and started making women's garments of various attractive designs at home. Moving forward with continuous hard work, in the year 2018, both sisters also started keeping handicrafts. Now, in the name of Siddiqui Sisters, there is a collection of great design garments in Doon Haat, IT Park. These two sisters aim to connect two hundred women with self-employment in the next two years.

Divya and Indira: Divya, who lives in Pauri Garhwal, Uttarakhand, set up an enterprise in 2015 called 'Himalayan Haat' with her mother Indira. This enterprise of hers is not only her identity but also the identity of about 25 Pahari women working with her. Himalayan Haat, Divya, and Indira are making different types of products by processing fruits, vegetables, herbs, dry fruits, etc. grown in their fields. They started with pear drinks. Today she is making about 30 different types of products. Their products depart from Pauri Garhwal and reach Delhi and are subsequently sent from there in accordance with various orders from some direct customers and about 40 retailers. Through their dedicated efforts, Divya and Indra have a positive impact on the lives of poor women living in the mountains.

Discussion

The findings of the present study suggest that increasing participation of women in the field of entrepreneurship plays a vital role in changing society. These changes are related to a better lifestyle, freer thinking, and higher economic opportunities. It has been found in this study that by running small-scale enterprises

in Uttarakhand, women entrepreneurs have not only improved the economic condition of their families but have also helped in the economic progress of the state along with providing employment to other women. The Women entrepreneurs are providing employment opportunities and outreach to rural women. They are creating a lot of awareness in the community by empowering women in both rural and urban areas. Traditionally women are dependent on men for their money matters and family decisions. But in modern times, due to the entry of women entrepreneurs in the industrial sector, they have achieved self-reliance, which has increased their social status and self-confidence. These women entrepreneurs are making rural women self-reliant by training them in entrepreneurial activities and skills.

Traditional art forms are the heart and soul of any culture. These unique women entrepreneurs of Uttarakhand are harnessing their long-lost traditional knowledge through modern means to revive cultures. These women are re-fashioning traditional art, culture, and food practices by using their traditional knowledge from the kitchen to provide employment opportunities and pass them on to the generations to come.

Through various articles and web stories related to women entrepreneurs, it can be seen that women entrepreneurs aim to create a safe and sustainable workplace and stop mountain migration so that there are green fields and forests again. They believe that it is better to work hard on one's own land among one's own people than to wander in search of work in big cities. Role models are important in the world of entrepreneurship. Successful women entrepreneurs serve as powerful role models and inspire other women to start businesses. To increase the number of women entrepreneurs in the world, it is important to find successful women entrepreneurs and share their success stories with others. By hearing these inspirational success stories, women will feel more equipped to reach their goals and achieve their entrepreneurial dreams. In recent decades there has been a change in the mindset of the people and in their opinion, women have entered into entrepreneurship with full vigor and are playing a vital role in the development of the country. With the continuous financial support of the government, their participation in the resolution of a self-reliant India is increasing day by day. Women are not only empowering themselves but also contributing to strengthening the country's economy.

Conclusion

Women entrepreneurship is considered an important means of economic progress in any country. It has been observed in this study that the number of women entrepreneurs may be less in relation to the target, but it is encouraging. The Government of India and the Government of Uttarakhand have come up with several government policies for women entrepreneurs to start their own ventures. Various schemes are being run by the government to encourage women entrepreneurs and educate them on various aspects. Women entrepreneurs in Uttarakhand are not only making themselves self-reliant but also increasing employment opportunities for others. In the recent decades, women have emerged as an important part of entrepreneurship, they are playing a vital role in the development of the country. Their participation in entrepreneurship is increasing day by day. And they can be expected to lead the change and growth in the field of entrepreneurship in the years to come.

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Potentials of Homestay Tourism for Rural Development in Uttarakhand Garhwal

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Abstract

Being a permanent residence in a village of Uttarakhand Garhwal, I have chosen "Potentials of Homestay Tourism for Rural Development in Uttarakhand Garhwal" as the title of my research paper. The Government of Uttarakhand has made one of the biggest efforts to diversify its cultural tourism product through the Deen Dayal Upadhyay Homestay Scheme. Besides, the Homestay Scheme aims at a new form of rural development in the state. This research paper aims to highlight the income level of stakeholders, business opportunities and development of traditional culture in rural areas of Garhwal based on descriptive research. Both primary and secondary data were used for this research. Primary data were collected by convenience sampling. 58 homestays were selected from rural areas in 7 districts of Garhwal Mandal of Uttarakhand. Literature, newspapers, YouTube channels and other sources were used for secondary data. The results of this study show that the income level of the stakeholders has increased since the establishment of the homestay. The homestay program gave local people the opportunity to start their own businesses and of course also contributed to the development of local traditional culture in rural Garhwal. And especially where homestay clusters were established, the economic status of the participants increased. At the same time, this research also shows that program like homestays take a long time to achieve their goals due to the lack of basic services like electricity, water, roads, etc. in rural areas.

Keywords

homestay tourism, rural Garhwal, source of income, business opportunity, traditional culture.

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Introduction

The people of Uttarakhand are simple by nature and follow the ancient Vedic tradition of “Atithi Devo Bhava” or “Guests are a form of God”. People take personal care of their guests here, and the homestay program currently plays an important role. The government of Uttarakhand has launched a homestay program to promote rural development, curb out-migration and promote self-employment. As we know, homestay is a combination of two words: home and stay, which means to stay at home and enjoy local cuisine with local traditional culture (Jaswant Singh Jayara, 2017). Homestay provides the guests with a familiar environment and provides all the facilities related to the accommodation with minimal costs. Another aspect is that homestay allows the host family to engage in self-employment and the income generated by the homestay increases the host family’s income level. Several authors in their studies consider the homestay as a source of income, a community development channel, an economic promoter and a minimization of migration. For example, Ruchi Harish defined that a homestay is a short-term stay in a house as a paying guest, where the guest is provided with cheap accommodation and services by individual families and local communities (Ruchi Harish Arya, 2019). Ritika Singh et al. states that a homestay is a tourist’s stay in a home run by a local family. In the homestay concept, a tourist usually stays with a host family and experiences or learns about the daily and cultural activities of the family and the local community. In this program, the host family observes the local culture and local products while eating, cooking, etc. and getting a reasonable fee for it. Since homestay can provide additional income and employment to the community, more participants are motivated and encouraged to run homestay (Pusiran, 2013). There are many activities that can be developed by homestay operators or local communities themselves, especially those directly related to traditional culture and customs. Homestay guests should learn about local culture and customs and have the opportunity to participate. This will promote both local culture and economic benefits for local people (Roslan Talib et.al. 2017). The development of hospitality tourism can promote economic empowerment and job creation in rural communities through sustainable livelihoods (Ratna Bhuyan, 2020). The homestay program has become a tool for job creation and economic growth in the local community. This idea is especially prevalent in rural areas that combine cultural and environmental resources. These types of programs encourage visitors to experience and see the culture of places off the beaten track while directly contributing to the local economy.

Homestay Scheme in Uttarakhand State

The local people of Uttarakhand are generally referred to as Uttarakhandis and sometimes specifically as Garhwali or Kumaoni, depending on their place of origin in the Garhwal or Kumaon region. The population of Uttarakhand is 1,00,86,292 of which 69.77% live in rural areas and 30.23% in urban areas (Wikipedia). The state of Uttarakhand is divided into two regions: Kumaun (with 6 districts) and Garhwal (with 7 districts). Garhwali is the name for the people of Garhwal who speak the Garhwali language. The city of Pauri serves as the administrative center for the Garhwal division. Initially, the homestay program was introduced institutionally among the rural population (M.M. Rabu et.al; 2020). The Government of Uttarakhand has also taken this creative step by launching the Deendayal Upadhyaya Homestay Scheme, which provides comfortable homestay accommodation to tourists with standardized world-class services to increase the availability of accommodation in rural tourist destinations. The main concept is to create a clean and economical environment for foreign and local tourists, with an opportunity for tourists to stay with Uttarakhandi families to learn about Uttarakhandi customs and traditions while enjoying traditional Uttarakhandi cuisine. This study examines the prospects for income generation and economic growth in rural areas by examining homestays in the Garhwal region of Uttarakhand. In the hilly districts of the state as well as in the urban areas, but in this article we focus only on the rural areas of Garhwal. To promote the homestay program, homestays are registered on the Uttarakhand Tourism Development Corporation (UTDC) website are supported by the state government by exempting the income of the registered homestay from SGST for the first three years established by the state government. The Government of Uttarakhand provides a loan subsidy of up to 33% or Rs 10 lakh in rural areas and up to 25% or Rs 7.5 lakh in urban areas (whichever is lower). Provision of interest rebate on loan amount up to 50% or Rs 1.5 lakh (in lesser cases). All these measures play an important role

in the development of homestays in the state. The government aims to develop the state's tourism policy and create opportunities for self-employment. The policy will come into effect on 20 April 2018 (Dileep Jawelkar, Secretary to the Government of Uttarakhand, 2019). In the state of Uttarakhand, the Home Stay Scheme will greatly contribute to the development of the tourist state (Ruchi Harish, 2019). The Government of Uttarakhand has introduced the Homestay Scheme to create self-reliance and grow the economy, introduce tourists to the cuisine, cultural and historical heritage and traditional Pahar style of the state, prevent migration by creating local jobs and build 5000 homestays under Vision 2020. Government of Uttarakhand makes every effort to help the development of the local people and problems such as increase in their income, development of society, availability of self-employment etc. can be solved.

Literature Review

There are several studies in the literature that describe the role of hospitality tourism in supporting the economy, self-sufficiency and development of community or traditional customs; hospitality tourism is considered a development strategy. A comprehensive regional development strategy can be developed through hospitality tourism. This plan to strengthen the position of local areas; Whether it is an economic, social or political situation, hospitality tourism has been able to reveal its potential. Previous studies on homestay tourism talk about opportunities for job creation, community development, economic development internationally and nationally, and some other various areas, but I have not found any study specifically related to Garhwal Mandal. Hence I chose Garhwal Mandal for my study. It is uncertain from which angle to look at rural tourism which provides huge opportunities for future research in this area (Nik Alif Amri Nik Hashim, et.al; 2018). Homestay is a platform where locals are interested in being hosts and tourists spend time with locals to experience their lifestyle, food, culture, etc. In this process, tourists can enjoy different kinds of culture of local people. Both locals and visitors share their experiences of different cultures so that both can learn and experience from each other (Anmol Srivastav et.al; 2022). Homestay is such a rural business where the whole family benefits from the participation in this (Isabel Kannegieser, 2015). For this, it is necessary to develop infrastructure, especially road connectivity and basic needs such as banking, finance, medical facilities, appropriate sources of information and communication channels about tourist sites to increase the attractiveness of tourist sites (Bindu Roy, 2020). Homestay is one of the best means of promoting the socio-economic well-being of rural people, but to fully benefit from it, local residents must be trained with basic knowledge and skills (Dr. Bipasha Chetiya Barua, et.al; 2018). Income from the homestay program benefits not only the homestay operators, but also the entire community. Local people also get an opportunity to increase their income when tourists participate in cultural activities and buy some services such as selling souvenirs, selling local products, traveling, etc. (Jamaliah Said et.al; 2014). This research focused on tourism in rural homestay and Komathi Vasudawan has well defined that tourism resources are identified as mediators because the use of tourism resources increases the effect of rural culture and cultural attractions, thereby reducing the poverty rate (Komathi Vasudawan et.al 2021) . Lokenda Woli states that the initiative of host families in rural areas is expected to bring additional money to the local community. Host families are a potential economic activity for the local community. The homestay program contributes to economic development and job creation in the local community (Lokendra Woli, 2022). Nikhil Saini in his research pointed out two determinants, firstly the 4 A's which are 1. accessibility 2. affordability, 3. Attractiveness, and 4. authenticity. These factors are very important for the development of the homestay. Therefore, the concerned government must pay attention to these things so that a comprehensive development of the homestay tourism can take place (Nikhil Saini et.al; 2022). In terms of traditional culture and daily activities, Pornpimon Kampetch's research showed that Ban Rim Klong homestay in Thailand is a self-sufficient community with a self-sufficient economy and that homestay tourism includes gifts to monks, making Thai desserts, baskets, coconut, sugar glow, worm sightseeing drives, planting mangrove forests, etc., on which the activity focuses. As stated in the homestay program, traditional customs and activities should be merged to attract tourists from homestays in rural areas (Pornpimon Kampetch et.al; 2019). Ratana Bhuyan in their research acknowledges that the development of rural tourism can promote economic empowerment and job creation in

rural communities through sustainable livelihoods (Ratana Bhuyan, 2020). From the literature review it is found that homestay tourism is benefiting the local people and there is improvement in rural economic development.

Objectives

1. To find out the impact of homestay tourism on the income of homestay stakeholders in rural Garhwal.
2. To evaluate homestay tourism as a business opportunity in rural areas of Garhwal.
3. To find out the impact of homestay tourism on traditional culture in rural areas of Garhwal.

Research Questions

1. Does homestay tourism help generate income for stakeholders in rural areas of Garhwal?
2. Does homestay tourism provide business opportunities in rural areas of Garhwal?
3. Does homestay tourism help the development of traditional culture in rural areas of Garhwal?

Research Methodology

To achieve the objectives of the study descriptive research method has used. Both primary and secondary data are taken for the this. The samples for the study were collected by convenience sampling from 7 districts (Uttarkashi, Tehri, Pauri, Chamoli, Rudraprayag, Dehradun and Haridwar) of Uttarakhand Garhwal. Primary data is collected from rural areas of Garhwals' districts by sturctured online questionnaire and Secondary data is used from Uttarakhand Tourism Development Corporation (UTDC) website, literature, online sources, newspapers, magazines, reports on homestay tourism etc. Using sampling, an online questionnaire was sent to 250 respondents via Gmail, WhatsApp and SMS. But due to network, connectivity issues and lack of suitable medium in the respondents area, only 58 respondents were able to submit their responses which were collected for data analysis. Statistical tools like- mean, median, standard deviation, maximum and minimum were used to data analysis.

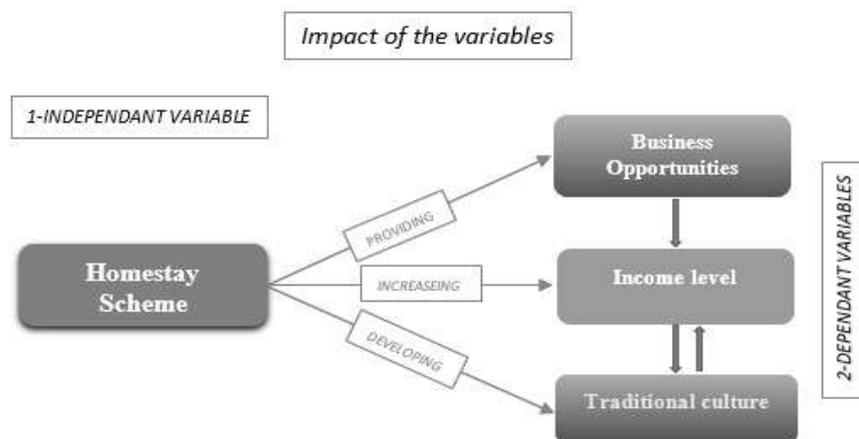


Figure - 1 Conceptual Framework of Study

The impact of independent variable on dependent variables defined in this conceptual framework. In this framework that homestay scheme is effecting on income level of stakeholders', business opportunities and traditional culture. And also traditional culture is helping to boost the income of local people by different way which are defined in the results and findings.

Data Analysis

Tabulation of data				
Responses 58 Participants'				
SN	Characteristics	Description	Frequency	Percentage
1	Gender	Female	7	12.07
		Male	51	87.93

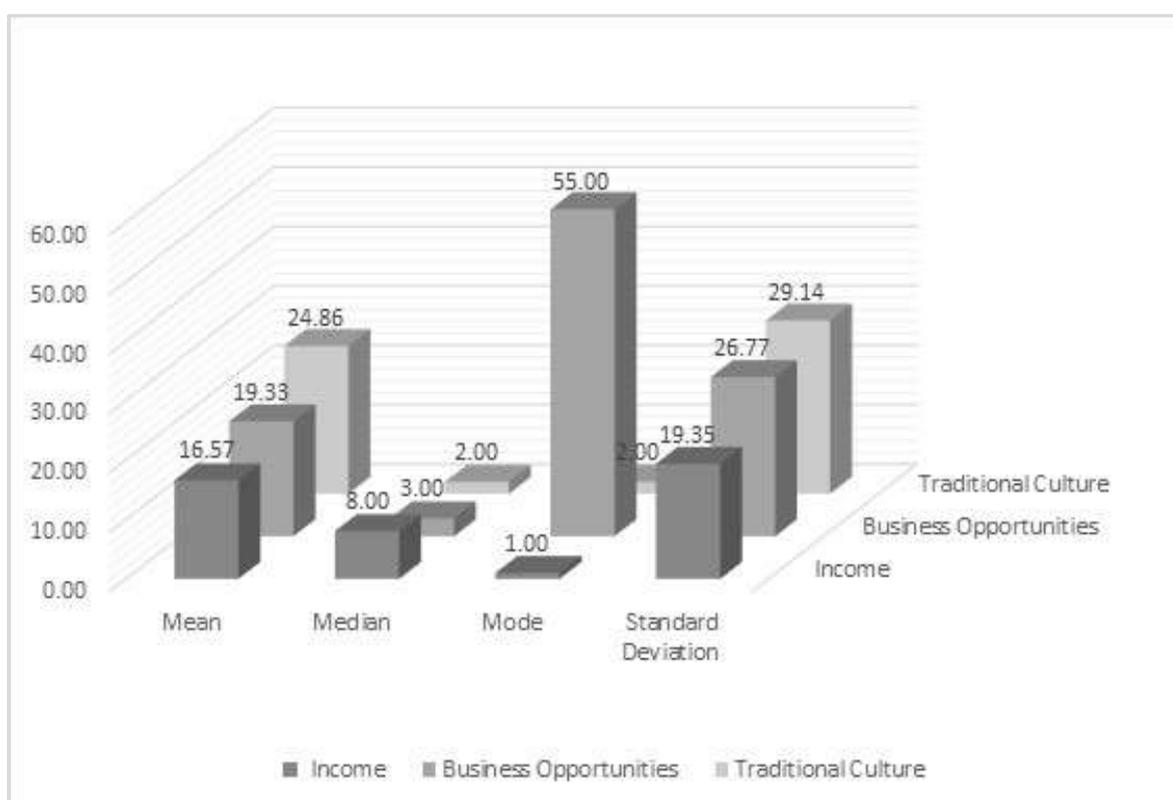
2	Age Group	below 25 years	2	3.45
		26-40 years	27	46.55
		41-60 years	28	48.28
		above 60 years	1	1.72
3	Educational Level	Illiterate	2	3.45
		high school	4	6.90
		Intermediate	16	27.59
		UG	33	56.90
		PG	2	3.45
		Other	1	1.72
4	Other occupation with homestay	Agriculture	35	60.34
		Govt. servant	5	8.62
		Adventure and water sports	3	5.17
		Other	15	25.86
5	Member involved in Homestay	less than 2	20	34.48
		3 to 4	36	62.07
		5 to 6	2	3.45
Section-A Income related				
Characteristics		Description	Frequency	Percentage
6	Homestay tourism is only source of income.	Yes	25	43.10
		No	30	51.72
		Yes/No	3	5.17
7	Your annual income.	>50 k	2	3.45
		50 k to 1 L	5	8.62
		1 L to 2.5 L	21	36.21
		2.5 L to 5 L	18	31.03
		5 < L	12	20.69
8	Homestay tourism is increasing the income of homestay stakeholders.	Yes	56	96.55
		No	2	3.45
9	Local people are getting benefits by Homestay tourism.	Yes	58	100.00
		No	0	0.00
10	Local people are benefitted by homestay tourism through-	Travelling	36	62.07
		Adventure	1	1.72
		Local Goods	1	1.72
		Domestic Products	3	5.17
		travelling & Adventure	8	13.79
		All	9	15.52
11	Income of members involved in your annual average income.	Yes	53	91.38
		No	4	6.90
		Yes/No	1	1.72
Section-B, Business Opportunity related				
Characteristics		Description	Frequency	Percentage
12	Homestay tourism is a good option for self-business or employment.	Yes	55	94.83
		No	2	3.45
		Yes/No	1	1.72

2. Respondents' and their responses value in percentage form.

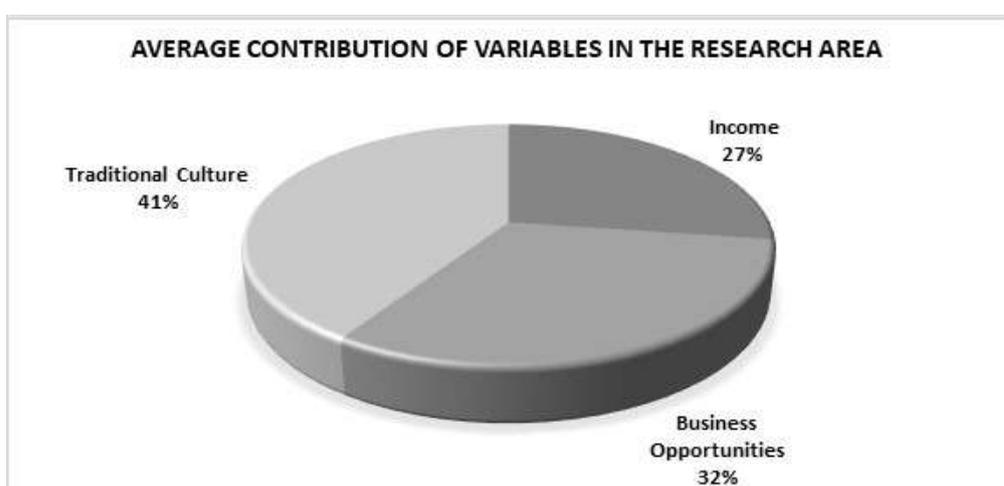
Descriptive statistics of the data			
Description	Objective of the study		
	Income related	Business Opportunities related	Traditional Culture related
Mean	16.57	19.33	24.86
Median	8.00	3.00	2.00
Mode	1.00	55.00	2.00
Standard Deviation	19.35	26.77	29.14
Minimum	0.00	0.00	1.00
Maximum	58.00	55.00	57.00

3. Results of Descriptive statistic of the Data.

Statistical data of the Study



4. Districtive statistic data by diagram.



5. Pie Chart shows the contribution of the variables in the rural Garhwal of Uttarakhand.

Results and Findings

In the table 1, the details of the respondents and their answers are converted into percentages. The results of this table show that the percentage of males is more than women participating in homestay program. Maximum 41-60 years age group's are involved in homestay tourism in rural areas of Garhwal. Here, the maximum number of stakeholders run their homestay part-time or side-by-side with other jobs, approx. 60% highest rate being in agriculture. Maximum of 3-4 family members of stakeholders which are approx. 62% serve in this field.

A - Income Enhancement

This section describes the details of income related issues. there is approx. 51% of people are not depend only on the income generated by the homestay. They are also depends on other sources of income like – agriculture, govt. servant or pensioner and so on. Maximum 96.55% participants are agree that homestay tourism helps to increase the income level of stakeholders. Approx. 36% participants earn 1 - 2.5 lakh per year from this employment. The local people of Garhwal benefit from the scheme in every way, but they benefit even more from the travel of tourists in the area.

Section B - Provision of Business Opportunities

The results of this section show that homestay tourism provides good opportunities for employment in rural Garhwal. Here approx. 95% agree that a homestay is a good option for self-business or employment and are happy for this opportunity.

Section C – Development of Traditional Culture

In this section cultural promotion of local areas through homestay tourism is defined. Table 1 shows that approximately 96% of participants accept that homestay tourism promotes traditional culture such as customs, cuisine, rituals and tourists participat in daily activities as per their choices. Participation of tourists in daily activities and customs is great promotion of local culture. This promotion helps to improve the economic condition of the local area - by selling popular local products, selling homemade products, traditional celebrations, etc.

Conclusion

The objective of this study is to explore the potential of homestay tourism in rural Garhwal in providing business opportunities, raising income levels and developing rural culture. The results of the study show that the homestay program plays a vital role in the development of rural Garhwal, in which 41% share in the development of traditional culture and thereby local people get benefits otherwise, 32% by providing business opportunities as an employment and third one is 27% increase in the income level of homestay stakeholders. So we can say that homestay directly or indirectly plays a vital role in the development of rural Garhwal in Uttarakhand. This study can become an opportunity for future studies to focus on exploring employment opportunities for the young generation along with the social and economic development of rural areas through the homestay program.

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A Study of the Influence of Covid-19 Pandemic and Strategic Solutions for the Tourism Industry in India

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Abstract

Tourism is of great importance for any country's economic growth and economic development. In this present scenario, traveling is found as an important aspect of happy and healthy living. The Industry of Travel and Tourism has booming with the passage of time. Since ancient times travel also releases tension, stress, and boredom from doing mundane tasks of the daily routine. Nowadays travel is needed for entertainment, spirituality, health and wellness, adventure, and social activities. The purpose may vary, but the ultimate goal is to travel to newer destinations to fulfill their desires. The study illustrated the influence of COVID-19 on the leisure and tourism industry in India. As the major contributor in the service industry tourism was badly affected by COVID-19 and faced the highest damage in world industries there was a sharp decline in tourist travel worldwide during this pandemic the industry suffered huge revenue losses. The study reveals the impact of the COVID-19 pandemic on the tourism sector in India. The second agenda is to explore the consequences of the disease on the tourism industry and simultaneously to change the strategy of future planning and execution for early recovery and rebuilding of the basic framework of the tourism industry in India. Last but not least to focus on more research patterns for the tourism industry and suggest new ideas and innovative ideas for the top-notch bureaucrat, government, and offices of the tourism industry to regain its original position with better infrastructure and better framework.

Keywords

Economic crisis, COVID-19, influence, travel and tourism industry, challenges, leisure, foreign and domestic tourists, etc.

Reference to this paper should be made as follows:

**Dr. Asha Rongali,
Dr. Kanchanlata Sinha**

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Introduction

Tourism is not only a mere industry but it is a combination of many industries, i.e. travel and transport, attractions, restaurants, hotels, and accommodation. It worked with the efforts and coordination with the above-mentioned industries. Tourism can be stated as when people travel and stay in places outside their residence or their usual area of living for less than a year for leisure, travel, business, health, wellness, or other reasons of their choice. Globally, travel and tourism has a direct contribution to GDP and it was registered as 5.8 billion U.S. dollars (approx.) in the year the 2021. In recent years it was found that the Travel and Tourism Industry has considered well in respect of profit and wealth generation and people from every strata found to plan visits and tours for their own interest. There were various modifications in the policies of various countries to increase the earnings through tourist activities and worked positively in the upliftment of the Travel Industry of the country.

According to Statista Research Department, (Feb 20, 2023) in 2021, the countries ranked best in respect of *Travel and Tourism Development Index (TTDI)*, Japan, the United States, and Spain, which gained a scoring of 5.2 points each out of the total seven and which is commendable. As travel and tourism contributes significantly well to the GDP worldwide, but it severely affected by the global pandemic the deadly coronavirus (COVID-19) pandemic, that emerged and shook the globe with its deadly impact on tourism industry.

Due to COVID-19 pandemic situation nationally and internationally travel and tourism industry was in great financial losses and crisis and the picture becomes more worsen when we talk about the industry of travel and tourism as a worldwide.” Fear of Infection and the fear of being in quarantine” was capturing the mindset of the people on the Globe. The most important reason for the cancellation of trips or not performing any travel during this period was the anxiety towards being infected from this deadly virus of COVID-19 and the consequences faced by the people who suffered with covid-19. As if one person for being not well could not enjoy travel to anywhere, similarly the fear of having infected from a disease as a tourist cannot plan for his/her trip somewhere to enjoy. Therefore, the Tourists planned not to perform any travel during COVID-19. Even everyone finds themselves to be safer at home than traveling for any trip. Everyone was worried to be safe and healthy during this pandemic. As The virus was mutating rapidly and mortality rates were also increasing at a sharp and deadly pace. Therefore overall, it had a negative impact on the tourism industry to a large extent.

Review of Literature

The literature was referred to and reviewed by the researcher in respect of the impact on tourism due to COVID-19 epidemic situation and which are enlisted as follows: (Noga Collins-Kreiner, Yael Ram, 2021) researched and insight about the National Tourism Strategies, it highlighted that Only 8% of the recommendations proposed by the United Nations, WTO 2020 were positively implemented. Italy ranked first in adopting the recommendation, than the other countries studied and in respect of the exit strategies can be applied and implemented for shorter time period and not for the longer time in respect of Travel and Tourism Industry.

(S.Mostafa Rasoolimanesh , Siamak Seyfi , Raymond Rastegar ,C.Michael Hall,2021) in their research study “*Destination image during the COVID-19 pandemic and future travel behavior*” the impact of media in building the image in planning for Tours during the COVID-19 pandemic and on how it supported the post-pandemic travel intention and further normalizing the situation with changed mindset of the people post covid-19 for initializing the tours in coming future with safety.

(Jaffar Abbas, Riaqa Mubeen , Paul Terhempa Iorember, et.all , 2021) researched “*Exploring the impact of COVID-19 on tourism: Transformational potential and implications for a sustainable recovery of the travel and leisure industry*” and investigated the sustainable recovery of the Travel and Tourism industry in the coming future through systematic planning and execution of pandemic situational policies and how to overcome the drawbacks of the older policies with better sustainable plans.

(Loda, Norman, & Backman, 2005) the research study highlighted that advertising for Tourism activities is more important to tourists as they have no opportunity to handle or experience the products in advance and consumer experiences only after they make the purchase of the tourism products or after reaching their

destinations. Therefore an image building is formed with the services offered and services received by the consumers of the Tourism products. The advertisements for the Travellers help consumers in establishing their beliefs and trust for future visits or for a second visit again next time. The truth must be depicted in advance, falsifying vital information only ruins the tourism products and had harmful impacts in the future as well.

Need & Significance of the Study

In the recent past few years, there was an unprecedented and unmatched growth and development has seen in Travel and Tourism sector in India. The tourism activities became an important source of income for most of the people and contributes highest to the service sector of the nation. But there was break in the development of this sector in the mid of the March 2019 due to the outbreak of COVID-19 and declared pandemic for and continued till 2021 mid-year. As the most contributor in the services industry in India, it suffered up to a large extent. Significant negative growth had visible in the Tourism Industry, it also closed doors for new entrepreneurs and startups to give a boost or initiate in this sector.

The digital adoption in various marketing and promotional activities and strategic marketing will further enhance its share in the economy of India to regain its original version of charm for travel. At national level, the promotion of tourism as a brand had created a wide range of impact over this sector globally. But now after the COVID-19 era there must be sharp change at a basic infrastructural level in respect of health and hygiene is the need of the hour. India failed to enlist under the top 10 destinations for foreign tourists during the post-COVID-19 pandemic situation.

Therefore, this research study is significant to find out the areas what were the impacts of COVID-19 on the Tourism Sector and the sector state lagged behind. How the effective marketing and promotional strategies can be implemented and how the coordinated promotional activities can be helpful to overcome this situation of unexplored and unknown to explore and known to the country and the world? In the present scenario, Uttarakhand is known for *Char-dhams*, and Haridwar Kumbh which can be explored with better planning and can contribute to the national GDP with a higher share. Uttar Pradesh was the preferred state for travel by the tourist and secondly, Tamil Nâdu and the rest of the other states also come forward with better tourist destinations, so that the newer destination of the emerging states can put their footprints in the general conscience of the residents and foreigners as well. Therefore, it is a sincere effort to outline the implementation of strategic promotional and marketing of tourism products and services in the country with the betterment of infrastructural facilities and hygienic and safe tourist destinations that can bring more Foreign Tourists in the post-COVID-19 era.

Objectives of the Study

The object of the research study is enlisted as follows:

1. To study the factors which actually compel a tourist to plan a tour to a specific destination after this COVID-19 pandemic situation.
2. To illustrate the changes in priorities for a tourist to plan for a trip after this COVID-19 outbreak
3. To investigate the promotional and marketing strategies in the tourism sector in India.
4. To highlight the positive impact of promotional activities in tourism at in respect of Infrastructure and Health & Hygiene for Domestic and Foreign Tourists in India.
5. To inquire about the promotional and marketing strategies needed to be adopted by the Government of India for growth in the tourism activities in India post COVID-19.

Research Methodology

For this research study the researcher had collected and referred secondary data of *Department of Tourism, Government of India (GOI)* in respect of Foreign Tourists Arrivals (FTAs) and the International Tourist Arrivals (ITAs). The researcher had a descriptive study about the factors/ motivators which actually accelerate a desire to travel to a particular place or a tourist destination. A sincere effort has been made to find out the way to create a consistency in growth and transformation of tourism after the COVID-19 pandemic situation which attracts

and brings tourists to the country around the year as a preferred destination worldwide. The research also highlights the improved and innovative marketing strategy and promotion of tourism in the state and searches the problematic areas and the areas where advertising and promotional activities are lacking behind in the country with improvised health and hygiene requirements. The researcher referred to specific reports published by various national and state agencies/bodies such as the *Ministry of Tourism, GOI, Bureau of Immigration, Directorate of Economics & Statistics, Department of Planning, etc.* the author also studied various books published by the renowned authors, websites and research papers published in peer-reviewed journals to find out the previous work done in this area so far, and also acknowledged newspaper editorial columns based on COVID-19 and related issues.

Influence of the COVID-19 Pandemic on the Tourism Industry in India

Due to the outbreak of COVID-19 in the mid of March 2019, fear prevailed among the people around the Globe, and had started cancellation of their Trips and Tours on a large scale, therefore Tourism Industry started shrinking and not enough bookings were done for so long. Therefore, in distress, the industry had to tough to reduce the number of employees working at all levels of management and executive bodies.

During the year 2019, there were 333 million people engaged in tourism-related jobs whereas in 2020 there is a steep decline of 18% in employment in the tourism sector and there were only 271 million people engaged in the travel and tourism sector in respect of employment, worldwide. Similarly, in 2021 there were 289 million people engaged in the tourism sector an increase of 6.6% from the previous year. The above data also illustrates that there was a sharp downfall in employment in tourism as well, during this epidemic.

The Table1.01, highlights the following facts in respect of foreign tourist arrivals (FTAs), International Tourist Arrivals (ITAs), Non-Resident Indians (NRIs) and shows how the Covid-19 pandemic impact on the overall datasets of tourism industry and crushed it badly.

Due to the COVID-19 pandemic situation and the restriction issued by the World Health Organization (WHO) and as well as the Government of India related with COVID-19, During the year 2021, The arrivals of Foreign Tourists in India reduced to 1.52 million from 2.74 million in 2020 and registered a great fall with a negative growth of 44.5% and depicts a gloomy picture of tourism in India.

Similarly, the arrivals of Foreign Tourists also acclaimed with negative growth in the year 2021. Whereas Non-Resident Indians and International Tourists experienced a bright and positive growth in numbers. The visits of Non-Resident Indians (NRIs) enhanced by 52.6% in 2021 compared to 2020 arrivals in India. Similarly, in 2021 it was found that there was also an increase of 10.6% in 2021, the number of visiting and touring International Tourists worldwide as compared with 2020 datasets.

Table:1.01

Number of Foreign Tourist Arrivals in India, NRIs Arrivals in India and International Tourist Arrivals

Year	Foreign Tourists Visited India (million)	Change from the previous Year (%)	NRIs Visited India (million)	Change in (%) from the Previous Year	International Tourists Visited (Million)	Change in (%) from the previous Year
2014	7.68	-	5.43	-	13.11	-
2015	8.03	4.6	5.74	5.7	13.76	5.00
2016	8.30	9.6	6.22	8.4	15.03	9.20
2017	10.04	14.1	6.77	8.8	11.81	11.8
2018	10.56	5.2	6.87	1.5	17.42	3.6
2019	10.93	3.5	6.98	1.6	17.91	2.8
2020	2.74	-74.9	3.59	-48.6	6.33	-64.7
2021	1.52	-44.5	5.48	52.6	7.00	10.6

Source: Bureau of Immigration, Government of India

- As per the reports published by the *Bureau of Immigration, Government of India*, the Foreign Tourists preferred travelling through the air routes than other routes. The report also claimed that 87.5 % of the foreign tourists reached India using air transport, 11.8 % used land transport, and only 0.7% arrived using sea travel modes.
- As per the report published by the *Ministry of Tourism*, In 2021, the highest number of Foreign Tourists Arrived in India were from the various countries of the globe i.e. United States (USA), Bangladesh, the United Kingdom (UK), Canada, Nepal, Afghanistan, Australia, Germany, Portugal, France, the Maldives, Sri Lanka, the Russian Federation and Iraq were the top countries with highest Tourist visits in India.
- The Leisure and the Tourism Industry also plays a crucial role in earning the foreign exchange and improves the economic condition and helps in economic development of the nation. According to the report published by the *Ministry of Tourism, GOI (2022)*. In 2021, the earnings in respect of foreign exchange from Tours, Travels and Tourism was USD \$ 8.797 billion whereas it was USD \$ 6.958 billion in 2020, registered a bumper positive growth of 26.4% shows the reducing terror of COVID-19 and illustrates that the tourists had overcome from the fear of travel and the infection from COVID-19. After the decline in COVID -19 cases worldwide during 2021, despite the amid COVID-19 prohibition and strict instructions and covid- protocols, tourism grew steady pace globally.

Key Findings and Suggestions

The following are the key findings and suggestions for accelerating the Foreign Tourists Arrivals (FTAs) post COVID-19 era and again establishing its growth rate in positive sense with improvised basic infrastructural facilities at various norms highlighted during this research study.

- The implementation of promotional and marketing of tourism products and services in the country with betterment of infrastructural facilities and hygienic and safe tourist destinations that can bring more Domestic and Foreign Tourist Arrivals (FTAs) in the post COVID-19 era.
- The factors which actually compel a tourist to plan a tour to a specific destination after this COVID-19 pandemic situation has changed a lot. Now post COVID-19 era tourists planning for those destinations which are safer in respect of health and Hygiene, less crowded, natural and eco-friendly in nature and prioritize to have at least basic medical facilities. Therefore, Indian tourist destinations have to be accompanied with the similar infrastructural facilities so that attracts tourists to plan a trip again.
- There is a change in priorities for a tourist to plan for a trip after this COVID-19 outbreak and they are sensitive to Health and Hygienic facilities on top priority while booking for a specific trip.
- The post COVID-19 pandemic situation the regain of Tourism Industry is very necessary as it contributes in highest to the service industry of the country. Therefore implementation of the promotional and marketing strategies in tourism sector in India which should be destination specific with limit of tourists must be fixed and monitored at central level so that better facilities can be provided for the Domestic Tourist Arrivals (DTA's) and Foreign Tourists Arrivals (FTAs) in the country of India.
- The positive impact of promotional activities in Tourism Sector by the *Ministry of Tourism* i.e *Athiti Devo Bhavo* at in also several projects and schemes like PRASAD which changed the Infrastructure of Major Tourists Destinations and Tourists arriving at a larger extent through these promotional activities and similarly the innovation and betterment in Health & Hygienic facilities at Tourist destinations should be looked very seriously so that the beauty can be enhanced simultaneously and the tourists arrivals as well.
- The promotional and marketing strategies needed to be adopted by the Government of India for growth in the tourism activities in India post COVID-19 still not immense, loads of potential is still to be worked upon in respect of marketing. Again, a newer brand imaging which covers/embraces all the aspects like natural, beauty, sustainable, cleanliness, basic amenities (availability of potable water and sanitation), Healthy and Hygienic Food, cleanliness at boarding and Lodging at a priority basis.

- Insurance Facilities also must be added in the booking packages while planning for a short or a long tour, can be more strategic in building good faith among the tourist and the satisfaction of being safe physically as well as financially and have a positive impact on Tourists.

Conclusion

After this post COVID-19 situation, gradually but steadily now tourists are more Health and Hygiene specific and planning a tour to those destinations that gives them enjoyment but not at the cost of their health, now “*Safety First*” rules. So the need of the hour is to improvise the Hygienic factors in Tourism which was not focused or took seriously so far. Therefore in the broader sense the decline in tourist arrivals was a just a break to understand the newer dimensions of Travel and Tourism sector, the untouched areas are to be looked after so that India can provide better destinations equipped with all basic infrastructural facilities including food, water and sanitation. When we equipped with such facilities then next aim is to brand imaging of Travel and Tourism Sector with promotional activities over the Globe. If these pillars will be well established then only the tourists’ arrivals can be increased with several folds and the Indian tourist destinations will be the top priority for domestic and international tourists. More sincere efforts are needed to upgrade the existing tourist destinations with full-fledged facilities required by the tourists and provide all the facilities by the housekeeping department also so that in real sense tourists can be treated as “*Athiti Devo Bhava*”.

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Impact of Mall Image on Buying Behaviour Towards the Pacific Mall of Dehradun

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Abstract

Purpose – *The study of this paper is to know the impact of mall image on buying behaviour towards the pacific mall of Dehradun.*

Design/Methodology – *We have taken 3 variables (Access, Atmosphere and Mall Design) of Mall Image with 15 items and 4 variables (Price/Promotion, Exploration, Product Assortment and Corona Facility) with 20 items to fulfil our research objectives. In total, 510 people filled the questionnaire out of which 500 samples were completed and reliable. Hence the total sample size for the study was 500 who were selected randomly from Pacific Mall of Dehradun further, Smartpls4 and SPSS software was used to test the validity of the model and test the hypothesis.*

Findings – *The study revealed that there is a significant impact of Access, Atmosphere, and Mall Design on Mall Image, Demographic factors have no significant impact on the mall Image and Buying behaviour of consumers is affected by the mall Image.*

Keywords

Mall Image, Customers, and Buying Behaviour.

Reference to this paper should be made as follows:

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Impact of Mall Image on
Buying Behaviour Towards
the Pacific Mall of
Dehradun

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Introduction

Pacific Mall is Dehradun's beloved shopping, dining and lifestyle destination. Back in 2013, it was the beginning of this revolutionary project which later evolved into the prime shopping complex in Uttarakhand.

The prominent national and international brands joined together to introduce the unmatched shopping experience for the shoppers in Dehradun and neighbouring locale. People, from every corner of the city and even beyond, visit this place for fun, entertainment, and obviously for an authentic shopping experience. More than 175 handpicked brands welcome at least 25k shoppers every day.

Besides its unparalleled shopping attribute, the mall has some of the best hangout spots in Dehradun. The five-screen PVR multiplex right before the prominent food court Salt is a perfect domain for fun and entertainment. In addition, the visitors spend hours after hours in the Funky Kingdom. The Funky Kingdom is a play zone where there is something for everyone.

Furthermore, the mall also hosts many events and flea markets every so often. Musical groups, celebrities, professional dancers, and numerous other entertainers perform at Pacific to amuse the visitors.

The mall covers a gross area of 300,000 sq. ft. with a vast parking complex. Impressively, the mall recorded 9 million visitors in the previous year.

Mall Image

The image or perception of a mall can have a significant impact on consumer behaviour. The appearance and atmosphere of a mall can affect a consumer's decision to visit or not. A well-maintained and inviting mall with modern architecture and clean surroundings can create a positive impression and encourage consumers to explore and shop. Furthermore, a positive image can instil confidence in consumers, making them feel safe and comfortable, which can result in longer visits and more purchases. Additionally, a positive image can create a sense of loyalty among consumers, leading to repeat visits and recommendations to friends and family. Finally, the perception of value is also influenced by the image of a mall, with high-end malls being perceived as offering more expensive products and discount malls being perceived as offering better deals. Therefore, the image of a mall is a critical factor in consumer behaviour, and malls should focus on creating a positive image to attract and retain customers.

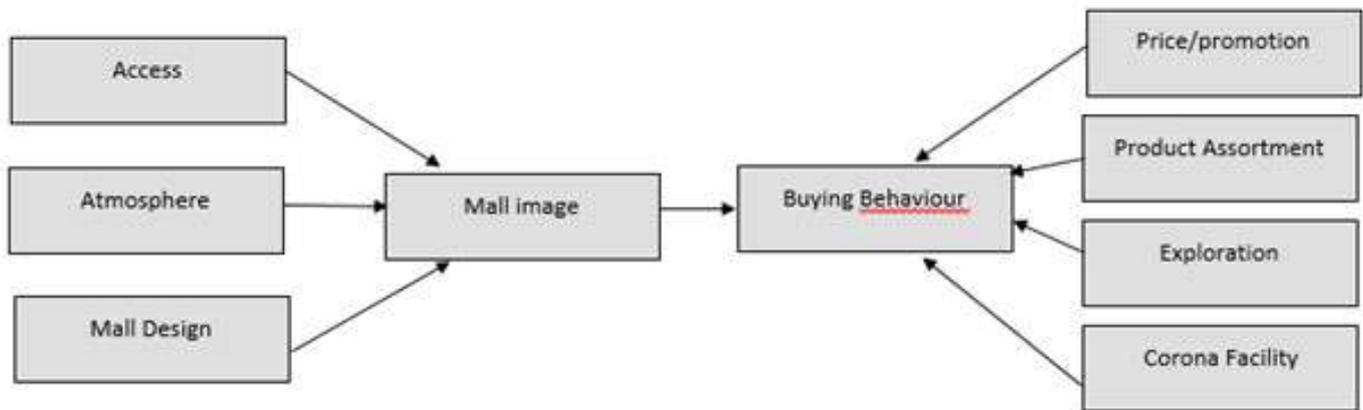
Literature Review

Praveenraj & k Subramani (2022), In their paper "Perception and attitude of shoppers towards shopping at shopping malls" examines the attractiveness factors of shopping malls from the shoppers' perspective based on the survey of urban shoppers. Furthermore, the paper also proposes to derive the constituents of an ideal mall from shopper's perspective. This study revealed six attitude factors of the shoppers towards malls: Locality & Convenience, Relaxed Shopping, Prestige Shopping, Product knowledge, any day visit and Price Parity. The study also arrived at characteristics of a mall that people consider while visiting the mall which are Overall Attractiveness, Amenities & Atmospherics, Personnel, Shopping Ease and Convenience. The study concludes that after analysing the customer's perception and behaviour of mall shoppers within Tamil Nâdu. Most of the middleclass peoples are economically growing the next level this is the base for increasing the shopper's behaviour. Based on the expectations of the mall shoppers the mall managers can offer various entertainment aspects to their customers.

Prasanth, Kiran & Datta (2021), In their paper titled "Consumer perception with reference to customer relationship management in organized retail in Vishakhapatnam" explains the customer perception with reference to Customer Relationship Management (CRM) in organized retail sector of Visakhapatnam city. They investigate 600 customers to record their opinion about the quality of offered services by organized retails stores and its impact on customer satisfaction. They did the research on retailer like Spencer's, More, Reliance fresh, Big Bazaar and others in Visakhapatnam city. The study concludes that the customer perception depends on Positive attitude towards Customers, Flexible timings of purchase/ exchange, and better grievance process.

Methodology

This research was carried by conducting a questionnaire with two sections composed of closed questions. The first section comprised 35 five-point scaled questions ranging from “strongly agree” to “strongly disagree”. The second section included demographic questions.



survey method using a fully structured questionnaire was used to obtain the relevant data needed for this study. Malhotra (2004) defines a survey as an interview with large a number of respondents using a predesigned questionnaire. Face-to-face interviews were conducted and placed the respondents at ease, helping to reduce anxiety, increasing the response rate and decreasing potential measurement errors (Tustin, Ligthelm, Martins & Van Wyk, 2005). In the questionnaire, most references were adapted from the methodology of Sit, Merrileesr and Birch (2003) and Singh and Sahay (2012) to measure attractiveness of shopping malls.

The Factor which Creates Mall Image and Affects buying Behaviour

Atmosphere:

The atmosphere of a mall can have a profound effect on consumer behaviour. Consumers are not only interested in the products and services offered, but also the overall experience of shopping. The mall atmosphere encompasses various factors, including lighting, temperature, music, layout, cleanliness, and design, which all contribute to the overall experience. A pleasant atmosphere can positively impact consumer emotions and moods, creating a sense of calm, comfort, and relaxation, leading to increased consumer satisfaction and repeat visits. On the other hand, an unpleasant atmosphere with uncomfortable lighting, loud music, and poor layout can lead to frustration and negative emotions, which can deter consumers from visiting the mall or returning to the stores. Moreover, the atmosphere can also influence consumer behaviour, such as impulse buying, time spent, and brand image, all of which can significantly impact retailers' sales and profits. Therefore, retailers must pay close attention to the mall atmosphere to create a positive, comfortable, and engaging environment that enhances the overall shopping experience and drives consumer behaviour towards increased sales and loyalty.

Access:

Accessibility can have a significant impact on consumer behaviour in malls. When a mall is easily accessible to all customers, regardless of their physical abilities, it can attract a wider range of shoppers, including those with disabilities or mobility issues. This can result in increased foot traffic and sales for retailers in the mall.

Furthermore, when a mall is designed to be accessible, it can create a more inclusive shopping environment that promotes a positive shopping experience for everyone. Customers who feel comfortable and welcome in a mall are more likely to spend more time and money there, and may even become repeat customers.

In contrast, if a mall is not accessible or has limited accessibility, it can deter customers from visiting, particularly those with disabilities or mobility issues. This can result in lost sales for retailers and a negative perception of the mall.

Price/promotion:

Price and promotion can have a significant impact on consumer behaviour in malls. Consumers are always looking for good deals, and they are often motivated to make purchases based on the price and promotions offered by retailers.

One of the most significant ways that price affects consumer behaviour is through price sensitivity. Consumers who are price-sensitive will compare prices across different stores and brands to find the best deal. They may also wait for sales or discounts before making a purchase.

Promotions, such as discounts, coupons, or limited-time offers, can also influence consumer behaviour. These promotions can create a sense of urgency for consumers to make a purchase before the promotion ends. Additionally, promotions can attract consumers who may not have considered purchasing a particular product before.

Retailers can use pricing and promotions strategically to influence consumer behaviour in malls. For example, they may offer promotions on certain products to attract consumers to the store and then use in-store displays or sales associates to encourage consumers to purchase other products as well.

Mall Design:

The design of a mall can significantly affect consumer behaviour. The layout, lighting, music, and other environmental factors can all influence how shoppers interact with the space and ultimately make purchasing decisions. For example, a mall with a clear and intuitive layout may make it easier for consumers to navigate the space and find what they're looking for, resulting in a more positive shopping experience. Similarly, the use of bright lighting and upbeat music can create a lively and energetic atmosphere that encourages shoppers to stay longer and spend more. Additionally, the placement of stores and products within the mall can also influence consumer behaviour. Stores located near popular anchor stores or in high-traffic areas may attract more customers and generate higher sales.

Exploration:

Exploration factor refers to the degree to which consumers engage in exploratory behaviours, such as browsing, window shopping, and trying out new products, in a mall or retail environment. The exploration factor can have a significant impact on consumer behaviour in malls in several ways.

Firstly, the exploration factor can influence the time consumers spend in a mall. When consumers are in an exploratory mood, they may spend more time browsing, trying out products, and discovering new stores, leading to longer shopping trips.

Secondly, the exploration factor can impact consumers' willingness to try new products and brands. When consumers are in an exploratory mood, they are more open to trying new products and brands, which can result in increased sales for stores.

Thirdly, the exploration factor can affect the level of satisfaction that consumers experience during their mall visit. Consumers who engage in exploratory behaviours are more likely to feel satisfied with their shopping experience, as they have had the opportunity to browse and discover new products.

Product assortment:

The product assortment available in a mall can have a significant impact on consumer behaviour. The variety, quality, and availability of products can influence a shopper's decision to enter a store and ultimately make a purchase. When a mall offers a wide range of products, it provides consumers with a sense of choice and empowerment, which can increase their level of engagement and motivation to shop. Additionally, the availability of high-quality products can increase consumer trust in the mall's offerings and lead to increased loyalty. On the other hand, a poorly curated assortment or limited options can discourage consumers from entering stores or making purchases, resulting in lower sales for the mall.

Corona facility:

During the pandemic of Covid -19 malls has adopted the safety guidelines provided by the shopping mall and corona facilities has a big factor that affects the buying behaviour of consumers during the pandemic. If the mall provides a clean environment, then consumers feel safe on shopping mall premises.

Objective of the Study

- To study the impact of demographic factor on mall Image.
- Study the impact of mall image on the buying behaviour.

Hypothesis of the Study

H_{01} : Mall image is not affected by the demographic factor.

H_{a1} : Mall image is affected by the demographic factor.

H_{02} : Buying behaviour is not affected by the mall Image.

H_{a2} : Buying behaviour is affected by the mall Image.

Result and Discussion

Demographic Profile

Variables	Frequency
Gender	
Male	196
Female	304
Qualification	
Up to 12 th	38
Graduate	65
Post-Graduation	314
Professional	47
Diploma	36
Age	
Below 20	53
20-30	389
30-40	43
40-50	12
Above 50	3
Marital Status	
Married	97
Unmarried	403
Occupation	
Student	312
Government employee	21
Private employee	86
Businessman	20
Other	61
Monthly Income	
Below 10000	285
10000-20000	83
20000-30000	49
30000-40000	39
Above 40000	44

Reliability

	Cronbach's alpha	Composite reliability (rho A)	Composite reliability (rho c)	Average variance extracted (AVE)
Access	0.724	0.693	0.591	0.313
Atmosphere	0.866	0.866	0.865	0.562
Buying Behaviour	0.943	0.945	0.943	0.468
Corona Facility	0.845	0.847	0.845	0.522
Mall Design	0.858	0.859	0.859	0.549
Mall Image	0.815	0.914	0.824	0.345
Price/ Promotion	0.880	0.881	0.880	0.595
Product assortment	0.838	0.844	0.840	0.514

To evaluate the reliability of the measurement scale, Cronbach estimates were calculated. Our results show that all constructs reach Cronbach's Table and that all of the composite reliability (CR) values are above the accepted threshold of 0.5, and in turn, constructs were considered satisfactory (Hair et al., 2010). Likewise, the average variance extracted (AVE) values were calculated for each construct to assess the discriminate and convergent validity of the scale. The results show that the AVE values ranged from 0.313–0.595, but according to Hair it must range between 0.5-0.9 thus apart from all other variables indicate a pretty adequate convergent validity of the measurement model.

Hypothesis Testing

H_0 : Mall Image is not affected by the Gender of the Consumers.

H_a : Mall Image is affected by the Gender of the Consumers.

Independent Samples Test: Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Malldesign	Equal variances assumed	2.858	.092	1.070	498
	Equal variances not assumed			1.106	459.429
Access	Equal variances assumed	.123	.726	-.745	498
	Equal variances not assumed			-.747	419.865
Atmosphere	Equal variances assumed	.292	.589	1.310	498
	Equal variances not assumed			1.331	437.884

The t test results presented in the above table reveal that the calculated F values are found to be insignificant at 95% significance level, in all the case of Mall Design, Access and Atmosphere the null hypothesis have been accepted and alternative hypothesis have been rejected.

H_0 : Mall Image is not affected by Marital Status of the Consumers.

H_a : Mall Image is affected by the Marital Status of the Consumers.

Independent Samples Test: Marital Status

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Mall design	Equal variances assumed	3.163	.076	-1.142	498
	Equal variances not assumed			-1.267	167.389
Access	Equal variances assumed	.006	.938	.830	498
	Equal variances not assumed			.795	138.970
Atmosphere	Equal variances assumed	.111	.739	-1.208	498
	Equal variances not assumed			-1.215	146.796

The t test results presented in the above table reveal that the calculated F values are found to be insignificant at 95% significance level, in all the case of Mall Design, Access and Atmosphere the null hypothesis have been accepted and alternative hypothesis have been rejected.

H_0 : Mall Image is not affected by Age of the Consumers.

H_a : Mall Image is affected by Age of the Consumers.

ANOVA: Age

		Sum of Squares	df	Mean Square	F	Sig.
Mall design	Between Groups	1.045	4	.261	.470	.758
	Within Groups	275.176	495	.556		
	Total	276.221	499			
Access	Between Groups	.862	4	.216	.716	.581
	Within Groups	149.058	495	.301		
	Total	149.920	499			
Atmosphere	Between Groups	1.897	4	.474	.861	.488
	Within Groups	272.735	495	.551		
	Total	274.632	499			

The ANOVA results presented in the above table 5.32 reveal that the calculated F values are found to be insignificant at 95% significance level, in case of Mall Design, Access and Atmosphere the null hypothesis has been accepted and alternative hypothesis have been rejected.

H_0 : Mall Image is not affected by Qualification of the Consumers.

H_a : Mall Image is affected by Qualification of the Consumers.

ANOVA: Qualification

		Sum of Squares	df	Mean Square	F	Sig.
Malldesign	Between Groups	2.484	4	.621	1.123	.345
	Within Groups	273.737	495	.553		
	Total	276.221	499			
Access	Between Groups	1.441	4	.360	1.201	.310
	Within Groups	148.480	495	.300		
	Total	149.920	499			
Atmosphere	Between Groups	2.449	4	.612	1.113	.349
	Within Groups	272.183	495	.550		
	Total	274.632	499			

The ANOVA results presented in the above table 5.32 reveal that the calculated F values are found to be insignificant at 95% significance level, in case of Mall Design, Access and Atmosphere the null hypothesis has been accepted and alternative hypothesis have been rejected.

H_0 : Mall image is not affected by Occupation of the Consumers.

H_a : Mall image is affected by Occupation of the Consumers.

ANOVA: Occupation

		Sum of Squares	df	Mean Square	F	Sig.
Malldesign	Between Groups	3.356	4	.839	1.522	.194
	Within Groups	272.865	495	.551		
	Total	276.221	499			
Access	Between Groups	.533	4	.133	.441	.779
	Within Groups	149.387	495	.302		
	Total	149.920	499			
Atmosphere	Between Groups	2.324	4	.581	1.056	.378
	Within Groups	272.308	495	.550		
	Total	274.632	499			

The ANOVA results presented in the above table 5.32 reveal that the calculated F values are found to be insignificant at 95% significance level, in case of Mall Design, Access and Atmosphere the null hypothesis has been accepted and alternative hypothesis have been rejected.

H_0 : Mall Image is not affected by the Consumers Monthly Income.

H_a : Mall Image is affected by the Consumers Monthly Income.

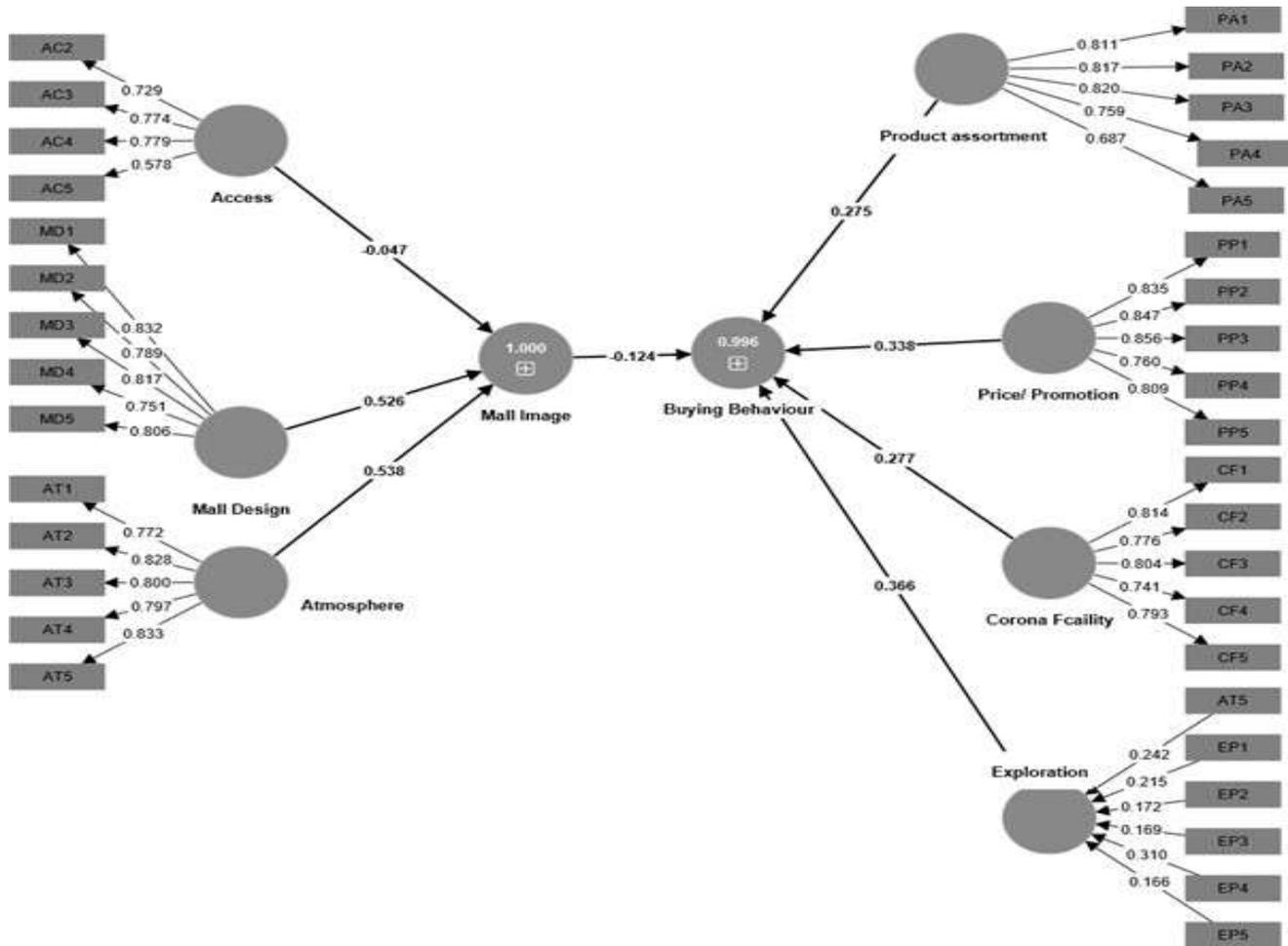
ANOVA: Monthly Income

		Sum of Squares	df	Mean Square	F	Sig.
Malldesign	Between Groups	2.499	4	.625	1.130	.342
	Within Groups	273.722	495	.553		
	Total	276.221	499			
Access	Between Groups	.508	4	.127	.421	.794
	Within Groups	149.413	495	.302		
	Total	149.920	499			
Atmosphere	Between Groups	2.427	4	.607	1.104	.354
	Within Groups	272.205	495	.550		
	Total	274.632	499			

The ANOVA results presented in the above table 5.32 reveal that the calculated F values are found to be insignificant at 95% significance level, in case of Mall Design, Access and Atmosphere the null hypothesis has been accepted and alternative hypothesis have been rejected.

	Access	Atmosphere	Buying Behaviour	Corona Facility	Mall Design	Mall Image	Price/ Promotion	Product assortment
Access								
Atmosphere	0.152							
Buying Behaviour	0.114	0.868						
Corona Facility	0.107	0.858	0.894					
Mall Design	0.113	0.859	0.889	1.165				
Mall Image	0.613	1.005	0.869	0.989	0.991			
Price/ Promotion	0.079	0.665	0.978	0.674	0.673	0.659		
Product assortment	0.155	0.932	0.978	0.827	0.828	0.885	0.757	

Discriminate validity was tested to confirm whether the constructs in the model are highly correlated among them or not. It compares the square root of AVE of the particular construct with the correlation between that construct and another construct (Henseler Et Al., 2014) the result is less than 0.85 which suggests that discriminate validity exists between the two scales.



H₀₂: Buying behaviour is not affected by the mall Image.

H_{a2}: Buying behaviour is affected by the mall Image.

	T statistics (O/STDEV)	P values
Access -> Mall Image	0.000	0.000
Atmosphere -> Mall Image	0.000	0.000
Corona Facility -> Buying Behaviour	3.432	0.001
Exploration -> Buying Behaviour	0.754	0.451
Mall Design -> Mall Image	0.000	0.000
Mall Image -> Buying Behaviour	5.436	0.000
Price/ Promotion -> Buying Behaviour	12.299	0.000
Product assortment -> Buying Behaviour	5.856	0.000

From the above table show that access, atmosphere and Mall design have significant impact on the mall Image. In case of Corona Facility, Price/Promotion and Product assortment have significant impact on the Buying Behaviour further exploration has not significant impact on the Buying Behaviour of the consumers as well as above table also reveals that Mall Image have a significant impact on the Buying behaviour because the P value is Less than 0.05.

Conclusion

The study aims to investigate the impact of demographic factors on the mall image and the impact of mall image on buying behaviour. The study concludes that the demographic factor (gender, age, marital status, qualification, occupation and monthly income) has not impact the mall image because the all-null hypothesis accepted as well as buying behaviour of the customers is affected by the mall image because the alternative hypothesis has been accepted.

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Role of Artificial Intelligence in Cyber Security

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Abstract

Cyber Security is a way of securing computer or internet networks from cyber attacks or unintentional access. Many organizations around the world need Cyber Security solutions because cybercriminals are now posing a threat to everyone in multiple ways. AI right now promises to be a great solution for such problems. Security professionals are able to secure networks as well as data from cyber attackers by fusing power of artificial intelligence with cyber security. The power of AI can be combined with Cyber Security to protect sensitive networking and data from cyber attacks. Using Artificial Intelligence for maximizing Cyber Security is the need of effective cyber world.

Instead of constantly monitoring network traffic for suspicious activities, cyber security experts can optimally use AI technology to implement best practices and at the same time minimize and reduce the scope of attack surface. At the same time cyber criminals can take advantage of those same AI systems for malicious purposes.

Keywords

Cyber Security, Artificial Intelligence, Cyber Attack, Cyber Security Solutions.

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Introduction

The harsh reality of today's time is, "We live in a world where everything is digital and data is the king".

Cyber security was originated from the Greek word *kubernetikos* (good at steering). Later in French it became *cybernetique* (the art of governing). With this "cyber" started to sound more like its current equivalent.

Cyber security is a complex, evolving and interdisciplinary science which includes Computer Science and Information Technology. It is the technology designed to protect vital information (or network) from damage as well as unauthorized access. This is important because many bodies of the world or organizations collect and store a lot of information.

According to statistics, "The term Artificial Intelligence came into being in 1956 at Dartmouth College. Cognitive scientist, Marvin Minsky had a very positive vision for the technology of AI. The government also did not extend full support to AI in the period between 1974-1980, a period which is known as the "AI downtime", when many critics spoke negatively about the progress.

Artificial intelligence basically refers to the computer technology required to replace existing technologies at work. Current technology is changing rapidly, similar to the exponential growth that information technology experienced in the 20th century.

Over the next few years, much of the new value that software will provide will be driven, at least in part, by artificial intelligence.

Artificial Intelligence is now associated with cyber security because:

1. Cyberattacks disrupt the operations of businesses, banks, corporations and government networks.
2. It includes criminal acts of individual citizens (hacking) to acts of groups (terrorists).
3. The cyber security in function with artificial intelligence will reduce the risk of cyber attacks.

Objectives

This paper attempts to focus on the following:

1. An understanding of the terms, Artificial Intelligence and Cyber Security
2. Technologies been used to achieve AI goals
3. Applications of AI into Cyber Security
4. Benefits of AI application in Cyber Security
5. Challenges of adopting AI in Cyber Security

This document provides a brief overview of artificial intelligence applications and their use in Cyber Security. It is also willing to consider the possibility of expanding Cyber Security investment through the development of defense mechanisms. After reviewing the current AI software for cybersecurity, we can assume that useful applications already exist. First, they are used to protect the environment and various cybersecurity areas through neural networks. On the other hand, it is true that some Cyber Security problems can only be solved using application of AI techniques.

Technologies Used to Achieve AI Goals

AI has many variants that can be added to existing skills. Artificial intelligence uses various computer techniques or techniques to achieve its goals, for example:

Expert Systems: Expert Systems enable computers to make better decisions as human experts by interpreting data and choosing options. It uses an approach called rule based reasoning, which uses rules to manipulate data.

- **Neural Networks:** These are computers trained to recognize objects or recognize patterns. A distributed network of neurons that perform mathematical operations is called an artificial neural network (ANN).

Model ANNs represent relationships that are not directly learned from the modeled data.

- **Natural language processors:** These are basically programs that interpret or translate human speech. NLP techniques are used to extract information from unstructured data such as medical records to add clinical information. It includes language related applications such as speech recognition, text analysis, translation, and more. The two NLP methods are statistical and semantic. NLP tools are generally used in the healthcare industry.
- **Robot:** A computerized or programmable machine with physical manipulators and sensors. The entry of intelligent robots into the medical field can improve patient satisfaction, diagnostic accuracy, and hospital work efficiency. Medical robots can assist with surgery, therapy, relationships, and more.
- **Fuzzy Logic:** "Fuzzy logic is all about uncertainty dealing in information by simulating human centered reasoning for incomplete or fuzzy data". Fuzzy models are quite reactive to parameter changes as well as accommodating of certain assumptions.
- **Machine Learning:** Machine learning basically extracts certain characteristics emerging from input data by developing algorithms that analyze data and analyze features to create predictive models. The four type of learning ie. Supervised, unsupervised, reinforcement and deep learning are the most popular machine learning techniques. Precision medicine is the most commonly used field in machine learning. Machine learning algorithms are good for antimalware as they can deal with "cloaking".
- **Deep Learning:** A set of ML techniques built on deep layers, where each layer handles unique aspects about complex problems. By adding more techniques, it attempts to improve the ability of supervised and unsupervised learning algo to solve complex real-world problems.
- **Data Mining:** This involves discovering hidden patterns as well as new information from big data. Many algorithmic tools have been introduced in data mining, including statistics, regression models, central links, fuzzy methods, and evolutionary models.
It is recommended to use a combined set of these models in place of using a single model as it will be effective on a larger scale.

Applications of AI in Cyber Security

There are many areas where artificial intelligence and cyber security are related. AI tools or techniques are increasingly used for the detection and prevention of cybercrime. They can be used to learn how to allow security professionals to understand the network environment to identify vulnerabilities. AI can help existing cybersecurity solutions do many things.

Companies can use artificial intelligence in four areas to improve their existing cyber security systems:

- **Automatic protection:** There are two types of cybersecurity systems: expert (analyst) and automated (machine-driven).
Professional machines are designed and controlled by humans, while automated machines use AI smart tools. A good example of computer technology is CAPTCHA (Completing Public Turing Tests for Computers and Humans). Without automation, humans cannot handle the speed and volume of information needed to protect cyberspace. As networks grow and become more complex, AI can bring significant benefits to an organization's cyber defense.
- **Security intelligence:** Security intelligence combines artificial intelligence with human intelligence. It refers to the hardware and/or software that makes the human brain work. AI and CC are similar in theory, but they differ in their willingness to interact with humans. Artificial intelligence (AI) is a term used to refer to technology that performs tasks requiring human intelligence generally. Cognitive computing attempts to overcome the limitations of programmable (Von Neumann) computers. IBM's first artificial intelligence, Watson for Cyber Security, proved by Jeopardy that it can answer tough questions as well as the human world.

- **Competitive education:** This term is often used to refer to the development and use of artificial intelligence for malicious purposes. Hostile learning attacks can cause algorithms to fail or reveal details about how they work. AI systems can become more efficient through competitive training that makes it easier to spot flaws.
- **Parallel and Dynamic Monitoring:** Monitoring is necessary to ensure that the discrepancy between the expected and actual behavior of the system is adequately captured and adjusted. To this end, developers of AI systems must retain control as a measure of the original system's performance.

Benefits of AI Application in Cyber Security

Artificial intelligence is good for solving some complex problems, including cyber security.

This technology is changing our lives. Everything will be "smarter" and work better if integrated into our homes, cars and devices. Whether a software is malicious or not, intelligence can detect it. With new AI capabilities, the world can become safer, fairer and safer.

Some of the benefits of using Artificial Intelligence in Cybersecurity are listed below:

- Artificial intelligence helps identify unknown threats.
- Due to its automatic nature, it reads a lot of data and analyzes it to identify any threats.
- Artificial intelligence along with cyber security can manage vulnerabilities better.
- Artificial Intelligence in Cyber Defense is used to improve Enterprise Efficiency and Resilience.
- Supports management by understanding how security software and tools work.
- The cybersecurity replication process is controlled by intelligence that pursues the best aspects of the human body while ignoring its weaknesses.

Challenges of Adopting AI in Cybersecurity

Every advantage in today's world comes with a price: As mentioned above, some of the challenges of using AI in Cyber Security can be put into limelight as:

- Although tools of AI helps to combat cyber crime yet these tools are not full proof and can be easily misused by cyber crackers.
- AI is a technology so it is quite cumbersome to use it in a general way. It calls for expertise and specialization in implementing AI tools.
- Network security is an area where absolute security is impossible.
- AI application in cyber security requires monetary and human resources than non AI solutions. Cyber security solution of AI tools may not be suitable for few implementations also.
- Hackers utilize AI to create their own malware and design it with AI-protected protected feature.
- The data from which AI systems are trained determines their accuracy; If the data is wrong, the AI system will be wrong.
- Using AI-based security systems can be expensive, especially for small and medium-sized businesses without the means.

Conclusion

Robert S. Muller said, "There are only two types of companies: companies that are hacked and companies that will be hacked."

Information security teams may now reduce breach risk and strengthen their security posture with the use of artificial intelligence (AI)-based tools for cyber security. AI is useful in cyber security because it helps security professionals better understand, study, and analyze cybercrime. But the need of the hour is to seriously analyze all the minute aspects of using artificial intelligence in Cyber Security so that we can carry on its further positive implementations without being worried for its use for malicious purposes.

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Impact of Organic Farming Practices on the Hilly Precincts of Uttarakhand

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Abstract

In the contemporary India, our government are attempting to magnify the organic farming practices where the scientist & International institutions are focusing on various aspects of agro based economy; generally, it is a scheme which debar the use of artificial input by peasants while farming. Researchers took the areas of ramnagar in Uttarakhand for the study; Data are retrieved by the researchers by using Interview method.

The paper investigate the rigorous mental analysis trailing the transforming of farming practices from conventional to organic by the peasant as well it gives a little gist about the revenue generated by the peasant through this farming practices. At the end researchers concluded her research paper by giving many unanswered questions and gave some imperative recommendations in order to mitigate the drawbacks in adoption of organic farming practices by the peasants.

Keywords

Globalized, Organic Farming, Precincts, Peasants.

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Introduction

In a Globalized sector, India is countries which are based on agriculture, approx.67% of Total populations are engaged in Agro sector. Our governments are continuously attempting to magnify the Organic Farming Practices. Organic Farming is the Scheme which debar the use of non- natural inputs (like;- Fertilizers, Pesticides, Hormones , Chemically made feed, Addictive etc.) to the apex feasible extend believe upon the crop rotation , crop residues, Animal manures , Off- Farm Organic waste , Mineral grade rock addictive and biological system of nutrient mobilisation and Plant protection.

Generally, Organic farming is a term used to define the farming by peasants without the use of any chemicals which would affect the soil, produce unhealthy product and are harmful for the environment.

Origin of Organic farming in Uttarakhand

Uttarakhand has evolved into the second prominent State who is adopting organic farming practices. This state secure 2nd rank in this sector after Sikkim who has already adopted the method of organic farming, Uttarakhand converts almost 40,000 hectares of farming land into Organic Farming. Around 80,000 micro and medium peasants are emboldened to get hooked in the go- green initiative of state govt, in order to preserving our environment. Rudraprayag (followed by Pithodagarh) is the place who has largest no. of organic farm.

The main sense behind launching the approach of Organic Farming Practices was to yield and sell a healthy, safe and eco- friendly products to the ultimate consumers.

Objectives

- (i) To perceive the explicit cause following the switching to organic farming practices from the conventional one by the peasants.
- (ii) To investigate the revenue accumulated by the peasants through organic farming practices.

Research Methodology

This Research Study is Descriptive in nature; Researchers has applied Interview method in her investigation. Researchers conducted her research investigation in the field of Ramnagar. There are 200 Respondents (Organic Peasants). Researchers take assistance from diversified Thesis, Research Paper, and Research Articles.

Results and Discussions

The result pertaining to the impact of organic farming practices on the hilly precincts of Uttarakhand are as follows:-

Table 1:-Data regarding the conversion of peasants from conventional to organic farming

Period of Transformation	% of peasants who transformed from conventional to organic farming.
In the year 2019	20%
In the year 2020	28%
In the year 2021	14%
In the year 2022	19%
Others	19%

Interpretation of data- Researchers would like to stated that, In his study around 20% of peasants have transformed their farming practices from conventional to organic in the year 2019, 28% transformed themselves from conventional peasants to organic peasants in the year 2020, 14% change their farming method in the year 2021, approx.. 19% peasants have changed their farming method in the year 2022, and 19% peasants have registered themselves as an organic peasants with a certifying agency in the other year not prescribed here.

Table 2:-Data regarding the main reason of transforming their method of farming from conventional to organic farming

Reason behind transforming the method of farming from conventional to organic farming	Frequency
To mitigate the use of chemical things	46
From the viewpoint of Health	56
From the viewpoint of Environment	98

Source:-Field Survey,(n=200)

Interpretation of data- On the basis of above study, researchers finds some fact and figure which are as follows:- Around 45 Peasants change their method of farming from conventional to organic because of mitigating the excess use of chemical inputs , 56 peasants transform just because of health issue, and last but as usual not least 98 peasants change their method because of environmental issues.

Table 3:- Data regarding the revenues generate by the organic peasants

Revenue generate (per month)	% OF PEASANTS
10,000	25%
20,000	45%
15,000	10%
12,000	15%
Others	5%

Source:-Field Survey.

Interpretation of data- The most important factor in the life of peasant is his revenue /Income. Researcher found that around 25% peasants are earning approx.10, 000 per month by producing the organic products / through organic farming. 45% peasants are getting revenue of 20,000 per month from organic farming, and around 10% peasants are earning approx. 15,000 per month, 15% are earning 12,000 income every month, remaining percentage of peasants are earning others revenue which are not mentioned here.

Conclusion

On the above study researchers have come on this conclusion that the scope of organic farming in the hilly precincts of Uttarakhand is not as spacious as we are familiar, we have to put much efforts in order to achieve the level where the entire Uttarakhand could evolve into organic. Banks are not providing so much funds to them, some Ngo's like sanjeevani, kartways are working for organic peasants, some peoples and eminent MBA girl left her job in order to do organic farming.

Researchers did a survey at ramnagar where she converge some relevant instruction regarding the revenue generated ,Year of their transformation, reason behind their transformation, facilities provided by NGO's, Bank and Govt. to them, etc, this shows the impression of organic peasants towards organic farming, and to analysis that how much a peasant is appeased with this farming or are they getting reasonable proceeds after selling its crops to govt. or not, there are so many questions which arises in the mind of every peasants and Consumers, that what is the benefit of accomplishing organic farming practices, and what is the vast deviation between organic products and normal products and to know that are consumer wants to switching to organic products from normal one.At last researchers wants to state that organic farming practices is one of the organic farming which is complimentary of any chemical inputs, pesticides etc., and every one can confide on its products.

Recommendations

After contemplate the entire concept of organic farming practices, researchers give some useful recommendations in order to make the Uttarakhand organic just like Sikkim in East India:-

(a)Govt. should inaugurate a large no. of Training Centres for the peasants where they all realize to recognize about the mechanism, apparatus and techniques of organic farming practices.

(b)A health awareness programme should be evoked across the each and every precincts of Uttarakhand where all consumers can get the proficiency about the harmful products they are using which is also harmful for the Environment and they could motivate and encourage proving Healthy Products, i.e., Organic Products.

Future Scope of Investigation

This research study is too wide in scope so covering each and every segment into one paper is also not possible, future researcher who would like to formulate research paper on this area can explore their study to some cutting edge vicinities like-

- (a) Adoption of Rice production technologies by tribal peasants,
- (b) An analysis of Farmer Field School (FFS) as a potential source of advanced technology dissemination among the peasants.
- (c) Study of constraints faced by the farmers in adoption of bio-fertilizers.

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A Study on Customer Perception Towards Food and Beverage Unicorn Start-UPS with Reference to Online Food Delivery Applications in Airoli Region of Navi Mumbai

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Abstract

On January 16, 2016, Prime Minister Shri. Narendra Modi unveiled the Start-up India Scheme, a programme aimed at fostering entrepreneurship skills, creating jobs, and generating wealth. India currently boasts the third-largest startup ecosystem in the world, behind China and the United States. Food is one of the fundamental necessities of life, and online food delivery services like Swiggy, Zomato, etc. have gained substantial appeal among food and beverage-related unicorn start-ups. Organizations are working hard to reach as many customers as possible, secure customer loyalty, and keep their current customers given the increased market competition in the turbulent, uncertain, and dynamic business climate. With booming industries in tech-savvy India and a focus on sustainable development, there has been a substantial shift in the ordering and delivery of meals from the way it was done in the past. This study focuses on how consumers perceive food and beverage unicorn start-ups in relation to online food delivery applications. Further, an attempt has been made to suggest ideas which could be a road map in order to ensure that Government's vision of making India a 40 trillion dollar economy by 100th year of independence. To get the necessary data, a structured questionnaire is used. Utilizing the SPSS software, data are being gathered from the Airoli Region of Navi Mumbai.

Keyword

Unicorn Start-up, Entrepreneurship Skills, Online Food Delivery Applications, Swiggy, Zomato, Sustainable Development, Airoli Region of Navi Mumbai.

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Introduction

Government's vision - India @100 wants to see the country grow into a powerful economy with fair wealth. All sectors should expand according to Government. India will undergo a transformation through a vision of all-around development with fruitful international partnerships, and the new India will be a technological powerhouse bringing about socioeconomic growth. This change and general evolution will be significantly influenced by technology. According to Government's vision, technology will be the primary driver of growth across all other sectors, resulting in profound changes in the social, economic, cultural, and political spheres. To transform India into an economic giant, a variety of sectors including finance, management, commerce, economics, education, and technology would need to develop and assure successful policy implementation.

This research paper contains a study of once such technology in the form of mobile application based food delivery and how has it created a transformation in the society and further, how does it aid in achieving Indian Government's vision of transforming India into a 40 trillion dollar economy and further, aiding and supporting United Nation's sustainable development goals.

Introduction to Start-ups

Everyone aspires to lead a very successful life. Success may undoubtedly be attained with the help of one's efforts, commitment, and dedication to one's goals. However, in addition to one's own efforts, support from other members of society is also important. Family, friends, co-workers, financial institutions, educational institutions, Government etc. may all provide support. Support can refer to both monetary and moral support.

One such support initiative is the "Start-up India Scheme," which the Honourable Prime Minister of India, Shri Narendra Modi, unveiled on January 16, 2016. Young businesses called start-ups are established with the goal of creating an innovative or cutting-edge good or service. It may consist of an entirely new good or service, or it may only be an inventive improvement to something already available. A start-up, which is founded on innovation, market research, and skill development, aims to correct the flaws or deficiencies of currently available goods or services or develop completely new categories of products or services, thereby facilitating a better and more effortless life and ensuring customer satisfaction. By creating a robust ecosystem for fostering innovation, start-ups also encourage entrepreneurship and skill development. This helps to fuel sustainable economic growth and create substantial job opportunities.

India currently boasts the third-largest start-up ecosystem in the world, behind the United States and China, and by maximising one's skills, India has a big number of young entrepreneurs. India also boasts the biggest percentage of youth in the entire world, which undoubtedly presents a significant opportunity for entrepreneurship and the emergence of a powerful global economy.

All this put together, there is no doubt that India will not only be able to achieve the 40 trillion dollar economy target by its 100th year of independence but also will achieve United Nation's sustainable development goals.

Introduction to Unicorn Start-ups

Aileen Lee, an American venture capitalist, coined the phrase "Unicorn Start-up." A unicorn start-up is a privately held, \$1 billion or more valued start-up that has received venture capital funding. Unicorn start-ups aren't specifically appraised on the basis of their current performance; instead, investors and venture capitalists who have participated in various investment rounds view them primarily for their growth potential.

Entrepreneurship and Skill Development

The four production factors are land, labour, capital, and enterprise. Entrepreneurship is the ability and process of creating, structuring, and operating a new business in order to produce economic value in the form of profits while taking on associated financial and other risks. India has been moving on from solopreneurs to entrepreneurs and creating a large scale job opportunities.

The "Ministry of Skill Development and Entrepreneurship" has been established by the Indian Government. It is headed by Union Minister Shri Dharmendra Pradhan and State Minister Shri Rajeev

Chandrasekhar. With the goal of creating a “Skilled India,” this ministry was established on November 9th, 2014 with the mandate of training and skill development, skill up gradation, vocational skills, innovative thinking, and the creation of new and innovative work prospects. This also supports United Nations sustainable development goals.

Introduction to Online Food Delivery Applications

Online meal delivery apps are technology and smartphone-based software programmes that compile all registered eateries and food outlets according to our location. Additionally, we can quickly order, pay for, and have meals delivered to the desired location by choosing our desired menu from a variety of selections and prices from different restaurants. They act as link between customers and restaurants.

Zomato

One of the greatest online food ordering and delivery apps in India is Zomato, which was established in 2008 under the name Foodiebay before changing its name to Zomato in 2012. Pankaj Chaddah and Deepinder Goyal founded this food and beverage-related start-up, which has its headquarters in Gurgaon, Haryana, India, with delivery sites throughout the world, including the UAE, UK, Singapore, and Lebanon. Zomato is a tech-savvy start-up app from India supported by e-commerce that has expanded to international markets, becoming a global inspiration, and is also creating job possibilities by just charging eateries a commission of 18 to 25% based on their associated sales revenue.

By introducing a new way to order food and reaching out to the largest possible audience—something that traditional restaurants occasionally find themselves unable to do on their own—Zomato has helped revolutionise business and social practises. Additionally, Zomato wants to have all of its delivery cars in its fleet be 100% electric by 2030. Additionally, it emphasises plastic-neutral deliveries as well as trash minimization, reusing, and recycling. This evidence demonstrates Zomato’s contribution to a sustainable future. Zomato is also a unicorn startup, therefore it has been helping to advance our conference’s topic, “India @ 100: Vision 40 Trillion Dollar Economy,” by transforming India into a higher-income nation by 2047, the country’s 100th year of independence.

Swiggy

Swiggy, a well-known online meal delivery service, was founded in 2014 and is based in Bangalore, India. Swiggy charges restaurants a commission of 18 to 23% of their associated sales revenue. Swiggy was created by Sriharsha Majety, Nandan Reddy, and Rahul Jaimini. Swiggy is another another tech-savvy start-up app from India that supports online shopping. Swiggy has revolutionised food ordering and reached out to customers that conventional restaurants may not always be able to, changing the way people conduct business and engage with one another. To further support a sustainable future and lessen pollution, Swiggy pledges to enhance the deployment of electric vehicles and bicycles by 2025. Additionally, Swiggy, one of the unicorn start-ups, has been helping to advance our conference’s topic, “India @ 100: Vision 40 Trillion Dollar Economy,” by transforming India into a higher-income nation by 2047, when the country will celebrate its 100th anniversary of independence.

Traditional methods of ordering food

Traditionally, people would buy food from restaurants over the phone for delivery to a specific area, visit the restaurant in person to place an order for food to be delivered at a later time or date, or even physically hand-pick their own meal if they weren’t a delivery person. For ordering and meal delivery, we essentially made direct contact with the restaurant or food outlet.

Sustainable Development

The definition of sustainable development is “development that satisfies present demands without sacrificing the needs of future generations.” It adopts a more global perspective and takes into account a healthy balance between the three Ps: People (the social component), Planet (the environmental component), and Profit (Business Component).

Sustainable Development Goals given by the Department of Economic and Social Affairs, United Nations are as follows: No Poverty, Zero hunger, Good health and well-being, Quality Education, Gender Equality, Clean water and sanitation, Affordable and clean energy, Decent work and economic growth, Industry, Innovation and Infrastructure, Reduced Inequalities, Sustainable Cities and Communities, Responsible Consumption and Production, Climate Action, Life below water and on land, Peace, Justice and Strong Institutions and Partnership for the goals.

Review of Literature

Numerous studies have been done on start-ups in general, but little study has been done on start-ups relating to food and beverage and how it relates to online food delivery applications. Rarely is there research on the impact of online food delivery applications on business and societal behaviour, or on how these applications might contribute to a more sustainable future considering United Nations sustainable development goals. Additionally, very little research has been done on how start-ups might help India reach a 40 trillion dollar economy by 2047, the country's 100th year of independence. The lack of study connecting food and beverage-related start-ups with entrepreneurship and skill development in the targeted geographic area creates a research gap.

IANS, New Delhi (2021), in its online news article titled "Swiggy commits to increase deployment of electric vehicles by 2025", Swiggy, a unicorn start-up in the food and beverage sector, has made a commitment to become green by converting its fleet to electric vehicles by 2025, making it pollution-free.

Salamzadeh, Aidin & Kawamorita, Hiroko. (2015). *Startup Companies: Life Cycle and Challenges*. Startup firms are newly established companies that fight for survival. These organisations frequently start out with brilliant concepts and grow to be successful. These occurrences are mentioned in the literature on management, organisation, and entrepreneurial theories. But a precise image of these organisations is lacking. The goal of this essay is to conceptualise the phenomenon known as "start-ups" and to list potential challenges.

Illuri Venkatanarayana (2016), in his Research Paper titled "Start-ups in India: Sustainable Development", The goal of the Start-up India project is to inspire young people to become actively involved in business for the benefit of the country. Employment opportunities will be provided by this project. Additionally, obstacles like strict licencing requirements, a lack of bank backing, the absence of tax breaks, etc., will be removed.

Deepashree Chatterjee (2020), in her research paper titled "Start-up India – A Step towards Prosperity", is of the belief that innovations are essential for the growth of the country, and as a result, the significance of startups cannot be discounted. Launched with the intention of fostering entrepreneurship and creativity, especially among India's youth. There are many new job opportunities thanks to the Start-up India programme, which has significantly increased entrepreneurship in India. Startups must overcome challenges like creating and maintaining a culture, mentorship, adhering to legal requirements set forth by the government, financing, recruiting talented and skilled individuals to join their organisations, developing organisational structure, and adequate planning and forecasting. She emphasises that it is imperative that India's youth take action to improve both the nation's and the world's conditions.

Relevance of the Study

Modern approaches have revolutionised the food and beverage sector thanks to the convenience of internet ordering and smartphone apps. The provider of the food delivery service does not own any restaurants; rather, it only lists a variety of eateries on its app. The goal of this study is to determine how satisfied consumers are overall with online food delivery services compared to more conventional methods of placing food orders. This research also examines how society and particular enterprises have changed their behaviour patterns in relation to the food and beverage sector. From a larger standpoint, it's finally a start-up business idea that encourages entrepreneurship that has flourished and attained unicorn status. Any business plan must incorporate sustainable growth, and by looking at the actions being taken to safeguard the environment, one may learn

about this component from this example. During this “Amrit Kaal Mahotsav,” which celebrates 75 years of independence, it is important to learn about the post-independence development of business and management. Further, this studies gives suggestions, recommendations and helps in giving a road map as to how India can make it up to the target of 40 trillion dollar economy by 2047 i.e. it's 100th year of independence.

Scope of the Study

Conceptual Scope: This study is limited to customer preference towards method of ordering food in Airoli Region of Navi Mumbai.

Area: The area selected for study is Airoli Region of Navi Mumbai.

Age Group: All age group respondents are included in the study.

Gender: Both male and female respondents are selected.

Occupation: Students and working group respondents are considered.

Research Methodology

Class of respondent: The sample selected for the study is 200 respondents residing in Airoli Region of Navi Mumbai, irrespective of the age or profession.

Sampling method: For collection of primary data, non-probability convenience sampling method will be used.

Method of data collection: In this research researchers uses both primary and secondary data.

Primary data was collected from 200 respondent in Airoli Region of Navi Mumbai randomly and sample size being determined using sample size calculator.

Secondary data used to support the study is collected from books, journals, research papers, websites, and newspapers.

Statistical Technique of analysis of data: Chi square is used to test the hypothesis along with percentage analysis and pie chart.

Objective of the Study

1. To analyse online food delivery applications and comparing traditional and modern methods of ordering food and its delivery.
2. To analyse factors which drive people to use online food delivery apps along with problems faced by users in the same.
3. To study the satisfaction level derived by using online food delivery apps.
4. To study the change in customer behaviour and behaviour of businesses with respect of online food delivery applications and sustainable future.
5. To study the impact of Entrepreneurship and Skill Development on growth of start-ups.
6. To study the impact of United Nations Sustainable Development Goals on Start-ups Entrepreneurship and Skill Development.
7. To study the contribution of start-ups in making India a 40 trillion dollar economy by 2047 being 100th year of independent India.

Hypothesis of the Study

Hypothesis 1

H0: There is no difference in the criteria for ordering food by the respondents.

H1: There is difference in the criteria for ordering food by the respondents.

Hypothesis 2

H0: There is no difference in getting discounts between ‘Online food Distribution Apps’ and ‘Traditional Restaurant’.

H1: There is difference in getting discounts between ‘Online food Distribution Apps’ and ‘Traditional Restaurant’.

Results – Data Analysis and Interpretation

Customer preference towards methods of ordering food



Under which method can you track status of your order better?

Method	Count	%
Online	155	77.50
Traditional	45	22.50
Total	200	100

Where do you get more discounts and offers?

Method	Count	%
Online	133	66.5
Traditional	67	33.5
Total	200	100

Which method of ordering food is always available without time barriers?

Method	Count	%
Online	168	84.0
Traditional	32	16.0
Total	200	100

Which method delivers food fastest?

Method	Count	%
Online	150	75.0
Traditional	50	25.0
Total	200	100

Which method provides better personalised touch in their services?

Method	Count	%
Online	31	15.5
Traditional	169	84.5
Total	200	100

Which method adopts environment sustainable packing and delivery?

Method	Count	%
Online	115	57.5
Traditional	85	42.5
Total	200	100

Hypothesis Testing

Hypothesis 1

H0: There is no difference in the criteria for ordering food by the respondents.

H1: There is difference in the criteria for ordering food by the respondents.

Data collected was tested to be normal and non-parametric test was applied. Out of various non-parametric tests, viz., Wilcoxon Test, Kruskal Wallis Test, Chi-square test etc. To test the above null hypothesis Chi-square test is applied. The results are as follows.

Test Statistics

	Q5 How do you order food?
Chi-Square	16.95
df	2
P-value	.000

Interpretation: Above results indicate that the calculated p-value less than 0.05. Therefore Chi-square test is rejected. Hence, null hypothesis is rejected and the alternate hypothesis is accepted.

Conclusion: There is a difference in the criteria for ordering food by the respondents.

Finding: To understand the findings of the hypothesis observed and expected frequencies are obtained and presented in the following table:

Q5 How do you order food?

	Observed N	Expected N	Residual
Call Restaurant	26	66.66	-40.66
Use online food delivery app like Swiggy, Zomato, etc	103	66.66	36.34
Visit Restaurant	71	66.67	4.33
Total	200		

The above table indicates that the proportion of respondents is significantly less who 'Call restaurant' to order the food. Respondents either 'Visit restaurant' or 'Use online food delivery app like Swiggy, Zomato, etc' is significantly higher.

Hypothesis 2

H0: There is no difference in getting discounts between 'Online food Distribution Apps' and 'Traditional Restaurant'.

H1: There is difference in getting discounts between 'Online food Distribution Apps' and 'Traditional Restaurant'.

To test the above null hypothesis Chi-square test is applied. The results are as follows.

Test Statistics

	Q6 Where you get more discount and offers?
Chi-Square	10.89
Df	1
P-value	.000

Interpretation: Above results indicate that the calculated p-value less than 0.05. Therefore, Chi-square test is rejected. Hence null hypothesis is rejected and the alternate hypothesis is accepted.

Conclusion: There is a difference in getting discounts between 'Online food Distribution Apps' and 'Traditional Restaurant'.

Findings: To understand the findings of the hypothesis observed and expected frequencies are obtained and presented in the following table:

Q6 Where you get more discount and offers?

	Observed N	Expected N	Residual
Online food Distribution Apps	133	100	33
Traditional Restaurant	67	100	-33
Total	200		

Above table clearly indicates that discounts offered by ‘Online food Distribution Apps’ is significantly higher than discount offered by ‘Traditional Restaurants’.

Conclusion of the Study

It is clear that consumers prefer using online food delivery services to more conventional methods of placing food orders. Additionally, these applications have certain special features like GPS tracking of our orders, offers and discounts that are much greater than those at regular restaurants, various restaurants or food outlets possibilities for the same cuisine with price comparisons, no minimum order requirements, etc. Additionally, users receive top-notch, practical, and user-friendly services from the online meal delivery applications.

In addition, there has been a big shift in how society and businesses behave when it comes to the research issue we are interested in, and there are plans for future sustainability measures like the introduction of electric vehicles and trash reduction and recycling. Numerous people are employed by these online meal delivery application organisations as delivery workers, office staff, etc.

The conference’s theme, “India @ 100: Vision 40 Trillion Dollar Economy,” aspires to make India a higher income economy by 2047, the country’s 100th year of independence, and start-ups are assisting in this goal through promoting entrepreneurship.

Further, by offering training, education, mentorship, and financial help, the Ministry of Entrepreneurship and Skill Development has inspired many young people to launch their own businesses. India having the highest percentage of youth population in the World is also an asset for the country.

Suggestions and Recommendations

Given that India has the world’s greatest youth population, we may be certain that it has the ability to grow into a superpower and a world leader. The demand for mentoring, however, must start at the collegiate level. The finest start-up idea must also receive complete support from colleges in order to become a reality, and this support should be provided through start-up fests and business idea competitions. The government has already established incubation facilities and tax benefits for start-ups generally, but not all start-ups are able to comprehend and fully utilise these resources. Therefore, all new businesses must be informed of government programmes for them, such as mentorship, financial aid, tax incentives, and additional requirements for the same. Additionally, start-up finance banks must be established in all major cities, offering credit at reasonable rates to deserving start-ups with expansion potential. The best investment is in oneself, not in shares, debentures, stocks, bonds, gold, etc. To continually improve oneself and learn something new and inventive that will yield higher benefits, one needs commit time, money, and effort. Capitalizing on the highest number of youth population by encouraging and training on entrepreneurship and start-ups with export of goods and especially services and discouraging brain drain is also suggested. Thus, adopting these recommendations, a road map could be created and India will be able to achieve the vision of 40 trillion dollar economy by its 100th year of independence.

Limitations of the Study

1. Only Airoli Region of Navi Mumbai is selected for study.
2. 200 samples are selected for the study.
3. Among start-ups, food and beverage industry is selected for study.
4. Only online food delivery applications w.r.t food and beverage industry are selected for study.

Scope for Further Study

Thus, from the above mentioned limitations, it’s apparent on record that there exists further scope for study with respect to entrepreneurship and skill development, Start-up businesses, geographic location, industry, environment sustainability analysis, business or employee perception for the said topic and further contribution of various start-ups belonging to various industries along with its contribution towards the vision of making India a 40 Trillion Dollar economy etc. Further, there exists a large scope to study in detail on contribution of the Ministry of Entrepreneurship and Skill Development on success of start-ups in various industries. Further,

there also exists further scope to study the impact of United Nations, Sustainable Development Goals on Start-ups, entrepreneurship and skill development.

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Role of Cooperative Entrepreneurship in Socio-Economic Development

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Abstract

Cooperative entrepreneurship has a huge role in ensuring the sustainable socio-economic development. The cooperative play a major role in self-help in rural areas where private entrepreneurs hesitate to make investment and public authorities are not able to provide the required services due to paucity of fund. Cooperative entrepreneurship explores the mutually reinforcing requirement and intrinsically linked objectives of community socio-economic development. According to the many studies India has become the fifth largest economy in the world and can channelize its demographic advantage in its quest to become one among the world's top three largest economies. Cooperative entrepreneurship can play an important role in socio-economic development in India. This paper states that with the focus on quality, professional management, innovation, growing expertise in marketing and branding and government support, cooperative entrepreneurship are all set to accomplish the objective of socio-economic development of Indian masses.

Keywords

Cooperative Entrepreneurship, Self-Help, Demographic, Professional Management, Innovation, Socio-Economic Development.

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Introduction

Universality of the basic values of cooperative societies viz. mutuality, equality, self-help, voluntarism and democratic condition in its working. Cooperation acts in harmony with man's right and need to form associations. It refers to an organization of individuals for achieving a common economic objective by mutual help and collective effort. The cooperatives societies play a major role in influencing the people towards social and economic changes in terms of adoption of innovations. In this process, the Cooperatives assist people and offer unlimited possibilities to their participation in economic resurgence. Cooperative Entrepreneurship concept focus on the effective facilitating and positive change in the society, through a shared and value-based enterprise structure mainly focused on society welfare and sustainable socio-economic development. Cooperative entrepreneurship generally concentrated on important issues faced by the society. The principles of a cooperative society are that it is open to all, unlimited in membership and, as an alternative to producing a profit on capital invested, produces benefits in the form of services for its members. The general goal is to create a force on the market consisting of many small business working together for the achieving the same goals. And in which the goal and methods are decided upon democratically in advance according to the central principle that the benefits of the collectively owned and operated company accrues as evenly as possible to all participants. Today the cooperative entrepreneurship is a modern phenomenon of interest that describe an organisation composed of the firms from various Micro, Small, and Cottage industries in India. The collaborative abilities allow firms to pursue a joint strategy/plan of continuous innovation. Moreover, in this paper, two major characteristics must be highlighted (a) The cooperative relationship facilitate knowledge or creation of new ideas, and (b) the cooperative relationship are voluntary and in turn, continuous innovation. The term cooperative entrepreneurship refer to entrepreneurial teams and to cooperation and joint efforts among the group of people with same interest. Therefore, it is an important domain to explore, and fundamentally different from the aggregation of firms in collaborative communities. On the other side, the cooperative represents a bridge between individuals in a group and action taken with regard to group decision. Under this process, a business may be enrich its performance by creating new knowledge/ideas that becomes a foundation for building new competences or revitalising existing business.

To attain the objective of all inclusive growth, various community development models have been advocated by development planners and policy makers and have been implemented by the State Governments and central Government. Amongst those, a potent approach has been to tap the potential of cooperatives in the country and promote entrepreneurship amongst them to carry out effective and profitable community economic activities. By the virtue of the principles on which they rest, cooperatives are successful in mobilising resources independently and utilising these for more productive purposes. While the characteristics of cooperatives are homogeneous, the manifestation of cooperatives is heterogeneous. Cooperatives rest on the basic triple tenets of, economic development social mobilisation and democracy. The broad manifestations of cooperatives include short term credit cooperatives like Primary Agricultural Cooperative Societies District Central Cooperative Banks and State Cooperative Banks and long term credit cooperatives like Primary Cooperative Agriculture and Rural Development Banks and State Cooperative Agriculture and Rural Development Banks etc. cooperatives which involve in commodity in different products like textiles, sugar, oil, and dairy etc. and service cooperatives like hospital cooperatives, housing, tourism, transport etc. The first example of financial inclusion was the adoption of Cooperative Societies Act, 1904. Since then a long way has been traversed and with the setting up of the new Ministry of Cooperation by the Central Government in July, 2021, the continued significance of the Cooperative movement has been underscored. The four hold guiding principles of this movement are Sahkar se Samridhi inclusive development, Cooperation-Beyond Cooperatives and Aatma Nirbharta through community entrepreneurship.

The entrepreneurship is generally defined as the creation of an innovative economic organisation for the purpose of gain or growth under conditions of risk and uncertainty (Dollinger, 2004). Accordingly, the cooperatives can be called community enterprises being managed by diverse member entrepreneurs, recent

research indicates that local level participation of communities in different developmental activities has a positive impact on shaping communities, and ensuring the progression of low income community into the socio economic mainstream. In this backdrop, this paper explores the mutually reinforcing requirements and intrinsically linked purposes of cooperatives and entrepreneurship to achieve the broader objective of socio-economic development of community.

Objectives and Methodology

The present study is based on secondary data which collected from various sources Viz Report, magazine, books and website etc. This paper explores the role of cooperative entrepreneurship in socio-economic development in India. Other objectives are

1. To understand the concept behind cooperative entrepreneurship.
2. To understand the legal and economic framework of cooperatives in India.
3. To provide some recommendation to strengthen the cooperative sector in India.

Legal Framework of Cooperative Societies

The incorporation, regulation and winding up of co-operative societies other than those operating in more than one state is a state subject and is governed by the state laws on co-operative societies. In the case of cooperative with objects not confined to one state, their incorporation, regulation and winding up fall in the central domain and are governed by the multi-state cooperative society act, 2002. It is estimated that there are 8.64 lakh cooperative societies with a membership of 28 crore members. As many as 1,514 multi state cooperative societies(MSCS) are registered in the country under the provisions of MSCS Act, 2002. The cooperative sector has an irrefutable major role in strengthening the rural economy through its engagement in dairy, agriculture, agro processing, fishery by providing credit, agricultural inputs and marketing for milk, forest products, medicinal plants, fruits, vegetable, flower, fish, honey and Resham, etc. and by contributing immensely by generating more and more direct and indirect employment opportunities.

Strengthening the Cooperative Sector

To strengthen the cooperative sector, the following steps are being taken by the government of India. Some major steps includes-

- The Formulation of a scheme – Cooperative to Prosperity will map the growth catalysts in the economy and encourage rolling out of a coordinated approach of cooperative development to enhance income and growth.
- The launch of a pan-India project for computerisation of 62,500 PACS at a total estimated cost of Rs. 2,513 crore. Digitalisation of Primary Agricultural Cooperative Societies will ensure efficiency of their operations, speedy disposal of loans, lower transition costs, faster audit, reduction in imbalances in payments and accounting with DCCBs, and SCBs enhanced transparency and trustworthiness, and a positive and emphatic transition towards financial inclusion and providing digital literacy to the peoples.
- The Formulation of a scheme for modernising and professionalising the cooperative education and training will take care of capacity building needs of the sector and will ensure that the cooperative sector attains required competitiveness in the changed economic scenario.
- The Draft model Bye Laws are being prepared. Preparation of draft model bye laws for the Primary Agricultural Cooperative Societies to transform them into multipurpose and multi-dimensional vibrant economic entities.
- The Creation of a National Cooperative Database will help in identifying the areas where cooperative movement could be expanded and, accordingly, facilitate the framing of appropriate policy.
- A new National Cooperation Policy should be Introduce by reviewing the two decade old policy and exploring new and sustainable development pathways through cooperation.

Some Other Steps which should be Taken

Besides the above said steps, there are some more steps which should be taken to strengthen the Indian cooperatives. These are

(i) Awareness Programme for Youth

Awareness programme entailing all forms of media is the need of the hour. School children and fresh graduates need to be made aware that entrepreneurship, especially in the cooperative sector, is a full-fledged career option available to them. In this regards, some higher education institutions have started running undergraduate entrepreneurship programmes. The National Cooperative Development Corporation under the Ministry of Cooperation is implementing Yuva Sahakar- Corporate Enterprise Support and Innovation Scheme. Currently, the proposal to set up a National Level University dedicated for the cooperative sector is under the consideration of the Ministry of Cooperation.

In the globalised world, access to information is the most important knowledge sharpening tool. Accordingly, a common interactive portal with all information for cooperatives, including potential employee employer mapping, access to not just information, but access to credit and skill training too, and encouraging entrepreneurship is the need of the hour.

(ii) Convergence

In last few years More than 12,500 cooperative societies are registered as Micro, Small and Medium enterprises (MSMEs), which implies that cooperatives account for about 0.15% of the 1.22 crore MSMEs which have registered on the Udyam Registration Portal, according to new definition of MSMEs adopted on 26th June 2020, amidst the first wave of the covid-19 pandemic. The new definition is based on dual criteria of investment in plant and machinery or equipment and turnover and, accordingly, the enterprises registering on Udyam are classified as Micro, Small or Medium. Udyam is a unique identity number for MSMEs, generated on the basis of information fetched from GSTN and PAN databases through Application Programming Interface. Export figures are deducted from the turnover for the purpose of classification, thereby encouraging export oriented MSMEs. Another recent step that discourage MSMEs from stunting their growth merely for the purpose of availing benefits as an MSME, is the extension granted to MSMEs on 18 October 2022 to continue to claim their previous status as a Micro, Small or a Medium enterprise for a period of 3 years. In case there is an upgradation in their classification of MSMEs. The Udyam registration number is mandatory to all for availing benefits of Priority Sector Lending and for most programmes of Ministry of MSME. The Ministry of MSME is also working on Udyam Shakti with some other Central Ministries, Central Departments and some State Governments for converging benefits being offered to MSMEs. Considering that a substantial number of cooperatives have already declared themselves to be MSMEs and that Udyam is almost like a Know Your Customer (KYC) for the MSMEs, in the spirit of convergence and enhancing the ease of doing business, it is a possibility for consideration whether Udyam certification may be made mandatory for them to avail the benefits of all the programmes for cooperatives instead of any other documentation.

(iii) Training and Skill Development programme

Training is an integral and important part of upgradation of skills and for forming the basis of entrepreneurship. Such trainings are conducted by various institutes including Regional Institutes of Cooperative Management, Bankers Institute of Rural Development, NCDC, National Council for Cooperative Training (NCCT)'s, Vaikunth Mehta National Institute of Cooperative Management, National Cooperative Union of India, Institutes of Cooperative Management, etc. For capacity building, customised special schemes may be explored. In this context, entrepreneurs among cooperatives and aspiring entrepreneurs can avail benefits of Ministry of MSME's Entrepreneurship and Skill Development Programme.

(iv) Finance

All Cooperatives can come up with innovative business ideas to set up new business entities and to expand existing units. The foremost challenge before them is to avail adequate and affordable finance timely, along with services to effectively use all such resources. Collateral free loans ensuring timely availability, accessibility and affordability are important. An exclusive fund for cooperatives to achieve their objectives.

(v) Technological Upgradation

Today the world is changing very fast, keeping abreast of technological developments has become an absolute necessity and a reiteration of Schumpeter's theory that new innovations replace existing ones which become obsolete with time. Accordingly, a special scheme is required for digitalisation of cooperatives.

Table-1, depicts the Performance of Cooperative Banks. The proportion of Non -Performing Assets out of the loans outstanding is high for Urban Cooperative Banks (UCBs), SCBs and DCCBs. The Gross Non Performing Assets as a percentage of Gross Loans Outstanding of Cooperative Banks.

Table - 1

Urban Cooperative Banks		District Central Cooperative Banks		State Cooperative Banks	
31.3.2020	31.3.2021	31.3.2020	31.3.2021	31.3.2020	31.3.2021
10.6	11.7	12.6	11.4	6.7	6.7

Source: Indian Lok Sabha Unstarred Ques. No. 2462 answered on 28/2/2022.

As per information provided by Ministry of Cooperation in Lok Sabha Unstarred Question No. 388 answered on 19th July 2022, 81 out of 1,508 Multi State Cooperative Societies are under liquidation in which process of winding up have been initiated.

In order to provide credit to cooperative institutions, irregular regional central cooperative banks, city cooperative banks and SCB are reported as participating lending institutions of the Guarantee Fund Trust (CGTMSE) scheme. February 3, 2022. Additionally, on May 8, 2022, DCCB, SCB and UCB personal mortgage limits will be doubled. It also allowed local credit unions to finance commercial and residential real estate, and allowed UCB to offer door-to-door banking services to its customers, similar to commercial banks.

(vi) Procurement and Marketing

Marketing of products and services have remained a major challenge for the cooperatives. Recently, on 1st May 2022, cooperatives have been allowed to register on Government e-Marketplace (GeM) as 'buyers'. The objective of this initiative is to enable cooperatives to procure goods and services from 40 lakh vendors on the GeM portal, thereby improving transparency in the procurement system and helping cooperatives to make some savings. A preference policy for cooperatives as sellers may ensure the much needed boost to them. Further, subsidized participation in fairs may help them in showcasing their products and forging business tie ups. In this context, a holistic approach helping cooperatives in overcoming tariff, non tariff and other trade barriers will help them in gaining market access overseas and become competitive in the global era.

(vii) Mentoring

Cooperation among cooperatives is one of the seven important principles of cooperation, as defined by international Cooperative Alliance. Effective cooperation and coordination amongst cooperatives would mutually benefit their business initiatives and maximise community development through adequate expansion of member driven cooperative activities. Thus, the time has reached where the bigger cooperatives would mentor the weaker and smaller ones and ensure that these units retain their competitiveness in the market.

(viii) Coping up with the Repercussions of the covid – 19 Pandemic

Cooperatives need both the policy and financial support services from the Government. While the Ministry of Cooperation is working towards designing policies and procedures for the spread of cooperatives through enterprise and entrepreneurship development, NCDC tries to finance the sectoral cooperatives to lessen their money burden and to reduce financing risk of cooperatives through the mechanism of loan and subsidy assistance. Total disbursements under financial assistance extended by NCDC in the form of loans and subsidy had reduced from 28,262.53 crore in financial year 2018-19 to Rs. 27,704.23 crore in 2019-20 and further to Rs. 24,834.27 crore in 2020-21. To mitigate the impact of the covid – 19 pandemic, NCDC hiked the financial assistance by 39% to Rs. 32,321.14 crore in 2021-22 over the previous years as evident from Table 2, and restructured loans worth Rs. 203.69 crore and Rs. 379.61 crore for Sugar and Textiles Cooperatives respectively.

Table - 2: Disbursement by NCDC

Year	Disbursements (in crore)
2017-18	21,969.58
2018-19	28,262.53
2019-20	27,704.23
2020-21	24,733.24
2021-22	32,321.14

Source: Indian Rajya Sabha Unstarred Ques No. 1922 answered on 3rd august 2022.

The minimum alternate tax rate for cooperatives was lowered from 18.4% to 15% in the union budget for 2022–23, and the surcharge on cooperative societies was reduced from 12% to 7% for those with total incomes of more than Rs. 1 crore and up to Rs. 10 crores. Cooperative sugar mills received relief on October 25, 2021, when it was made clear that they would not be subject to additional income tax if they paid farmers higher sugarcane prices up to the fair and remunerative price.

Some Recommendations

The cooperative movement in India is not uniform across the nation. As per the information available, Goa, Gujarat, Maharashtra, Karnataka, Kerala and Tamil Nadu witness larger spread of cooperatives (National Cooperative Union of India, 2018). There is a need to work towards deepening the cooperative movement in northern, north eastern and eastern States where the cooperative spread is low. Cooperative movement is a people based movement which follows a cooperative based economy model and where members engage themselves in economic activities with a spirit of responsibility. While the cooperative movement and entrepreneurship are useful means, the coveted end is inclusive community development.

For cooperative entrepreneurship to effectively contribute to community development, some Important recommendations are as follow

- The possible tenets of the national policy for cooperatives which is being drafted may stress on universal coverage and providing a single unique identity to each cooperative, on being technology driven, a single portal and identity number for registration and all other business affairs, Integration/ convergence with other Ministries' programmes, portals and efforts, and promoting and setting up of sector specific export oriented Multi state and State cooperatives.
- An exclusive fund for cooperatives may be explored to not only finance credit risks but to support technology adoption, brand development, marketing marketing research, advertisement, and etc.
- The Efforts are needed to ensure convergence of schemes, to facilitate the ease of doing business and to actually go beyond cooperatives, as envisaged in the term cooperation vis-à-vis cooperatives. While there is an urgent need to smoothen registration processes of cooperatives in diverse areas, Udyam Certification of MSME for smaller cooperatives may be considered for them to avail benefits of programmes for cooperatives instead of any extra documentation.
- All the pervasive awareness programme about the cooperative movement and related model of socio-economic development may be undertake through a pan India network of cooperative capacity building institutions.
- A preference policy for cooperatives as sellers on GeM may be considered to attract more cooperatives as sellers.
- A Special schemes for cooperatives, with a focus on digitalisation may be adopted.
- Bigger cooperatives may mentor the weaker and smaller ones.
- Subsidised participation in State Regional and National, fairs may be considered.

Conclusion

Cooperative enterprises play a important role in helping small- scale entrepreneurs to improve their market reach and business resilience. These entities provide the members with an opportunity to enter previously

untouched and value added markets as the guidance and support provided by the cooperative brand greatly reduces the market risk. cooperatives sector also plays a significant role in ameliorating the socio-economic lot of people. The cooperatives societies engaged in the rural sector provide timely and adequate credit at affordable terms and conditions for the production, processing, storage and marketing of agricultural and allied sector produce. they also provide the necessary credit for the establishment of Micro, Small and Cottage enterprises. Which are the backbone of the rural economy. Cooperative entrepreneurship generate a significant source of employment and support formalisation of formal and informal employment through collective voice and economies of scale and extension of social protection. India has the largest cohort of the youngest population that can be mainstreamed to enhance their contribution in transforming society at large. The mission mode grass root level penetration of cooperative entrepreneurship will leapfrog the vision of country's socio-economic development to a new India.

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Customer's Satisfaction about Marketing Strategies of PSBs in Uttarakhand

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Abstract

In today's run-of-the-mill era, different types of competitions are being seen in every walk of life, which has given birth to cut throat competition in the market. This situation is even more frightening, especially in the business where there is a competition to outdo each other. Banking business is no exception to this, where there is lot of competition between Government and Private sector banks, as well as a big challenge in today's time is to keep its existence alive. In this modern time, all types of banks prepare different types of marketing strategies to attract their existing customers as well as potential customers and to keep themselves in the market. Often it has been seen that due to their good policy and good services, private banks are constantly making a place in the hearts of customers and Government banks are going backward. The main objective of this research is to know that in today's competitive era, what kind of marketing strategies are prepared by the government banks for the customers and what the effects of these strategies on the customers. In this research paper, a study has been done on the marketing strategies being followed by Punjab National Bank in the Garhwal region under the state of Uttarakhand and an attempt was made to find out the perception of bank customers about the effectiveness of these strategies by preparing a schedule questionnaire. After collecting and compiling the data, data analysis was done on SPSS 22 software in which statistical tools like Arithmetic Mean and One Way ANOVA were used.

Keywords

Marketing Strategy, Customers, Effectiveness, Public Sector, 7 Ps.

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Introduction

Customer relationship management, often known as CRM, is a word that refers to the practices, methods, and technologies that are utilized by organizations in order to manage and analyze the interactions with and data pertaining to their customers over the entirety of the customer lifecycle. This is done in order to cultivate positive business connections with clients, to aid in the retention of customers, and to assist in the enhancement of sales growth. The phrase “customer relationship management” was first used in the 1990s. The word “customer relationship management” is referred to as CRM (Gopinath, 2020a). Client relationship management (CRM) systems are created to gather data on customers from a variety of points of contact or channels between the client and the business. The company’s website, the phone, live chat, direct mail, promotional items, and more could all be considered these channels or points of contact. CRM applications also gather client information over time. Customer relationship management (CRM), which has the potential to help businesses attract new clients, hold on to existing ones, and increase the lifetime value of their clientele, has become increasingly important to many companies, including banks, insurance companies, and other service providers (Gopinath, 2019a). At this stage, keeping in touch with consumers calls for meticulous coordination between the information technology and marketing departments in order to guarantee the long-term retention of certain customers. Customers now have more control over which banks they do business with. As a result, keeping current clients while simultaneously attempting to attract new ones is one of banks’ top priorities. Customer satisfaction is a key component of assessment and control in the marketing administration of a bank (Gopinath, 2020b). A low level of customer satisfaction will result in a decrease in customer loyalty, and clients have the ability to quickly transfer banks given the comprehensive products provided by the competition. Banks need to do a better job of capitalising on the relationships they have with their customers and making greater use of consumer information across the organisation.

Impact of E-Banking On Banking System

Conventional banking is giving way to relationship banking in the banking sector as it makes a gradual transition in this direction. The one-on-one interaction that has traditionally existed between the bank and its customers has been maintained through the bank’s branch network. At the level of the individual branches, which were given responsibility for clearance and decision making, this was put into effect. The administrator of the office, which was also in charge of the size of the regional network and the overall clearing network, was in charge of providing staff training for the branch network. The bank was in charge of evaluating the organization’s performance and setting the criteria for decision-making; however, the information that was accessible to the branch personnel as well as the customers was restricted to a single geographic location. competitive

The banking industry in India was significantly impacted by the shift that was brought on by the proliferation of information technology. The creation of software that could run on computers was the impetus that led to the launch of an online banking system in India. The economic liberalization that took place in India in 1991 made it possible for the country’s banking industry to become more competitive on the global market. As a direct consequence of this, there has been an increase in the utilization of cutting-edge technology and computerization in the banking industry. In terms of customer service and convenience of use, Indian banks were having a tough time competing with international banking standards since they did not make use of information technology, computer systems, or software. Dr. C. Rangarajan, who was serving as the Deputy Governor of the Reserve Bank of India at the time, was appointed to serve as the head of the Committee on Mechanism in the Banking sector when it was founded in 1984 by the Reserve Bank of India. The committee’s recommendation that every single bank in India’s urban areas should use MICR technology was one of the most significant and crucial recommendations it made. It provided us with standardized check forms in addition to a system for encoding and decoding information. The Reserve Bank of India appointed Dr. C.R. Rangarajan to serve as the chairperson of the Committee on Computerization in Banks that was founded in the year 1994. The Committee on Computerization in Banks placed a strong emphasis on the necessity to computerize the

settlement process at the clearing houses of the Reserve Bank of India that are located in Bhubaneswar, Guwahati, Jaipur, Patna, and Thiruvananthapuram. These cities may be found in the country of India. In addition, it was argued that there ought to be a National Clearing of inter-city checks in Kolkata, Mumbai, and Delhi, and that MICR ought to be activated. These are the three cities that were mentioned specifically in this context. The following is a list of places that were mentioned in the debate. In addition to this, it placed a significant focus on the automation of banking activities across the board at all of the banking's branches, as well as the enhancement of electronic communication between the different bank locations. This was done in order to streamline operations and make them more efficient. In furtherance of that, it advised the establishment of online banking facilities. 1989 was the year that the committee sent in its states, and 1993 was the year when, following discussions between the IBA and the bank workers' organization, an agreement was reached that enabled the electronic records of all of the branches to get started. The committee's reports were turned in during the year 1989. The Committee of Experts on Technological Issues With regard to Transactions system, Cheque Clearing, and Equities Settlement in the Financial Services Industry was established in the year 1994. This committee focuses on technological issues that arise in the banking industry. The major focus of this group was on finding solutions to problems that occurred as a direct result of advances in technical capability. Shri.WS Saraf, who is now serving as an Executive Director at the Reserve Bank of India, has been given the responsibility of serving as chairman of the committee. It put a considerable amount of emphasis on the Electronic Funds Transfer (EFT) system, which utilized the internet as its carrier due to the fact that the internet is the most popularly utilized worldwide communication network. In furtherance of this, it said that MICR clearing should be carried out by all of the nation's banks that have more than one hundred locations spread out over the country.

Literature Review

In 2008, Shil, Nikhil Chandra, and Das, Bhagban performed a study on the subject of customer satisfaction in relation to banking. They came to a conclusion, and the study suggests that customers have grown quite choosy these days while selecting any financial services. The highest priority is placed on minimizing expenses while maintaining a high level of quality. For this reason, it is of the highest significance for any business to understand, respect, and meet the requirements and sentiments of its consumers on a continuous basis so that they may retain the longest possible life. This is so that the organization can maintain the longest possible existence. In yet another research, Gupta and Mittal (2008) did a comparative analysis of the promotional tactics adopted by public and private sector banks in India for their article entitled "comparative study of promotional strategies." This study was done with the purpose of comparing and contrasting the two types of banks' respective promotional strategies. According to the information presented in the piece, in order to successfully market banking products and services, it is very necessary to have a marketing plan that is not only well thought out but also put into action. In order to accomplish the ultimate aim of ensuring total happiness for the client. According to the findings of their investigation, the promotional strategies that are utilized by private banks and public banks are, for the most part, equivalent to one another. When it comes to marketing their products and services, traditional and online banks alike make use of virtually every conceivable form of media and communication medium. Personal selling and direct marketing are the two types of promotion that make up the primary distinction between the marketing approaches that banks choose to implement for their promotional campaigns. The primary distinction lies in the fact that public sector banks do not implement promotional methods such as personal selling and direct marketing, but private sector banks do. Private sector banks, on the other hand, do implement these strategies. A study was carried out by Godara, R. L., and Gupta, S. L. (2007) regarding the awareness, expectations, rejection, and acceptance levels of customers in relation to the use and effectiveness of new and innovative approaches in the banking business all throughout India. According to the findings of the study, the key element that is encouraging customers to use new and innovative ways in banking is the hectic lifestyle of the people, in which time is a restricted prime resource. This is because time is the most important resource. Therefore, in the unkindness of being a relatively that new technology gadgets have achieved and are assisting to meet out the set aims of consumer happiness up to a certain amount. The research on service

quality: gaps in the Indian banking industry was carried out by Rehman and Zillur (2005). The focus of this research was on the service quality offered by Indian financial institutions. It analyzes the disparity between the beliefs of customers and the fact that there are variations in service quality across demographic characteristics as well as perceptions of the quality of services. According to the findings of the study, there is a significant gap between what the bank promises to provide and what it actually does provide in terms of the service it provides. The SERVQUAL tool was utilized throughout the course of the research project. The findings suggest that the population represented by the sample has perceptual issues with regard to the financial services they have received. The research that was undertaken by Avelonitis, Goerge J., and Indounas Kostis A. (2005) on pricing objectives and price methodologies in the services sector refers to the question of how to price a service while taking into account all of the factors that have the potential to effect the price. According to the findings of the study, the goals that are being pursued are mostly qualitative (with reference to the contentment of customers), rather than quantitative in their nature, and a particular focus is given on the customers of the firm. Additionally, the study found that a specific emphasis is placed on the company's clients. The cost-plus method, which has been around for a very long time and is used by the great majority of companies in the service industry, is the pricing methodology that is being discussed here. In addition, the pricing takes into consideration the regular expenditures associated with the market. The following is how the research on satisfied consumers was carried out by Laren, Juliano A., and Espirioza, Francine S., in 2005: In order to study the connection between customer pleasure and brand loyalty, a field experiment was carried out. This was done on the basis of an analysis of satisfaction as a required requirement for bringing loyalty, which led to the conclusion that this was done successfully. We employed a sample of students from a variety of educational institutions, and the findings revealed that there is a correlation between the two variables that is in the positive direction. The happiness that a person has as a result of their purchase may be responsible for a large percentage of their loyalty. The phenomenon that satisfaction brings about, which is generally known as "no satisfaction, no loyalty," happens to come about as a consequence of this. This phenomenon is brought about as a result of the fact that "no satisfaction, no loyalty." According to the findings of Dixit, V. C. (2004), in order to have successful marketing, there needs to be a proper identification and assessment of the demands of the client through the process of designing new products to suit the customer. The employees have to have sufficient expertise and be well-versed in order to satisfy the requirements set forth by the customers. We need to develop strategies with a longer time horizon in order to make the entire business more focused on the needs of the customers. The research was carried out by Kumar and Harish (2004) and was titled "A comment on customer satisfaction measurement in banking services- business perspectives." It seems that private banks, particularly those based in other countries, are giving nationalized banks a run for their money, or we could say that they have given nationalized banks stiff competition. Banks such as ICICI, UTI, HDFC, IDBI, and Kotak Mahindra bank have achieved tremendous growth both in terms of the volume of business generated and customer services by introducing a variety of unique financial products that were hitherto unheard of in the Indian economy at least. This has allowed these banks to attract a much larger number of customers and create a greater volume of business. Because of this, these banks have been able to bring in a significant number of new clients. Entry and growth of such foreign banks as City Bank, American Bank, Standard Chartered bank, HSBC Bank, etc. have all together been showing tremendous results and resulting the way both in terms of creative strategies to tap a possible client base (to bring in the basket of business) and introduction of new services and goods in the Indian market. The City Bank, the American Bank, the Standard Chartered Bank, and the HSBC Bank are just few of the names associated with these financial institutions. Gupta, Sunil, Donald R. Lehmann, and Jennifer Ames Suart (2004) were the ones that conducted the research for their study on the valuing of customers. According to the findings of the researchers, a 15% improvement in either retention or margin or acquisition cost results in a 5%, 15%, or 15% increase in value respectively. They also found that a one percent change in retention had a roughly five times higher impact on company value in terms of the price of shares than a one cent change in discount rate or expenditures on capital. This was one of the findings of their study. This was one of the things

that they discovered. According to the findings, it is not only possible but also enlightening to relate marketing principles to shareholder value in a business. This is evidenced by the fact that this is the case.

Conceptual Frame Work

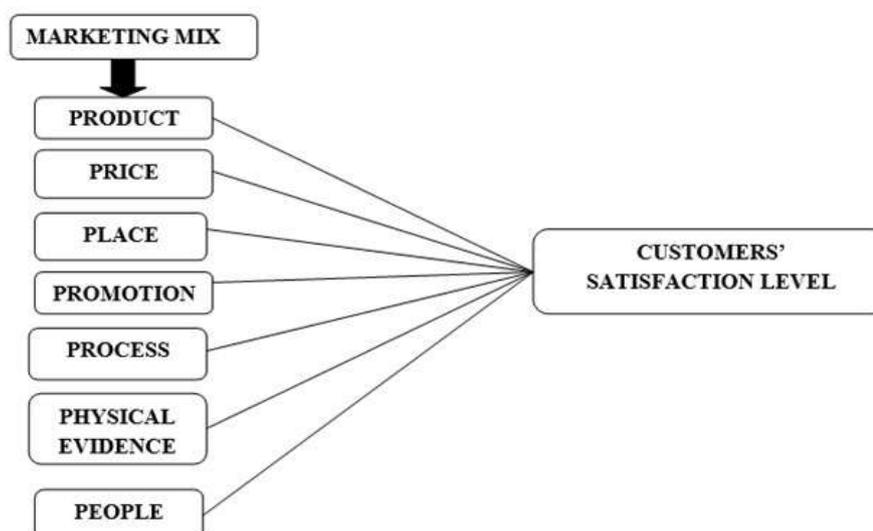


Figure 1: Conceptual Framework

Objective

- To analyze the impact of marketing mix on customers' satisfaction level.

Hypotheses

- There is a significant relationship between Product and customers' satisfaction level.
- There is a significant relationship between Price and customers' satisfaction level.
- There is a significant relationship between Place and customers' satisfaction level.
- There is a significant relationship between Promotion and customers' satisfaction level.
- There is a significant relationship between Process and customers' satisfaction level.
- There is a significant relationship between Physical evidence and customers' satisfaction level.
- There is a significant relationship between People and customers' satisfaction level.

Research Methodology

The research is empirical in character, and primary in addition to secondary sources of data were utilised in the investigation. Secondary data was gathered from sources such as published literature, research journals, periodicals, newspapers, websites, magazines, theses, dissertations, project reports, books, RBI, PNB, and other institutions' reports, etc., all of which provide a great deal of information that is pertinent to the study. A well-structured questionnaire in addition to personal interviews were used to obtain primary data from three hundred and fifty of the Punjab National Bank's clients. The clients were chosen using a method called stratified random sampling, and 50 respondents from metropolitan areas in each district were chosen. Analyses based on the arithmetic mean and one-way ANOVA have been carried out.

Reliability Analysis

The alpha coefficient value of the questionnaire was 0.945, which lies between the accepted range of .05 to .09. Hence the questionnaire has enough reliability to proceed further for analyzing the data.

Demographic Profile of the Respondents

Table - 1: Demographic wise Classification of the Respondents

Criteria	Classification	Res. (No.)	Res. (%)
Gender	Male	226	64.57
	Female	124	35.43
	Total	350	100.00

Age	Below 30	95	27.14
	31-45	120	34.29
	46-60	87	24.86
	Above 60	48	13.71
	Total	350	100.00
Qualification	Non-Matriculate	54	15.43
	Non-Graduate	69	19.71
	Graduate	99	28.29
	Post-Graduate	78	22.29
	Technical	29	8.28
	Others	21	6.00
	Total	350	100.00
Occupation	Agriculture	48	13.71
	Self-employed	72	20.57
	Govt. Job	102	29.14
	Private job	70	20.00
	Students	37	10.57
	Others	21	6.00
	Total	350	100.00
Income	No Own Income	46	13.14
	Upto Rs. 15,000	83	23.71
	Rs. 15,000 – 30,000	99	28.29
	Rs. 30,000 – 45,000	57	16.29
	Rs. 45,000 – 60,000	42	12.00
	Above Rs. 60,000	23	6.57
	Total	350	100.00

Data Analysis

Table - 2: Effectiveness of Marketing Strategy of PNB

S. No.	Statement	Resp.	SA	A	UD	DA	SDA	Total
1.	Marketing Strategy of Product	In No.	71	114	43	59	63	350.00
		In %	20.29	32.57	12.29	16.86	18.00	100.00
2.	Marketing Strategy of Price	In No.	74	109	29	65	73	350.00
		In %	21.14	31.14	8.29	18.57	20.86	100.00
3.	Marketing Strategy of Place	In No.	78	118	27	61	66	350.00
		In %	22.29	33.71	7.71	17.43	18.86	100.00
4.	Marketing Strategy of Promotion	In No.	63	91	78	41	77	350.00
		In %	18.00	26.00	22.29	11.71	22.00	100.00
5.	Marketing Strategy of Process	In No.	62	101	40	78	69	350.00
		In %	17.71	28.86	11.43	22.29	19.71	100.00
6.	Marketing Strategy of Physical Evidence	In No.	75	102	63	45	65	350.00
		In %	21.43	29.14	18.00	12.86	18.57	100.00
7.	Marketing Strategy of People	In No.	74	102	65	47	62	350.00
		In %	21.14	29.15	18.57	13.43	17.71	100.00

Table 2: represented the customer responses towards marketing strategy followed by PNB. Out of total respondent in the urban areas (52.86%) were satisfied with the product strategy, (52.28%) with the pricing strategy, (56%) with the place strategy, (44%) with the promotion strategy, (46.57%) with the process strategy, (50.57%) with the physical evidences strategy and (50.29%) with the people strategy adopted by PNB. whereas (34.86%) respondents were unsatisfied with the product strategy, (39.43%) with the pricing strategy, (36.29%) with the place strategy, (33.71%) with the promotion strategy, (42%) with the process strategy (31.43%) with the physical evidences strategy and (31.14%) with the people strategy.

Hypotheses Testing

Anova (One Way) - Analysis for Customers Perspective

- There is a significant relationship between Product and customers' satisfaction level.

Table 3: Product As An Effective Marketing Strategies

Gender	N	Mean	F value	P value calculated	P value alpha = 0.05	Sig. / Not Sig.
Male	226	2.77				
Female	124	2.85				
Total	350	2.80	0.237	0.627	0.05	SIG

- **Table 3:** represent the calculated value of P and the P value alpha. The calculated value of P is greater than P value alpha i.e. $0.627 > 0.05$ whereas the total mean value of the product is 2.80. Therefore, the null hypothesis is rejected. Hence product may consider as an important for the effective marketing strategies.
- There is a significant relationship between Price and customers' satisfaction level.

Table - 4: Price As An Effective Marketing Strategies

Gender	N	Mean	F value	P value calculated	P value alpha = 0.05	Sig. / Not Sig.
Male	226	2.88				
Female	124	2.85				
Total	350	2.87	.042	0.838	0.05	SIG

- **Table 4:** indicated the calculated value of P and the P value alpha. The calculated value of P is greater than P value alpha i.e. $0.838 > 0.05$ whereas the total mean value of the product is 2.87. Therefore, the null hypothesis is rejected. Hence price may consider as an important for the effective marketing strategies.
- There is a significant relationship between Place and customers' satisfaction level.

Table - 5: Place As An Effective Marketing Strategies

Gender	N	Mean	F value	P value calculated	P value alpha = 0.05	Sig. / Not Sig.
Male	226	2.81				
Female	124	2.70				
Total	350	2.77	0.407	0.524	0.05	SIG

- **Table 5:** exhibits the calculated value of P and the P value alpha. The calculated value of P is greater than P value alpha i.e. $0.524 > 0.05$ whereas the total mean value of the product is 2.77. Therefore, the null hypothesis is rejected. Hence place may consider as an important for the effective marketing strategies.
- There is a significant relationship between Promotion and customers' satisfaction level.

Table - 6: Promotion As An Effective Marketing Strategies

Gender	N	Mean	F value	P value calculated	P value alpha = 0.05	Sig. / Not Sig.
Male	226	2.95				
Female	124	2.91				
Total	350	2.94	0.065	0.799	0.05	SIG

- **Table 6:** represent the calculated value of P and the P value alpha. The calculated value of P is greater than P value alpha i.e. $0.799 > 0.05$ whereas the total mean value of the product is 2.94. Therefore, the null hypothesis is rejected. Hence promotion may consider as an important for the effective marketing strategies.
- There is a significant relationship between Process and customers' satisfaction level.

Table 7: Process As An Effective Marketing Strategies

Gender	N	Mean	F value	P value calculated	P value alpha = 0.05	Sig. / Not Sig.
Male	226	2.98				
Female	124	2.96				
Total	350	2.97	0.020	0.887	0.05	SIG

- **Table 7:** represent the calculated value of P and the P value alpha. The calculated value of P is greater than P value alpha i.e. $0.887 > 0.05$ whereas the total mean value of the product is 2.97. Therefore, the null hypothesis is rejected. Hence Process may consider as an important for the effective marketing strategies.
- There is a significant relationship between Physical evidence and customers' satisfaction level.

Table - 8: Physical Evidence As An Effective Marketing Strategies

Gender	N	Mean	F value	P value calculated	P value alpha = 0.05	Sig. / Not Sig.
Male	226	2.80				
Female	124	2.75				
Total	350	2.78	.087	0.768	0.05	SIG

- **Table 8:** represent the calculated value of P and the P value alpha. The calculated value of P is greater than P value alpha i.e. $0.768 > 0.05$ whereas the total mean value of the product is 2.78. Therefore, the null hypothesis is rejected. Hence Physical evidence may consider as an important for the effective marketing strategies.
- There is a significant relationship between People and customers' satisfaction level.

Table - 9: People As An Effective Marketing Strategies

Gender	N	Mean	F value	P value calculated	P value alpha = 0.05	SIG
Male	226	2.80				
Female	124	2.78				
Total	350	2.77	0.006	0.937	0.05	SIG

- **Table 9:** represent the calculated value of P and the P value alpha. The calculated value of P is greater than P value alpha i.e. $0.937 > 0.05$ whereas the total mean value of the product is 2.77. Therefore, the null hypothesis is rejected. Hence people may consider as an important for the effective marketing strategies.

Table - 10: Mean Value of Marketing Strategies From Customers' Point of View

Marketing Mix	Mean Value	Rank
Product	2.80	IV
Price	2.87	III
Place	2.77	VI
Promotion	2.94	II
Process	2.97	I
Physical Evidence	2.78	V
People	2.77	VI

- **Table 10:** represent the mean value of 7 P's of marketing mix and the rank given on the basis of the mean value. Process has the highest mean value i.e. 2.97 followed by Promotion (2.94), Price (2.87), Product (2.80), Physical evidence (2.78), People (2.77) and Place (2.77).

Conclusion

In light of the fact that the computed value of P is higher than the P value alpha in each of the aforementioned hypotheses, it follows that each of the null hypotheses must be rejected in favor of the alternative. Because of this, the seven components of the marketing mix known as the "7 P's" (Product, Price, Place, People, Promotion, Physical evidence, and Process) are the elements that have an impact on the efficiency of the bank's marketing strategy. Process and Promotion, two of the seven components that make up the marketing mix, are the most important aspects since their mean values are the highest. As a result, the bank need to accord an equal amount of significance to each component of the marketing mix. Placing an excessive amount of emphasis on a single component of the marketing mix may result in an unnatural state of affairs, which might prevent the bank from accomplishing its objective of developing efficient marketing strategies.

Findings and Discussion

Nowadays, banking operations in India, particularly those conducted by public sector banks, acknowledge that they are confronted with the dual task of ensuring the happiness of their customers while also keeping up with rapidly developing technological developments (Gopinath, 2020). CRM is the most effective technique for addressing these concerns and overcoming them. From an e-banking point of view, this study contributes one step towards a better knowledge of the CRM practises that are currently in use in public sector banks. Banks are required to provide services of the highest possible quality in order to satisfy the demands of their customers and maintain their position in the market. In order for the banks to maintain their market share, they will need to continue to innovate and improve upon their existing products and services while also keeping pace with technological advancements.

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Impact of Startups on the Economy: A Descriptive Study

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Abstract

The world's youngest yet largest democracy is 75 years old today. The nation will celebrate 100 years of independence in 2047. The next 25 years are termed Amrit Kaal by prime minister Narendra Modi. It is going to be gateway to the swarnim Yug, which is poised to start after 2047. Today, the world is rapidly ageing, but India is still young and going to remain the youngest until 2070. To ensure that India fully reaps the benefits of its demographic dividend, the Government of India is planning and executing policy meticulously. Startups require assistance, partnerships, and collaborations in order to survive end scale in their markets or enter new ones. To develop prospective startups, startup ecosystems in emerging markets must be developed, as well as global access to such ecosystems should be improved.

If words like startup, entrepreneurship and seeding have become popular among the youth today, then credit goes to startup India. Launched on the 16 January 2016 as a clarion call to the innovators, entrepreneurs and thinkers of the nation to lead from the front in driving India's sustainable economic growth and creating large-scale employment opportunities, Startup India today has become a globally known journey of India's fast-paced, always innovating and resilient entrepreneurial ecosystem. The story of startups is not just about numbers. It is the story of the ability to access new opportunities in the new India. A new India where good economics is at the centre of politics and is driving the much-needed change. All the young entrepreneurs have a bright future. The whole world is a playground for startups. Go and play keeping the spirit of Vasudhai Kutumbakam.

Keywords

Startup, skilled job, Entrepreneur, Startup Life Cycle, Government Initiatives, Economy.

Reference to this paper should be made as follows:

**Dr. Sanjay Kumar,
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Introduction

The central government of India has launched a new project called Startups India with the goal of creating a robust ecosystem for fostering innovation and entrepreneurs in the nation, which will foster long-term economic growth and create a tonne of job prospects for young people. Through this effort, the government's main goals are to strengthen and support the nation's startups ecosystem while also enabling startups to flourish through innovation and design. Supporting entrepreneurs and making India a nation of job creators rather than job seekers has contributed to the Prime Minister's goal of an Aatmanirbhar Bharat Startups India. A ground breaking programme called Startups India has been established to assist those who want to launch their own businesses. It is the story of the ability to access new opportunities in New India. A new India where good economics is at the centre of politics and is driving much-needed change. Today the world acknowledges the capacity, knowledge, and vigour of Indian youth in providing solutions to the most complex problems of human civilisation.

The government of India has been able to bring capital investment as well as the best innovative practices from around the world to India. We all start our journey in life as a profession and dream somewhere. It is about following one's passion, conceptualising something unique, giving it a shape, facing all the challenges, and realising something we truly believe in. It is also about creating something unique, in terms of solutions, products, or services that have the potential to disrupt the existing ways and means; thus bring a positive change around us. This is the line of thought behind the Startup India initiative of the Government of India. The Government through this initiative aims to empower startups to grow through innovation. In 2016, the Startup India Initiative has rolled out several programs with the objectives of building a robust startup ecosystem, supporting entrepreneurs, and transforming India into a country of job creators instead of job seekers. For this purpose to meet the objectives of the initiative, the Government of India has announced a plan that addresses all aspects of the startup ecosystem. With this plan, the Indian Government hopes to accelerate spreading of the startup movement, from the technology sector to a wide array of sectors including healthcare, agriculture, manufacturing, education, social sector, etc, and from existing tier-I cities to tier-II and tier-III cities including rural and semi-urban areas. The major key pillars of support for startups under the Startup India initiative are Simplification and Handholding, easier exist, easier compliance, proves for failed startups, legal support, fast tracking of patent applications, and a website to reduce information asymmetry; Funding and Incentives, exemptions on Income Tax and Capital Gains Tax for eligible startups; a fund of funds to infuse more capital into the startup ecosystem; and a credit guarantee scheme; Incubation and Industry-Academia Partnerships, creation of numerous incubators and innovation labs, events, competitions, and grants. These startups often bring innovative and tech-powered solutions to common world problems. Young minds have a power to think out of the box and challenge the existing systems and processes. Startups give wings to the imagination and potential of our youth, thus providing a launchpad for their participation in the growth story of the young India. Therefore, the present study reveals the major opportunities and challenges faced by the startups in the country.

Objectives and Research Methodology

The Present study is based on secondary the data collected from secondary sources like Reports, Newspapers, Magazines, Articles and Websites. The main objective of this study is to analysis the growth and development of Indian Startups. The other objectives are

1. To study the impact of startups on Indian economy.
2. To analyse the opportunities and challenges face by the startups in Indian scenario.

Government Initiatives for Startups

The startup India initiatives have been successful in fostering innovation and entrepreneurship in the nation. The industry-academia partnership and incubation component concentrates on building a nationwide network of incubators and accelerators that can offer companies cash, networking opportunities, and mentoring. Startups can get a variety of incentives from the financial assistance and incentives component, including funding support, tax advantages, and patent registrations. The government has streamlined the procedure for

establishing a business in India under the simplification and hand holding component by lowering the time and expense needed. In addition, the government has opened a startup-specific online resource portal that offers advice and information on a variety of business-related Ideas.

Impact on Indian Economy

Startup creates new jobs and has increased the purchasing power of people, they begin to purchase goods and services. This increases the flow of money and revenue to the government and thus boosts the economy. It also makes India self-sufficient in every aspect of healthcare and education. The sustainable development of start-ups as made India as the third largest start-up ecosystem in the world, and it has a huge impact on the Indian economy, demonstrating the ability to contribute approx. 4-6% of India's gross domestic products. According to a report published by the National Association of Software and Services Companies (NASSCOM), the Indian Startup ecosystem is expected to create over 600,000 new jobs by 2025.

Table - 1: Impact of startups on GDP

Year	No of startups	GDP in ₹ (C.p in crore)
2016	604	13771874
2017	5275	15362386
2018	8523	17095005
2019	17396	19010164

Above table depicted, there is positive relation between no. of startups registered and GDP at current price. It shows that the startups significantly help to increasing GDP of Indian economy. Startups India initiatives have a positive impact on the economy, particularly in terms of economic development and job creation.

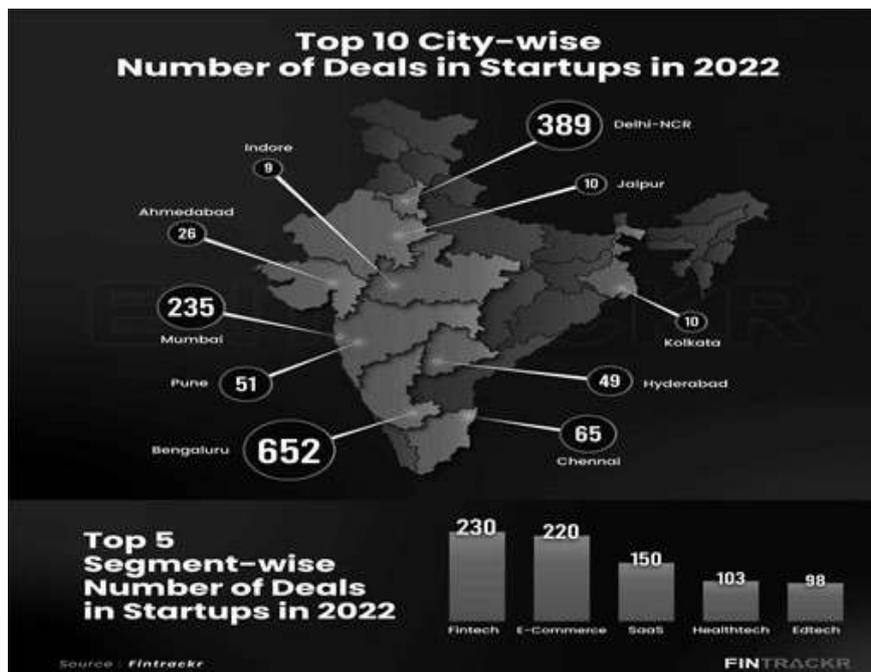
Table - 2: Registration of startups and Export during the periods

Year	No of startups	Export in ₹ (Cr.)
2016	604	1716382
2017	5275	1849436
2018	8523	1956517
2019	17396	2307665

The above table depict the positive relation between the exports and no. of startups registered in India. It shows that startups significantly help to promoting the exports of India. These have additionally promoted the expansion of entrepreneurship and innovation. With the help of the government programme, Indian entrepreneurs will have raised \$20.6 billion in total capital by 2022 compared to \$3.8 billion in 2015. Additionally, the effort has promoted the development of entrepreneurs in a number of industries, including agriculture, technology, and healthcare.

City and Segment wise Startups Deals

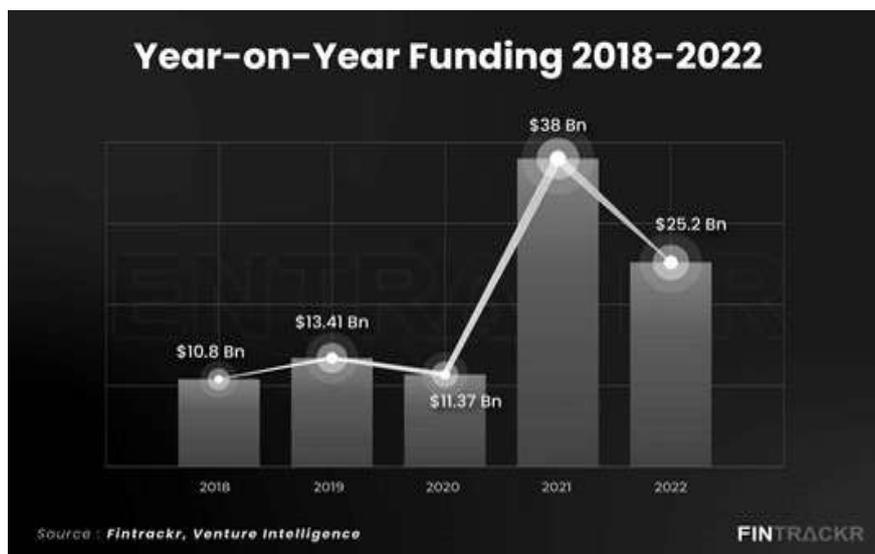
Bengaluru, India's capital of technology, once again emerged as the nation's startup capital in 2021–2022, when 655 local businesses raised close to \$13.5 billion in funding. This amounts to more than 51% of the funding received throughout the previous year. Startups from the Delhi-NCR region came in second with 389 transactions totaling \$5.3 billion. The top 5 list, which is similar to the top 5 list from 2021, included Mumbai, Chennai, and Pune. Fintech continued to lead all segments, with 236 startups raising more than \$4.2 billion. The following startups were in e-commerce, healthtech, SaaS, and education technology. Healthtech moved up to fourth place in 2022 from fifth place, while edtech dropped to fifth place during the same time period from second place.



Source: Fintrackr, venture Intelligence.

Year wise Trend

Overall funding fell by more than 25% in 2022-23 compared to 2021-22. Over the past five years, the Indian startup ecosystem has raised nearly US\$100 billion in venture capital funding. The annual chart reflects the volume and value of transactions since 2018.



Source: Fintrackr, venture Intelligence.

Challenges

Despite all the major impact of the Startup India initiatives, it also faces several big challenges. One of the most challenges faced is the lack of access to funding for startups, particularly for early stage startups. Although the government of India has launched various types funding schemes/plans but the accessing of funding is still a challenge for many startups. Another challenge faced by the Startup ecosystem in India is the lack of skilled manpower. Most of the startups struggle to find right skilled employees with relevant expertise and experience. Another limitation of the Startup India initiative is its focus on technology startups. Although technology startups have attracted significant funding and attention, other sectors, such as agriculture, education and healthcare, still have untapped potential. The Startup India initiative has been successful in promoting entrepreneurship and innovation in the country. According to a report by NASSCOM, India is the third largest startup ecosystem in the world, with over 50,800 startups operating in the country. The initiative has led to the

creation of over 4.3 lakh jobs in the startup sector, and Indian startups have attracted significant foreign investment. The Indian startup ecosystem is characterised by a young and vibrant workforce, with a significant focus on technology and digitalisation. India's large population and growing middle class provide a vast market for startups, and the increasing adoption of technology and digitalisation is creating opportunities for startups in areas such as fintech, ecommerce, and healthcare.

The Government's focus on promoting innovation through initiatives such as the Atal Innovation Mission and the Smart Cities Mission is also creating opportunities for startups. The Startup India initiative aims to create a conducive ecosystem for the growth of startups by providing them with access to funding, mentorship, and other support services. The initiative provides startups with access to funding through various schemes such as the Fund of Funds for Startups, Credit Guarantee Fund Scheme for Startups, and the Atal Innovation Mission. The initiative also offers tax incentives such as tax holidays and exemptions for startups. However, the initiative also faces several legal challenges. The regulatory framework for startups in India is complex and often cumbersome, making it difficult for startups to comply with the regulations. There is also a lack of clarity on the definition of a startup, which creates confusion and ambiguity in the regulatory framework. Additionally, there is a need to strengthen the legal framework for intellectual property rights to protect the innovations of startups. The startup ecosystems of the Japan, USA and India share several similarities and differences.

The USA has a well established and mature startup ecosystem, with a significant focus on technology and innovation. The country has a large and diversified pool of venture capital funds and angel investors, providing startups with access to funding. Japan on the other hand, has a more traditional business environment, with a focus on large corporations. However, the country has taken several initiatives in recent years to promote entrepreneurship and innovation. The Japanese government has launched several programs such as the Japan revitalization Strategy and the Japan innovation Network to foster the growth of startups. Compared to the USA and Japan, the Indian startup ecosystem is relatively young and still evolving. However, the country has made significant progress in recent years, with the launch of the Startup India initiative and other initiatives aimed at promoting entrepreneurship and innovation.

The Indian startup ecosystem is characterised by a focus on technology and digitalization, with a large and growing market for startups. The Startup India initiative has provided various incentives and support to entrepreneurs, including those from marginalised communities. This had a positive impact on the development of marginalised communities in India. The initiative has provided opportunities for marginalised communities to participate in the entrepreneurial ecosystem and has helped in the creation of job opportunities. For instance, the Stand-Up India scheme provides loans to women and SC/ST entrepreneurs to start new ventures. Similarly, the National Handicapped Finance and Development Corporation provides financial assistance to people with disabilities to start their businesses. These scheme have helped marginalised communities overcome the financial barriers to entrepreneurship. The initiative has also encouraged the growth of startups in sectors such as agriculture, healthcare, and education, which have the potential to benefit marginalised communities. Start ups in the agriculture sector can provide market access and technology support to small and marginal farmers, while startups in the healthcare sector can provide affordable healthcare services to underserved communities. Similarly, startups in the education sector can provide access to quality education to children from marginalised communities. Moreover, the initiative has provided a platform for the empowerment of women and the inclusion of marginalised communities in the mainstream economy. According to a report by the Ministry of Commerce and Industry, the number of women-led startups in India has increased by 51 percent since the launch of the initiative. Similarly, the initiative has helped in the inclusion of SC/ST entrepreneurs in the mainstream economy, who were previously excluded due to discrimination and lack of access to resources. Furthermore, the initiative has provided a boost to the Indian economy and has contributed to economic growth.

The Indian startup ecosystem is expected to create 14-16 million direct jobs by 2025. The growth of startups in sectors such as e-commerce, fintech, and health-tech has also attracted significant foreign investment, contributing to the growth of the Indian economy. Despite these efforts, the impact of the Startup India initiative

on the development of marginalised communities in India has been limited. The majority of startups in India are concentrated in urban areas and are led by people from privileged backgrounds. According to a report by Oxfam India, only 16 percent of startups in India are founded by women, and less than 2 percent are founded by people with disabilities. Similarly, startups in sectors such as healthcare and education are mostly focused on urban areas and serve the needs of the affluent population. Moreover, the initiative has not adequately addressed the structural challenges faced by marginalised communities in India, such as social discrimination, lack of access to education and training, and limited access to finance. These challenges and limitations are the main constraints that limit the ability of marginalised communities to participate in the entrepreneurial ecosystem and benefit from the initiative.

Conclusion

The Indian startup ecosystem has similarities and differences with that of the USA and Japan. While the USA has a mature and diversified startup ecosystem, Japan has a more traditional business environment but has taken initiatives to promote entrepreneurship and innovation. India, on the other hand, has a relatively young and evolving startup ecosystem but has made significant progress in recent years with the launch of the Startup India initiative. The initiative has provided startups with access to funding, mentorship and other support services, and has created a conducive environment for entrepreneurship and innovation. The Startup India initiative has been successful in promoting entrepreneurship and innovation in the country. The initiative has created a conducive ecosystem for the growth of startups by providing them with access to funding, mentorship and other support services.

However, the initiative also faces several legal challenges, such as the complex regulatory framework and the lack of clarity on the definition of a startup. Further, the initiative has encouraged the growth of startups in sectors such as agriculture, healthcare, and education, which have the potential to benefit marginalised communities. However the impact of the initiative on the development of marginalised communities in India has been limited. The majority of startups in India are concentrated in urban areas and are led by people from privileged backgrounds.

Moreover, the initiative has not adequately addressed the structural challenges faced by marginalised communities in India. Therefore, there is a need for a more targeted and comprehensive approach to promoting entrepreneurship among marginalised communities in India. This approach should address the structural challenges and provide adequate support and incentives to promote the growth of startups in marginalised communities.

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The Digitalization of Literature is the Need of Contemporary Phase

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Abstract

The Present Paper analyzes the Digitalization of literature as a need of the contemporary phase. Digitalization is one of the upcoming trends in the present era. It is basically developed on the availability of the internet. Digitalization is the medium to convert any hard copy to a soft copy. It enhances the business of the desired field. So far as the question of literature in the context of digitalization is concerned it definitely increased its value and reach to every person within a few seconds. The foremost impact of Digitalization on literature is that it has produced new forms of literature such as digital poetry, hypertext fiction, and interactive fiction. These forms can create the same entertainment and pleasures as traditional forms have produced. I consider it has more power to influence its readers. The other impact of it that creates its utility in our day-to-day life is easy to access by every reader anywhere. Time-saving, budget, and environment-friendly are other impacts of it that make it trendy. A person consciously and unconsciously accepts those things that are easy and comfortable for life. So the Digitalization of literature is a need of the present time.

Keywords

Digitalization, Digital Literature, Technological aspect, Digital Literacy, Electronic Literature.

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Introduction

Today human beings are living in an age of technology and machines. Every possible thing is going to turn into digital form. A human being is considered the wisest species on the earth. Human beings have sharp minds so based on their mind they have decreased their labor or in a better way it can be stated that they have shifted most of the burden upon machines and technologies. This trend is going on in every field of life. Literature is also not an exception to technology. Literature is a prominent part of human life. Through it we analyze the past and the present and in many ways the future also. Digitalization of any business enhances the values and income of the desired area. But some fields are sort of where income doesn't matter primarily such as education and medicine. So the Digitalization of educational things is very necessary for the overall development of any society. Literature is a tool for education and entertainment. So here we'll focus on digitalization in Literature.

Digitalization is the demand of the present phase, a human being wants to run in the development so fast even before the time. So his inclination is just to invent all the mechanisms that can reduce the burden of man in his life. Literature is generally regarded as the main source of knowledge, entertainment, and new learning. If this learning becomes quite easy and pleasurable it is acceptable due to its handy nature. Its value increases very much. With the passage of time, new changes have been introduced in every field of life. Literature in a technical form provides new phenomena of learning.

In this way, it can be whispered that the digitalization of literature is a new way of literature learning that is not traditional. Traditional ways have some limitations in this changing world. Non-traditional forms of literature are very effective for the present scenario. The emergence of new ideas, expression of feelings, and realization of emotions are the rudiments of human tendency. These tendencies find ground in the literature but today's man has no time to do things patiently so in every field he desires to go fast or faster. If we try to analyze the relevancy of the digitalization of literature, it is a proper and revolutionary step for the future generation. Walking with time is appropriate.

Methodology and Approach: This present study is based on the topic Digitalization of Literature is the need of Contemporary Phase. So the Interpretative research method is used in it along with the context-focused approach.

Substance of Digitalization

Digitalization is the most valuable weapon in the present era. If we describe the present century in a world definitely it can be titled the 'age of Technology' Technology is the medium to provide the facility for many hard things into an easy tasks. Technology is the trick to doing things simply and quickly. Work has its tendency either it can be done in a hard way or a simple way. First, we seek a way to do a thing means to work hard but with the help of our mind, we convert it into a smart way. So the quick and easy way of any work is provided by digital way. Basically, when work is done with some certain algorithm within a few minutes or seconds, it is the magic of technology. Digitalization is part of technology so the first thing to be acknowledged is the meaning of Digitalization. In simple words it can be said that any hard copy or data is turned into a soft copy it is called Digitalization. According to Gartner, "Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business." (Gartner)

Meaning of Digitalization in Literature

After being acknowledged digitalization it is necessary to understand the meaning of digitalization in literature. Digitalization is a word that describes the digital process of anything. In the context of literature, it is also the same. When a piece of literature is presented or created through electronic devices generally called digitalization. In this process, only the creation of literature is not included but also the presentation and reader's part as a character can be experienced. After it, we are at the point where we can say, what is the meaning of digitalization in literature?

“Digital literature, also known as electronic literature, is a form is a style of writing that is characterized by its creation and experience being on a digital platform. Digital literature are works created on digital devices and works that can only be experienced on an electronic device.” (What is Digital Literature.Twinkl Teaching Wiki)

Digitalization of Literature is a new way to express feelings, emotions, passions, and problems also. It is quite interactive for the readers, as it is what the reader is experiencing.

“A receptive perspective and Productive perspective” (Christiane Lütge) are two important aspects of digital literacy. Digital literature is very significant with these two aspects because a receptive perspective provides the hidden aspect of the literature, especially in the field of artistic aspect. Another productive perspective enhances the ability to produce a new thing. The reader during the learning time or at the time of interaction creates a new version of the story or poem. So it provides an opportunity to produce a new thing.

Basically, two effects are mainly aroused in the reader’s interaction with Digital literature first one is the improvement of understanding and the second one is productivity and creativity.

Types of Digital Literature- In the present time Digital literacy is a trending phenomenon and digitalization of literature is its prime facet. Various types of digital literature have existence nowadays, numerous are yet to come. Here are some types of digital literature.

- **Digital Poetry**

It is a new form produced by the digitalization of literature. In it, the reader enjoys the text of poetry with the hypertext links by which the reader can relate to the poetry more than the traditional one. Basically, in it, electronic device is used instead of traditional books or paper. This type of poetry is remarked for its various innovative and catching presentations for readers. This is a different experience it enhances the understanding of a reader. The author’s feelings, passions, and emotions are nurtured with a creative form.

- **Hypertext Fiction**

Hypertext fiction is also a new term generally used for digital Literature. Through it, a reader can access the story and it is different from the linear style of storytelling. A reader can choices his free will and so he can change most of the designs by participating in them. In this form of digital literature, a reader can enter by hypertext link. It is very innovative for a reader to have the choice and change the story according to his own choices. It is very popular in the present scenario.

- **Twitterature**

It is a very fresh form of digital literature, as its name clears, it germinated from Twitter where people post their thoughts. By it, the story is created. It can be in various forms such as poetry, prose, and story. It has 280 characters limits. As it is uttered, “This creates a chain effect in the storytelling, in which each post is a snippet of a wider piece, and the reader must follow along.” (What is Digital Literature.Twinkl Teaching Wiki)

- **Generators**

The next effective genre of digital literature is the generators. It is used for the display of literature and it works on coding technology to tell the story. Some words are provided to each reader by which they can form their own story.

The emergence of new ideas, results in a new product by it. It is valuable for the perspective of creativity.

- **Interactive Fiction**

Interactive fiction is a very popular term in digital pieces of literature. The main cause of the popularity of this term is that a reader can be part of the story. A reader can change some actions of the characters. So we can find more interest in the reader or it is an active exercise for the reader. Although there are some limits to changing the actions of any character. Especially the main character has a limit to be changed.

- **Interactive film**

Interactive film is also the next step in this field. Where a reader or spectator plays a role himself in the form of the presented characters. It enhances an experience of a reader or spectator because real-life experience can be attained by playing the role.

- **Audiobook**

Audiobook is a digital literature, in which a story is narrated by some characters. Various voices use for various characters with the background music. This is a really pleasing experience for any person to listen to it in a calm and peaceful mood. It helps us to consider things and enhances the power of visualizing.

- **Spoken Interactive fiction or Interactive Audiobook-**

This is also a high-tech version of an audiobook but a very impactful type of digital literature. A reader can be part of the audiobook.

Bright Edges of Digitalization in Literature

Digitalization is a testimony to the increasing development of the present era. It has expanded its influence in every field of life because technology has entered every aspect of human life. The root causes of its expansion are the benefits it has. Numerous benefits can be observed from it but some are discussed here-

Time-saving is one of the positive aspects of digitalization in literature. Time is a precious aspect of human life. Every person wants to do things quickly. The time-taking process is generally ignored so when digitalization in literature came it evolved in new dimensions. Just one click provided the desired result. So the traditional process of composing and printing literature has been changed. It has converted into a new experience not only for the author but also for the reader. In a limited time, a person can possess more material in the digital form. It provides great support for the reader. The next point that goes in the favor of the digitalization of literature is its easy accessibility. Whereas traditional books or literature is achieved through hard activity the digital form of literature is blessed with easy access. Generally in the present time we have electronic devices like mobile phones and laptops. So most of the sites, libraries, and e-books are easily accessed with mobile phones. Time-saving and easy access everywhere at any time is the prominent feature of digital literature.

Availability is the next significant aspect of the digitalization of literature. The handy and valuable are two chief qualities of its popularity. Digitalization in the literature provides us with the most important aspects the reach and availability for us. If a book or piece of literature is available everywhere or just away with one click certainly it will attract everyone. Digitalization has created this scenario for us. So it is very useful to us in our day-to-day life. Anything beneficial to the environment proves its value in itself. Digitalization of literature creates new vistas in the field of traditional book printing. Numerous trees were consumed for the printing of traditional books and other types of reading essentials. One and foremost side of digitalization in literature is that it is environment-friendly. It has the capacity to save millions and a trillion trees every year. It enables us to minimize paper use. So forsake of environment it is a boon. We are initial stage in the digital development. One thing we do is use the digital copy or any document but we have lingered with our old habit to keep the print or hard copy. This is not a wise thing but we have to be able to educate ourselves in the digital field. This little changes to human behavior can be more beneficial to Environment.

Economically friendly is another significant feature that goes in the positive aspect of digital literature. The electronically available literature is not costly because it is not time-consuming. In a country like India budget matters a lot for education as well as entertainment. A piece of literature available in our budget definitely enhances its value. Being budget-friendly it is very popular and handy. And most of the time the piece of literature is free. So it is the upcoming literature of the future. The main quality of digitalization in literature is that storage is the aspect trendy. The storage of hard copies of literature is very costly to any institution or person. To keep safe the hard copies for a long time is such a herculean task. Sometimes to maintain it properly numerous persons labored with various means. But the opposite side of digitalization it is very quick and easy to save numerous data, and pieces of literature on a small device.

Dark Verges of Digitalization in Literature

Everything needs a change with the passage of time. In the initial stage, the system is not ready to accept a change easily. Even infrastructure is not prepared smoothly for any change. So there are some dark sides to it.

One thing that is not in the favor of it is, sometimes we don't get authentic information from sites. Wikipedia is an example of it, anyone can modify the information. So the piece of literature can be manipulated easily. Not trusted sources are mentioned in any guideline. Even government has to take essential steps to frame regular guidelines about the authenticity of the site or website. Million trillion websites, online documents, and pages are floating in the digital world. We are confused by such a flood of information. So the need of the present time in the digitalization of literature is to frame a valid regular standard. Another important entity to be noted the youth of the present time is going addicted to copy paste system. Everything is just one click away none will go to evolve the real and original things. We all are addicted to copy-paste system. Plagiarism is the fruit of it. The easy accessibility promotes sometimes human rights abuses. The moral values decrease through this process. None is available to check them to follow this type of misconduct in writing and producing literature.

Unemployment also comes as a consequence of the digitalization of literature. In digitalization, it is the bare truth that several people lose their job. But it is the necessity of time. We have to prepare ourselves for the upcoming changes of the future. Another observation is that jobs may transform into new roles. People have to enhance their ability to acquire the essential skill to walk with time. Digital illiteracy is a bar in a country like India. Basically, technology changes the roles of an employee but adopting a new role for everyone is not easy. Digital literacy is not an easy task. Old-aged, senior, and mature persons feel a problem adopting change so frequently. But changing is a demand of every era, so digital illiteracy becomes a bar sometime for it.

It is true to state that everything has pros and cons but if we see the bright side we'll be able to move on the path of success smoothly. So here is just the need to be firm in resolution to acquire the necessary skill for the understanding and creating of digital literature. It will help in every field of life. Adrian correctly utters, "The digital revolution in education not only does not solves previous issues but apparently creates new ones as differences in access, in skills and in use patterns are able to increase the various offline gaps between people of different socio-economic backgrounds." (Hatos)

Outcome

This paper points out the significance of digitalization in Literature, its various evolved forms, and its bright and dark sides to the present scenario. Digital literature is a part of the technological aspect so it may be tough in the initial stage but after acquiring essential skills it proves very handy and easy. Digital literacy is the tool for its enhancement.

Conclusion and Suggestion

This paper concludes with a note of digital urgency in the field of literature is the need of the present time Digital and technological prosperity of a country leads it to the pinnacle of success. In the present time, it is really a revolutionary tool. New vistas can be developed only by firm determination and considering that it is a challenge for us to adapt to the skills of this new era with new things. We must not seek escape from the problem. To accomplish new horizons we have to move with long and fast steps so that we may be able to cope with the world's status of success. These tools of Digitalization in literature are new to us, and most people are deprived to use them due to a lack of facility of internet, or Digital illiteracy. So they feel difficult and problematic. But the awareness of digitalization in literature will lessen the problems in this area so soon. We will be accustomed to this innovative and progressive change in our life.

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Study of Startup's Regional Distribution Pattern and State's Performances in Indian Context

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Abstract

Any country's ability to develop depends greatly on how well its economy is doing. A stronger economy opens chances for innovative ideas that can deviate from the norm. Every sector of the economy is progressing thanks in large part to startups. Big actors in an economy are good markers of balanced growth, employment, and investment. A startup reveals that something new is coming in the world due to the endeavor of risk bearer with a motive of producing desired goods and services having potential to satisfy the need of prospective consumer. The risk of investing in this kind of firm is high. The idea of startups is relatively new in India. Although the aforementioned idea is ingrained in some Indians, a methodical approach and technique have shown them the way to success in this field. Startups are the consequence of creativity, the application of novel ideas, a successful balancing act between supply and demand, met worldwide ask criteria, etc. If regional balance in establishment and growth patterns can be preserved, startup availability and growth can keep pace with national economic development. The roles of several stakeholders define the road of success for entrepreneurs looking for innovation. A startup regulatory framework assesses the effectiveness of various administrative authorities and makes an effort to establish a common basis for all active startups in different economic sectors to achieve unique and distinctive status. For current and potential entrepreneurs looking to enter the startup industry, innovative ideas and a risk-taking mentality are creating favourable conditions. The government is developing several programmes and conducting regular evaluations to keep them up to date for both the immediate and long-term future. A positive and upbeat thought pattern in aspiring entrepreneurs is ensured by the public dissemination of important information regarding startup's fundamental principles. The international reach of Indian startups would draw foreign investment and guarantee a notable position among other nations putting up excellent performance.

Keywords

Innovative ideas, Regional balance, startup regulatory framework, aspiring entrepreneurs.

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Introduction

A startup is an organization of people who have an optimistic outlook on developing a distinctive new good or service under multiple circumstances of high uncertainty. The successful and final result of the founder's futuristic strategy is a startup. Startups straddle the conceptual and practical divides. The idea is being developed by the creators and co-founders to become a reality. Need is the mother of invention, and need and problems are strongly interlinked. Startups offer a vision for identifying issues and attempting to address them in an approachable and practical manner. All time frames have issues, but startups look for opportunities within them and work to make associated stakeholders' lives simpler. There are a lot of people in the economy who could use your services. Startup focuses on the customers, including their philosophies, purchasing power, buying patterns and lifestyles. All of this focus research results in an original good or service that fits the target market niche. In the economy, chances for innovation always win out. The idea for a startup was to bridge the gap between traditional and modern lifestyles, which has caused a market gap. The system has not always been open to new ideas. The startup's creator must be prepared for this and should concentrate on a long-term strategy for sustainable success. Despite having little revenue and little return, a passionate and energetic thought pattern should rule from the start. Startup is intimately tied to novelty and differs from conventional thinking patterns. Because there are so many entrepreneurs in the market that operate in that box and have a conventional approach to dealing with clients, goods, and services, founders and cofounders tend to come together outside of the box. The definition of a startup is broad. It covers philosophical distinctions and technical ones. Any startup's ability to succeed primarily rests on how well it is accepted by potential clients. If your ideas do not receive encouragement from your intended audience, they will remain in their own niches. Dary merckena, CTO of Gunner technology, "frankly a startup is very new business that has not reached critical mass yet run by one or more individuals whose primary work related goal is the growth of that company."

Literature Review

The most of literature available regarding startup initiative is focused on status of different types of Startups established in India and their performance in last some years. Present study will focus on the regional distribution pattern of startups and the role of states can be easily evaluated on the basis of startup establishment in their territories. Startup India is an initiative of the government of India. The campaign was first announced by Indian Prime Minister, Narendra Modi during his speech on 15th August 2015. **(Network (TNN), 2015)**.

The role of government agencies always has strong impact over the business environment for the establishment of any sort of Business. As the inception of any endeavor takes time to flourish. In the same way startup is also take some time and effort to shine before the public. However most of the times it is related to innovation and creativity which may have the reverse impact also. The Apex body in policy matters regarding monetary matters, RBI has focused over the easy atmosphere for doing the business in India whether it is traditional or an innovative one i.e. startup.

"The startup process can take a long period of time, and hence sustaining effort is required. Over the long term, sustaining effort is required. Over the long term, sustaining effort is especially challenging because of high failure rates and uncertain outcomes." **(Uy, Marilyn A; Foo, Maw-Der;lles, Remus,2015)**

Objectives

1. To get the pattern of regional distribution of startups established in India.
2. To find out the performance of various states in establishment of startups.
3. To study the startups ranking framework 2021.
4. To provide suggestions to make a harmonious arrangement of startups established in various states and union territories of India.

Research Methodology

In the present study "Study of Startup's Regional Distribution Pattern and State's Performances in Indian Context" various aspects of regional distribution pattern are studied. Secondary data have been gathered

from statistical records published by government agencies. States ranking as per Startups ranking framework 2021 have been studied. Analysis and interpretation of gathered data have been done by way of comparison with the help of grouping of data having same sort of attributes. Absolute and relative figures are used to compare the data.

Startup India Scheme

The Startup India Scheme is the brainchild of Indian government in 2016. The promotion of companies, development of jobs, and wealth creation are Startup India's three main goals. A number of initiatives have been started by Startup India to create a strong startup ecosystem. The DPIIT is in charge of running these initiatives. Various programs have been introduced for strengthening the atmosphere favorable for the establishment and functioning of startups.

Startup Ranking Framework

Beginning in 2018, the States' Start-up Ranking Exercise was carried out by the DPIIT, which is a division of the Ministry of Commerce and Industry. The exercise is extremely important for improving the business climate for new companies in the nation. This framework has focused on the performance of States and UT's in various reforms areas so that the positive and negative feedback can be gathered and analyzed. Performance appraisal of various participants has been ranked in 5 categories as best, top, leader, aspiring leaders and emerging players.

Broad Reform Areas

Participants were assessed based on 26 Action Points spread throughout 7 major Reform Areas, ranging from,

- Institutional Support
- Fostering Innovation and Entrepreneurship
- Access to Market
- Incubation support
- Funding Support
- Mentorship Support to Capacity Building of Enablers.

Table - 1: States Startup Ranking Result 2021

Category	Category A (Population > 10 Million)	Category B (Population < 10 Million)
Best Performer	Gujrat Karnataka	Meghalaya
Top Performer	Kerala Maharashtra Odisha Telangana	Jammu and Kashmir
Leader	Assam Punjab Tamil Nadu Uttarakhand Uttar Pradesh	Andaman and Nicobar islands Arunachal Pradesh Goa
Aspiring Leaders	Chattisgarh Delhi Madhya Pradesh Rajasthan	Chandigarh Dadra and Nagar Haveli & Daman Diu Himanchal Pradesh Manipur Nagaland Puducherry Tripura
Emerging Startup Ecosystem	Andhra Pradesh Bihar	Mizoram Ladakh

Source : Startup Ranking Framework, 2021

Regional Distribution Pattern of Startups

Sustainable efforts about increasing the number of recognized startups have resulted in increasing the number of recognized startups from 452 in 2016 to 84012 in 2022 (as on 30th November 2022), Minister of state for commerce and Industry, Shri Som Prakash said in reply to a parliament. Regional distribution pattern of startups can provide the total prevailing business environment. Harmonious, equitable and justifiable distribution pattern of startups can be established in various administrative regions of India i.e. northern, western, southern, central, and eastern and north- eastern.

Table - 2: Startup position in Northern India

S. No.	Name of State	2016	2017	2018	2019	2020	2021	2022	Total	% share
1	Haryana	25	253	474	694	806	1060	1199	4511	50
2	Himanchal Pradesh	0	9	16	28	41	56	103	253	3
3	Jammu and Kashmir	2	13	43	37	64	132	159	450	5
4	Ladakh	0				1		4	5	0
5	Punjab	7	28	63	92	146	240	263	839	9
6	Rajasthan	13	137	241	349	493	619	879	2731	30
7	Chandigarh	8	21	25	39	53	69	73	288	3
	Total	55	461	862	1239	1604	2176	2680	9077	100
	Absolute Change from last year		406	401	377	365	572	504		
	Percentage Change from last year		738	87	44	29	36	23		

Source: (DPIIT)

The startup position in India's northern region is depicted in the table above. Together, Haryana and Rajasthan account for a sizable portion, or 80% of all businesses founded in the last seven years. The hilly regions of Jammu and Kashmir, Ladakh, and Himachal Pradesh have few opportunities for the development of entrepreneurship because of this. Despite this, since 2016, there has been a strong development pattern in startup establishment, sending a favourable and optimistic signal. Concentrating on Punjab and Chandigarh can improve northern India's standing as a startup nation.

Table - 3: Startup position in Central India

S. No.	Name of State	2016	2017	2018	2019	2020	2021	2022	Total	% share
1	Madhya Pradesh	7	101	287	327	423	557	813	2515	12
2	Chattisgarh	11	56	118	158	153	165	210	871	4
3	Uttar Pradesh	27	385	764	873	1370	1966	2334	7719	36
4	Uttarakhand	4	43	69	97	114	162	214	703	3
5	Delhi	62	713	1147	1371	1765	2178	2352	9588	45
	Total	111	1298	2385	2826	3825	5028	5923	21396	100
	Absolute Change from last year		1187	1087	441	999	1203	895		
	Percentage Change from last year		1069	84	18	35	31	18		

Source: (DPIIT)

The startup position in India's central regional states is represented in the table above. Approximately 81% of the startups in the aforementioned region are located in Uttar Pradesh and Delhi. As far as the absolute change from the previous year is concerned, a consistent growing tendency has been observed in all the states included in this region since 2016. But when it comes to relative change, 2019 and 2022 show a dramatic fall. The Covid-19 epidemic is the main cause of this. Geographical constraints limit the opportunities for Uttarakhand. However, Uttarakhand's plain areas have produced commendable outcomes. Concentrating on Madhya Pradesh can improve the standing of this area within the context of all of India.

Table - 4: Startup position in Western India

S. No.	Name of State	2016	2017	2018	2019	2020	2021	2022	Total	% share
1	Gujarat	24	278	434	591	878	1709	1963	5877	27
2	Maharashtra	86	1047	1607	2118	2671	3703	4339	15571	71
3	Goa	2	19	43	41	67	80	99	351	2
4	Dadra & Nagar Haveli and Daman and Diu		4	1	3	5	12	12	37	0
	Total	112	1348	2085	2753	3621	5504	6413	21836	100
	Absolute Change from last year		1236	737	668	868	1883	909		
	Percentage Change from last year		1104	55	32	32	52	17		

Source: (DPIIT)

The data on startups founded in the Western India area is displayed in the above table. Mumbai has been referred to as the economic centre of India, and Maharashtra has long been a centre of industrial development. The state has also made the startup part of the story true. Maharashtra, with a significant share of 71%, has taken the top spot in this area. Gujarat is renowned for its entrepreneurial abilities and participates in startup ventures as well. Due to geographical constraints on area size and population, Dadra & Nagar Haveli and Daman and Diu have little opportunities. Goa is also displaying a promising outlook in terms of his future. After observing a significant increase in 2017 as a result of the beginning interest, a favourable growth pattern can be shown from 2016 to 2022. The impact of Covid-19 has been significantly reduced in 2019 and 2020 thanks to continuous relative growth, which is also praiseworthy. The distribution and impact of startups in the Indian setting would also shift if Gujarat and Maharashtra experience any kind of good transformation.

Table - 5: Startup position in Eastern India

S. No.	Name of State	2016	2017	2018	2019	2020	2021	2022	Total	% share
1	Bihar	1	46	145	154	258	390	469	1463	23
2	Jharkhand	2	35	85	88	163	191	208	772	12
3	Odhisia	4	105	163	184	277	389	400	1522	23
4	West Bangal	8	170	269	300	394	682	916	2739	42
	Total	15	356	662	726	1092	1652	1993	6496	100
	Absolute Change from last year		341	306	64	366	560	341		
	Percentage Change from last year		2273	86	10	50	51	21		

Source: (DPIIT)

The information above depicts the startup environment in Eastern India. Top of the list with a 42% share is West Bengal. Odhisia and Bihar have an equal percentage share, but when we look at the number of companies, the latter is outpacing the former. Jharkhand is last on the list as a result of geographical restrictions. West Bangal may end up becoming this area's shining example of the right route. Since 2016, there has been a consistent growing tendency in the absolute change. However, the percentage changes between 2019 and 2022 have broken the trend of growth. The region's continued strong growth throughout the years COVID-19 is encouraging and indicates that entrepreneurship is stable for this reason. Focus on Jharkhand can modify the above picture and strengthen the startup position of Eastern Indian position in Indian context.

Table - 6: Startup position in North Eastern India

S. No.	Name of State	2016	2017	2018	2019	2020	2021	2022	Total	% share
1	Arunachal Pradesh			2	2		4	8	16	2
2	Assam	9	34	67	67	119	187	245	728	74
3	Manipur		3	7	6	12	37	30	95	10
4	Meghalaya			2	5		9	10	26	3
5	Mizoram			2	1	1	2	6	12	1
6	Nagaland	1	4	2	2	5	7	7	28	3
7	Sikkim		1		2	1	3	2	9	1
8	Tripura			2	7	23	11	26	69	7
	Total	10	42	84	92	161	260	334	983	100
	Absolute Change from last year		32	42	8	69	99	74		
	Percentage Change from last year		320	100	10	75	61	28		

Source: (DPIIT)

The startup position in North Eastern India is shown by the data above. Due to its geographical advantage of having a wide territory and population, Assam is in the top spot and far ahead of all the other states in this region. As far as industrial growth is concerned, the North East region has historically lagged behind because of topographical constraints and political unpredictability. We can see that Arunachal Pradesh, Meghalaya, Mizoram, and Tripura did not provide even a positive amount in 2016 or 2017. However, they displayed a constructive outlook moving forward. Absolute change shows a healthy trend of growth, while relative change shows a dramatic decline in 2019 before things turn around. The growth trajectory of the mentioned area has a significant impact on India as a whole in terms of startup status. Before all the other states in this region, Assam can demonstrate a model role. The North-East Region Entrepreneurship and Startup Summit (NERES), a specific government initiative, will undoubtedly alter the statistics picture in the future.

Table - 7: Startup position in Southern India

S. No.	Name of State	2016	2017	2018	2019	2020	2021	2022	Total	% share
1	Andaman And Nikobar Island		1	2	8	5	13	9	38	0
2	Andhra Pradesh	4	97	158	174	231	296	340	1300	5
3	Karnataka	58	828	1172	1659	1729	2141	2317	9904	41
4	Kerala	24	158	320	647	699	919	997	3764	16
5	Puducherry		3	15	10	13	17	29	87	0
6	Tamil Nadu	43	252	448	602	755	1103	1501	4704	19
7	Telengana	20	303	496	592	798	980	1237	4426	18
8	Lakshdweep					1			1	0
	Total	149	1642	2611	3692	4231	5469	6430	24224	100
	Absolute Change from last year		1493	969	1081	539	1239	961		
	Percentage Change from last year		1002	59	41	15	29	18		

Source: (DPIIT)

The startup information for India's southern region is shown in the table above. With a two thirds share in the area, Karnataka is in first place. Together, Tamil Nadu, Kerala, and Telengana make up practically the

entire region. Puducherry enjoys a good standing among the Union territories in this area. Absolute change over the previous year shows a healthy growth pattern. But in 2020 and 2022, there will be a noticeable decline. The accompanying image demonstrates Covid-19's negative effects. Karnataka, which has seen a substantial decline in the Covid-19 duration, is a centre for information and technology. Andhra Pradesh needs to put a lot of effort towards focusing. Karnataka can play a role of leader in this region and his assistance can change the picture of this region.

Table - 8: Comparative study of startup established in all regions

Region	2016	2017	2018	2019	2020	2021	2022	Total	% share
Northern India	55	461	862	1239	1604	2176	2680	9077	11
Central India	111	1298	2385	2826	3825	5028	5923	21396	25
Western India	112	1348	2085	2753	3621	5504	6413	21836	26
Eastern India	15	356	662	726	1092	1652	1993	6496	8
North Eastern India	10	42	84	92	161	260	334	983	1
Southern India	149	1642	2611	3692	4231	5469	6430	24224	29
Total	452	5147	8689	11328	14534	20089	23773	84012	100
Absolute change from last year		4695	3542	2639	3206	5556	3684		
% change from last year		1039	69	30	28	38	18		

Source: (DPIIT)

The data from all six regions of India are included in the table above. A comparative analysis can show the true distribution of startups in India. Western India tops the list in terms of absolute numbers, despite Central and Western India having nearly identical relative shares. This has been made possible by the presence of Maharashtra in western India and Delhi in central India. Third-place Southern India holds a stake of 29%, of the market. Bangluru's presence has made this possible. Despite its geographical limits, Northern India is also making a commendable contribution to new businesses. Haryana has accepted responsibility for its region's dominant status. West Bengal's efforts have improved the position of Eastern India. Despite having a lot of unfavourable topographical and political instability, North-eastern India's achievement of securing 1% of the Indian market is commendable. This is made feasible by the presence of Assam in the area. The absolute and relative development during these seven years makes it simple to comprehend India's progress. Due to the conception of the new idea and the attraction of entrepreneurs to the new concept after receiving institutional and financial backing from the government, startups unexpectedly increased by 1039 % in 2017. Following that, the remaining years show a pattern of positive growth with some swings in the relative change. The little relative change drop in Covid-19 demonstrates the robustness of the Indian economy.

Employment Status

Any sort of entrepreneurship always has a multifold impact on economy. Efforts of risk bearer provide opportunity to absorb large section of human resources by providing job. In the same way startups are providing various types of jobs to the young generation of India and contributing to the reduction in unemployment rate. The following table represents the total number of jobs created by startups since the starting of startup India programme i.e. 2016.

Table - 9: Employment status in startups

Year	Jobs as on 30 November, 2022	Total Number of Startups	Average Jobs offered by Startups
2016	10	452	0.02
2017	43322	5147	8.42
2018	88147	8689	10.14
2019	132804	11328	11.72

2020	161796	14534	11.13
2021	198762	20089	9.89
2022	238767	23773	10.04

Source: (DPIIT)

The above mentioned data in table shows the various aspects of job created by startups established since 2016. Average jobs offered by startups in 2016 was just 0.02 but in 2017 it jumped to 8.42. in 2019 the average job offered is highest i.e. 11.72 but after that a downward trend has been noticed for the next two years due to the adverse economic and social impact of Covid-19 in national and international level. Form the year 2022 it has resumed its previous increasing pattern by neutralizing the adverse impact of pandemic.

Suggestions

1. Institutional assistance is unavoidably necessary for the startup environment to succeed. The government should be actively involved in this through providing information to the public through startup portals, grievance systems with time limits, and active participation of government organizations through institutional assistance and policy creation.
2. The startup ecosystem must support entrepreneurship and innovation. Events should be held in vocational, professional, and higher education institutions to assist enthusiastic student entrepreneurs in order to identify the participation of young, energizing, and optimistic entrepreneurs. For the purpose of increasing the number of female entrepreneurs, a unique incentive for startups led by women must be prioritized.
3. Government with the collaboration of higher education institutions and other professional institution young entrepreneurs must be given right kind of consultation and direction in choosing the startups. As per a 2014 article in fortune estimated that 90 % of startups ultimately fail in a sample of 101 unsuccessful startups. **(Erin Griffith,2014)**
4. Access to markets is a key factor in any business' growth. Cost of production falls owing to the rise in output which is achievable only if sales opportunities are expanded. The requirements should be loosened up by the government to encourage more startups to participate in the public procurement process. Governmental agencies and businesses must together identify various programmes that offer marketing help.
5. Since starting a business is a risky endeavor with uncertainty and challenges to success. They can go more easily if they are given direction and guidance. By creating a framework for their assistance, incubator support aids the founders and cofounders in their initiatives. Government should support incubators in their establishment or improvement so that mentorship is available through the implementation of various accelerated programmes including free research and development facilities, free training, finance, etc., which simplify the complicated administrative requirements of a startup.
6. The foundation of any successful business is finance. Due to the commencement of innovation and the fact that the general public has not yet experienced its practical use, startups confront several challenges in obtaining financial assistance. State and federal financing assistance can aid in this by making funding established solely for a startup's well-being accessible to reach. Startups that have received funding assistance from state-supported funds or mechanisms and private funds should provide ongoing feedback.
7. Startup entrepreneurs, state agencies, federal agencies, and other relevant stakeholders work in harmony to ensure the success of new businesses. Various workshops should be held to raise awareness of the startup ecosystem in India among state government department officials. It is impossible for a startup to grow if the numerous concepts and procedures are not understood. For state-supported incubators, various training programmes and workshops must be held that cover best practices adopted at the national and international levels, the history and development of startups in India, as well as policies and regulations pertaining to the startup ecosystem.

8. Road map must be printed to keep a sustainable future in mind. Diverse startups with rural effect, focused on renewable energy, sustainability and climate change may boost the potential growth of startups in future. A methodical approach to work can open up new opportunities for other economic sectors that are connected to it.

Findings

After interpretation and analysis of gathered secondary data in the present study of “Study of Startup’s Regional Distribution Pattern and State’s Performances in Indian Context” various outcomes have been identified.

1. With a share of 29%, the southern region of India tops the list for startup establishment. Nearly 25% of India is in the central and western regions. 11% of all startups in India are located in Northern India. Eastern India has 8% of all established startups. 1% of startup ventures are in North Eastern India. The presence of Delhi and Uttar Pradesh in central India, Haryana in the north, Maharashtra in the west, West Bengal in the east, Karnataka in the south, and Assam in the north-east have provided the concerned region a solid platform in their positioning in India’s startup distribution.
2. Eastern India experienced a massive growth of 2273% in 2017, which is much more than the rest of the country’s regions. India’s central, western, and southern regions all experienced growth rates between 1000 and 1100%. 320% is a fairly low growth rate for the North Eastern region. From 2016 through 2022, favourable growth rates have been seen in all regions. India has demonstrated a strong position on the economic front during COVID-19. While the number of startups has decreased throughout the relevant pandemic era, growth patterns have held steady and are expected to resume in the ensuing years of recovery.
3. Gujarat and Karnataka were recognised as the top achievers in category A states with a population greater than 1 crore. Top performers in this category include Telengana, Odhisa, Kerala, and Maharashtra. Bihar and Andhra Pradesh have developing startup ecosystems. Meghalaya is the top performer among category B states with a population under 1 crore, and Jammu and Kashmir is in the top performer category. Ladakh and Mizoram are receiving favourable reviews as developing startup ecosystems. Gujarat, Karnataka, Maharashtra, Kerala, and Telengana have secured positions in the majority of reforms areas. The presence of Jammu and Kashmir as an incubation hub, Assam and Meghalaya as mentorship champions, Odisha, Meghalaya, and Uttarakhand as forerunners in capacity building, Himanchal Pradesh and Meghalaya as pioneers in procurement, the Andaman and Nicobar Islands as institutional champions, and Jammu & Kashmir as innovative leaders in reform area have all painted a positive picture for the growth of startups in various regions of India.
4. Popular cooperation is required for institutional and administrative assistance from the federal and state governments so that startups can match their supply and demand requirements. Numerous initiatives to strengthen the business climate through reforms in some areas or to facilitate certain parts of it. Pros and negatives should be determined as early as feasible, with positive outcomes being rewarded and downsides or drawbacks being controlled by implementing controlling procedures with a rectification approach mentality.

Conclusion

Startups are flourishing at a national and worldwide level, painting a bright image of the future. In terms of the creation of startups, 3 regions in India—the southern, central, and western—are expanding quickly, ensuring the concept’s promising future. The northern and eastern regions are imitating the other prosperous areas. The north eastern states are demonstrating a good trend despite having poor opportunities for resource availability and underutilization by securing a small but significant part in the overall startup environment of India. Startups have a solid foundation thanks to the central government’s forward-thinking policies and the ongoing support of the states and union territories. Successful startups’ global reach is providing other forward-thinking businesspeople with chances to follow best global practices. The researchers and decision-makers

concerned in startup-related issues will find this study useful. The analysis, interpretation, and recommendations drawn from this study can help with fund allocation and incentive programmes.

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Motivation - A Boost for Education

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Abstract

Supportive and healthy environment in the class created by the teacher fosters creativity, interest and better performance. Listening to child is also have positive correlation with creativity. Disorganization and high stress should be avoided otherwise student can experience frustration all student should not be dealt equally because they have different abilities every child pusses different level of aspiration. To achieve their goals, more realistic approach should be adopted. Some other sources of motivation are desire for social approval, to overcome opposition the wheel of dominance acquire parental impulses, positive opportunities for achievement. Music, literature, sculpture, pictorials etc. are expressions of respecting instinctive and give intelligent directions.

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Introduction

The word motivation is originated from the latin word 'Motum' which means - Move, Motor or Motion. In Etymological meaning, it is 'work' or 'activity'. In this way, excitement can be also called motivation. It is internal and external both. In psychological meaning, motivation means internal excitement on the basis of which human behaviour is decided. Definitions – Various definitions of motivation have been given by psychologists. Some are - According to Skinner, "Motivation is the super Highway to learning." In words of Guilford, "It is a particular internal factor or condition that tend to initiate and to sustain activity." Blair, Jones and Simpson defined "Motivation is process in which the learner's internal energies and needs are directed towards various goal objects in his environment."

There are two types of motivation - 1. Intrinsic motivation - In this type of motivation, a child does any work willingly. He feels satisfaction by doing the work. It is also called positive motivation. 2. Extrinsic Motivation - In this type of inspiration, child does the work because of external effect and achieve some particular target. It is also called negative motivation. The use of positive motivation is better than negative motivation. Pressey, Robinson and Horrocks said, "Extrinsic motivation is inferior to intrinsic motivation as a learning device." The theories of motivation are Instinct theory, Drive theory, Physiological theory, Incentive theory, Need theory, Psycho -Analytic theory.

Importance of Motivation in Learning

Marshal said, "Motivation determines how well people learn and how long they keep on learning." Teacher can control, guide and change the behaviour of students by using the artificial motives such as praise, condemnation, prize, punishment etc and he can provide right direction to their energy. Motivation is helpful to create interest towards study and other works among students. It also proves helpful to acquire the knowledge and in mental development of students. With the help of motivation, students can increase their concentration. In words of Crow and Crow, "Teachers can help the students to concentrate on the content by motivating them."

Motivation also gets direction to achieve that decided aims in life. Motivation is helpful to arise discipline in the students and to acquire more and more knowledge about different aspects. Crow and Crow wrote, "Teachers can motivate the students to get more knowledge by developing the feeling of competition among the students." Improvement in curriculum and in teaching methods should be done to motivate the students. Students should be given chance according to their individual differences. It can be said that motivation is the main basis of the procedure of education and it is a powerful instrument. By using it, teacher can assist the students and can bring drastic modification in their working pattern and they may be able to perform better than before. Teacher should know it very well where and when to use this. It proves helpful for improvement of results in process of learning. Kelly told "Motivation is the control factor in the efficient management of learning some sort of motivation must be present in all learning."

Techniques of Motivation

In the classroom, when learning process goes on, a teacher has to face different circumstances with his students. He has to work with students according to their individual differences. He does all the efforts to develop maximum qualities of his students. Everyday, he has to face this challenge in the classroom. His target is to make the learning procedure interesting and useful for the students considering their grasping power and working capacity. Teacher's work is of the great importance to make connectivity and proper communication with his students. Teacher should apply the following methods in the class to motivate the students -

1. Reward and Punishment - It is the most important technique. Students should be rewarded for good work and should be punished for wrong work. Rewards connect with good memory and punishment with hate, so priority to be given to reward. Purpose of using these two is to put positive effect on the future behaviour of students. In the words of Smith, "The actual problem is not to eliminate artificial rewards but to devise and administer them as to appeal to the higher motives of pupils in seeking rewards."

2. Praise and Blame -Student feels proud if he is praised and feels sad if he is blamed among his classmates. According to Frendsen,"Use of praise or blame at proper place and time may prove an important factor for motivation."
3. Success and Failure - Everyone gets both success and failure in life. Success inspires to lead for doing more,better work and the failure makes away from the work. Teacher should motivate the students by using these also. Bernard said,"School program should be sufficiently varried so that every pupil has a chance to succeed at his own level.
4. Competition and Co- operation -Competition is of two types - individual and in group.Students should be motivated for healthy competition.It promotes positive thinking and good feelings towards competitors. Miller said,"Friendly competition is a better source of competition ." If work is done with co –operation, it becomes easy , makes the life better and gives the best results in all tasks.These are really good techniques.
5. Knowledge of Progress - When a student knows his level of progress ,it motivates him and increases his confidence to do the work continue. Programmed instruction is a step in this direction.
6. Level of Aspiration -If someone gets success in continuity then his level of aspiration is high and in case of failure, the level of aspiration is low. Every person has different level of aspiration. If many persons have same target in life but their level of aspiration may differ.The concept of level of aspiration is given by Levin. He said,"It is the level of future performance on a familiar task which an individual expects to achieve."
7. Novelty-Teacher should apply new teaching methods and new teaching techniques to create students interest in teaching - learning procedure.He should also use the best audio - visual material aids of teaching. For attention of students, newness is must. The teacher should search easy and new methods to make clear the tough content.
8. Interest - In the absence of interest all things are useless. It's a challenge for teacher to create interest in students and to maintain it. It is said,"Interest is the greatest word in the dictionary of education."
9. Knowledge of Needs - Every student has different needs, values, ideals and attitude. These all are the part of his personality. Teacher should have knowledge about it to motivate the student properly according their individual differences. According to Hurlock,"The prime needs of the child act as incentives to his learning."
- 10 . Classroom Environment - It effects the whole personality of student. Motivational behaviour not only effect the educational achievement of a students but also effect students will power.Fredsen expressed,"A`grade teacher depends for effective motivation on a rich meaningful and continually changing classroom environment."

Role in Learning

Motivation is internal excitement. Our behaviour is based on it. It inspires us to do the work. In the process of learning, motivation has very important place. It is a powerful source of learning. Teacher can bring change in the behaviour of students by using motivation.In the words of Thomson,"Motivation is the art of creating interest in students."Students can acquire more knowledge. Motivation help the students to concentrate. Teacher can motivate the students to develop good qualities, good conduct and they should be kept in proper discipline. Motivation provides base to learning. Crow and Crow said,"Motivation helps the person to choose that activity which he wants to do."

Sources of Motivation

1. Need -In the words of Boring, Langfield and Weld,"A need is a tension within the organism which tend to organize the field of the organism with respect to certain incentives or goals and to incite activity directed towards their attainment."

2. Drive -With every need, drive is connected. According to Dashiell,"Drive is an original source of energy that activates the human organism."
3. Incentive - Boring and others said,"An incentive may be defined as an object, a situation or activity which excites, maintains and directs behaviour."
4. Motive -It is the sum of all the above three. Motive = Need+Drive+Incentive Infact, need drive and incentive-all these are closely related. Need give birth to drives. Drive is a stressful condition that gives proper direction to behaviour. By incentive, need is fulfilled and after it, drive is finished. Students' energy should be motivated towards the desired and proper channel and this will be helpful to solve the problem of discipline in the class. At all levels of education and in the procedure of learning, motivation is very important. If the pupils are motivated well ,they become able to do the work from his heart and full efforts and then, they can achieve success up to the maximum level in his performance. Development of personality and character can we build up in right way with the help of motivation given to them from the time to time ,during school and college life. In the absence of motivation, the hard work ,done by the teacher with students, doesn't show the better results. Wel motivated students become ready to learn each and everything very quickly and with full attention. Motivation cannot be ignored at the time of learning. Creation of suitable environment for learning, manipulation in incentives and goals, to arise emotional interest of students are connected with the motivation. What a students want to do and what a teacher wants to be done by them, combination between these two can lead to the successful teaching and learning in the class. If students are eager to learn then it becomes very easy for the teacher to promote them for theory and practical work. Without motivation it is useless to expect the best results and sometimes ,inspite of the hard work the teacher gets lower results.

Thomson described some points for teacher how to proceed with motivation —*Utilisation of a master motive *Encouragement of participation *He should be full of enthusiasm *Whole personality should be enlisted to make special use of the desire for status *proper examples should be set by him *Opportunity for self- expression in many ways *Teacher should give his attention towards the fact that- in motivation , heredity,age and learning process create individual differences. By understanding this, teacher becomes able to do his work with practical approach. To gain new knowledge and learning experience , the teacher has to decide his goals clearly and should take proper steps in the direction of providing effective motivation. Proper examples should be presented at the time of learning. Psychologists have given different theories of motivation. Teacher should know how to use them in practical conditions in the classroom. New ideas, new materials, new methods can be adopted to create curiosity among students. It's a great challenge for teacher to create interest in all students for doing everything with interest. Only motivation lead to the formation of interest and attention for completing the given task. Student should be given small instructions before starting a task. These instructions present a learning set, give direction to proceed further and inspire to do work in proper manner. Teacher can provide an organized framework for the required material for the better understanding and can provide transitional material between the previous knowledge and the new material. When his students know that what they have to do and how to do and what to learn, their desire arises to learn more. These are motivating techniques. In the classroom, individual differences are found in the students. The teacher must know the abilities of his students, difficulties facing by them and doing the activities. Encouragement should be given to students at different levels of performance.Students should be provided experience of success and failure in achieving their goals, It is very easy to give some assignment to all the students ,but the process of goal setting takes more time of teacher in the class and he should realize this. The behaviour of teacher - associated with the lower and higher achievement- involves in motivation.These are motivating techniques. In the classroom individual differences are found in the students. The teacher must know the abilities of his students, difficulties facing by them and doing the activities, encouragement should be given to students at different levels of performance, student should be provided experience of success and failure in achieving their goals, it is

very easy to give some assignment to all the students but the process of goal setting takes more time of teacher in the class and he should realize this. The behaviour of teacher associated with the lower and higher achievement,

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Analysis of China's Expansionist Intentions in the Indian Ocean for World Peace and India's Security

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Last Semester

Abstract

Confirming the urgency of the problem identified in the title of this research article, it is necessary, first of all, to note the essential fact that China's communist face hides devious and dangerous imperialist intentions. China is bordered by 14 countries, including India, and China has land or maritime disputes along its maritime border (the East and South China Seas) with almost all of its neighbors on the Asian continent (including 23 countries), Japan, Taiwan, and Vietnam. Controversial and conflict situations have arisen in Sunda, pore, Indonesia, the Philippines, Malaysia, and South Korea, which are a threat to world peace and harmony. India and China have often struggled for strategic supremacy in international and regional systems and borders mired in disputes. On June 15, 2022, over 250 Chinese soldiers attacked a party of 50 Indian soldiers. Indian troops were then observing the Line of Actual Control (LAC) located on the Indian side of the Galvan Valley. During this encounter, 20 Indian soldiers were martyred, while a large number of Chinese army soldiers were also martyred. The incident led to a prolonged standoff between the two sides on the LAC. China is responsible for the worldwide pandemic Covid-19.

Keywords

Indian Ocean, Sagarmala Project, expansionist intentions, world peace, India's security.

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**Dr. Ajay Krishna Tiwari,
Miss Ayushi Tiwari**

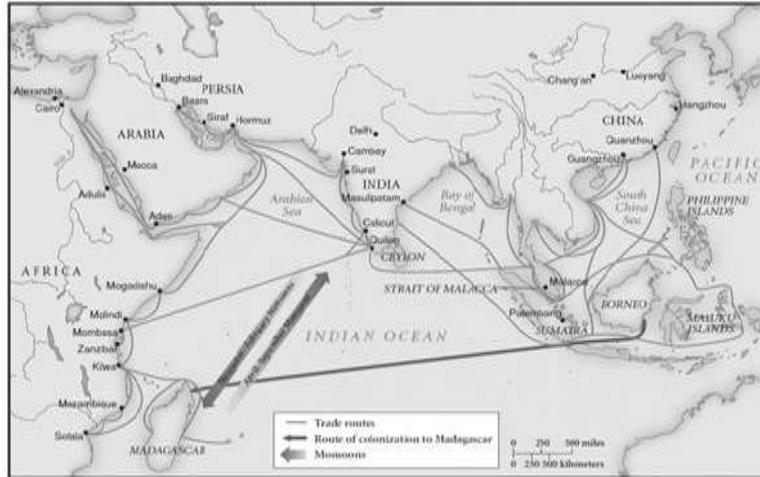
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Preface

The Indian Ocean is a vast region surrounded by the three continents of Asia, Africa, and Australia satellite photos and maps. Due to its strategic and commercial importance, the Indian Ocean has been the center of attraction and rivalry between various powers since ancient times. China is establishing strategic bases in vast areas from the Chinese Archipelago in the South China Sea, from Hainan to the Strait of Malacca, to the Bay of Bengal, through the Arabian Sea to East Africa. These bases are being built in the form of ports, airstrips, and surveillance centers. To strengthen its strategic position, China is now working on the One Belt One Road policy.



Today, peace-loving people in the world who believe in humanity and civilized society are worried about the two threats that are fast emerging in front of them. First - the continuous terrorist attacks and violence in the name of Islam and on the other hand the ever-increasing, economic power of China and its expansionist thinking. It has become the biggest threat to world peace.

India and China have often struggled for strategic supremacy in the international and regional order and have been embroiled in border disputes. However, despite all their differences, the two countries have also cooperated in bilateral, regional, and international fora in the past. This can be understood from the fact that Prime Minister Narendra Modi met President Xi Jinping at Ahmedabad, Wuhan, and Mamallapuram at different times in the years 2014, 2018, and 2019 and worked to increase harmony with China. However, the skirmishes at Galvan sent shockwaves across India, exposing China's expansionist intentions. Since then India has not only come closer to QUAD but has also increased its focus on military modernization. Indeed, the rivalry between India and China has intensified and the struggle for power and influence has reached a new height. Not only has the growing apprehensions of the Cold War and the Indo-Pacific region become the epicenter of geopolitical turmoil, but the role of South Asia has also become more strategic and important.

The Strategic and Commercial Importance of the Indian Ocean



The Indian Ocean surrounded by the three continents of Asia, Africa, and Australia is a vast area on satellite photographs and maps. Looks like a big natural lake. The Indian Ocean because of its strategic and commercial importance in ancient times since then it has been the center of attraction and rivalry between various powers. China, the Chinese archipelago in the South China Sea In vast areas from Hainan to Malacca Strait, Bay of Bengal, through the Arabian Sea to East Africa, Establishing strategic base. These bases are being built in the form of ports, airstrips, and monitoring centers Chinese bases are very close to India's borders which are posing a challenge to Indian security this policy was named String of Pearls by the US Defense Ministry Pentagon. China now has the whole world working on the policy of One Belt One Road to strengthen its badness and strategic position the two routes will be the Economic Silk Road and the Maritime Silk Road. An important part of the One Belt One Road China-Pakistan economic Kari Door (BCM) is posing a challenge to India's sovereignty and security. India understands these challenges of China and has been exploring various possibilities to strengthen itself in this field. India's naval power and armament Along with strengthening the areas, diplomacy is also being used. Where India's Malabar nine military power Chinese Challenging power is the same Asia Africa Growth Corridor, which was developed in collaboration with India and Japan. It is being considered a befitting reply to China's controversial One Belt One Road project. Similarly where India the Sagarmala project will protect India from China's maritime challenges, while many defense experts believe that the Necklace of Diamonds a new strategy to challenge China's String of Pearls strategy in India is made. Apart from the India-Japan-America-Australia thrasher formed the Quadrilateral Security Dialogue (FNC), which will counter-balance China's increasing dominance, in the presented research paper, to assess the challenges arising to India due to China's increasing dominance in the Indian Ocean. And to deal with these challenges, we have to explore the various possibilities of India.

One Belt One Road



The One Belt One Road (BTRT) project, also known as the New Silk Road, is the first President Xi Jinping delivered his speech at the Nazarbayev University in Astana (Kazakhstan) on September 7, 2013, an outline of the approach was presented. According to him, its objective was the all-around development of this belt, so that trade Transit and traffic, and connectivity will get a boost. In support of this initiative, the Chinese government is Seminars to agitate politicians, bureaucrats, scholars, journalists, businessmen, and the common man of the countries, conference. Organizing seminars and workshops etc. One Belt One Road Summit on May 15, 2017, Done in Beijing. Trade routes under the One Belt One Road initiative for representatives of 57 countries at the summit China's plans to build a network were demonstrated. An important part of the China-Pakistan Economic Corridor (BCM) is challenging India's sovereignty and security. India understands these challenges of China and is exploring various possibilities to strengthen itself in this region. Along with strengthening India's naval power and armament sectors, diplomacy is also being used.

While India's Malabar naval Power is a Challenger to China



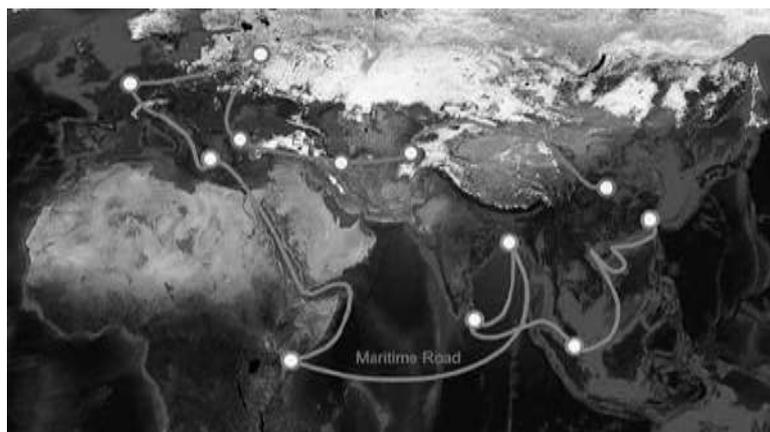
The Asia-Africa Growth Corridor, which was developed in collaboration between India and Japan, is believed to be a befitting reply to China's controversial One Belt One Road project. Similarly, while India's Sagarmala project will protect India from China's maritime challenges, many defense experts believe that the Necklace of Diamonds is a new strategy designed to challenge China's String of Pearls strategy in India. In addition to the India-Japan-US-Australia thrasher, Quadrilateral Security Dialogue (FNC) was formed, which will counter China's growing dominance, in the presented research paper, the challenges faced by India due to China's growing dominance in India The assessment has been made, and we have to explore the various possibilities of India to meet these challenges. We will always be ready to firmly counter China's expansionist plans in the Indian Ocean for world peace and India's security, this is India's need-based program.

Issues Related to Sovereignty Procedures and Leadership



Labor's financial arm Asian Basic India as a founding member of the Infrastructure Investment Bank (AIIB) should attend the summit, But India boycotted this conference on some issues related to sovereignty procedures and leadership. Labor Boycotting the project, India said, "No country can accept a project in which its sovereignty and territorial integrity has been ignored. New routes connecting Asia, Europe, and Africa, three continents by 2049 under One Belt One Road It has been

Land Route called Silk Road Economic Belt



There will be two routes of One Belt One Road, first – Land Route called Silk Road Economic Belt, and Second - the sea route which will be known as the sea silk road. If we talk about the land route first, then this route will revive the ancient route of trade, commerce, and person-to-person contact. Silk Before this route Trade used to happen, under the name of this, it is called Silk Road Economic Built. This belt starts from Xiang in central China. Hokan goes to Lanzhou and Khurtas (Xinjiang) in the west. After this, moving from there to the southwest, the middle Of Asia goes to Iran in the north, and from there it turns towards Iraq, Syria, and Turkey. capital of Turkey From Istanbul, this belt passes through the Bosphorus Strait and runs northwest towards Europe, from where Goes up to Bulgaria, Romania, and Germany, after reaching Duisburg in Germany it turns north to the Netherlands and reaches Rotterdam, from where it turns south and reaches Venice, Italy, where it meets Originates from the Marine Silk Route. Second - Talking about the proposed Maritime Silk Road is located in Quanzhou of Fujian province of China. It starts from and touches three important cities in China, Guangzhou, Beihai, and Hankou. Then to the south, The Malacca Straits turn around and the Maritime Silk Road from Kuala Lumpur reaches the Indian city of Kolkata. And then passing through the Indian Ocean to Nairobi, the capital of Kenya, the Maritime Silk Road horns north from Nairobi turns off Africa and then reaches the Mediterranean in the Red Sea from where it reaches Athens and then passes through there and finally reaches Venice, the Silk Road joins the Economic Belt. China-Pakistan Economic Corridor (CPEC), an important part of the One Belt One Road, is a major cause of concern for India. China-Pakistan Economic Corridor was formally announced in November 2014. The cost for this is about \$ 45 billion and China will bear the entire cost. Under this, the main objective of China is Such a road and rail network to be built in Pakistan, which can help China to deliver goods to the Arabian Sea, For this, we have connected our country's Kasugai to Pakistan's Rawalpindi by a highway called Karakoram Highway. Is. After this Rawalpindi is being connected to Karachi and Lahore. In this way, China reached Pakistan's Gwadar port clearing the way for. This will ease China's access to the Indian Ocean and strengthen its commercial and strategic position in the region from the Gwadar Port, which is close to India's major ports and the Strait of Hormuz (from where the main trade of the Persian Gulf is located very close and in the middle. Presently China has access to Africa for this, a distance of about 12000 kilometers has to be covered. Which was reduced to 3000 km due to CPEC will go China has now spread all over North India through CPEC. Pakistani border adjacent to China Rajasthan But a large number of Chinese soldiers have been deployed so that India can be monitored. India's biggest opposition to CPEC The reason for doing this is that the Karakoram Highway to be built under it is under Pak-occupied Jammu-Kashmir and Aksai Will pass through China which is legally part of India. It is a challenge to Indian sovereignty and integrity

Establish Supremacy in the Indian Ocean



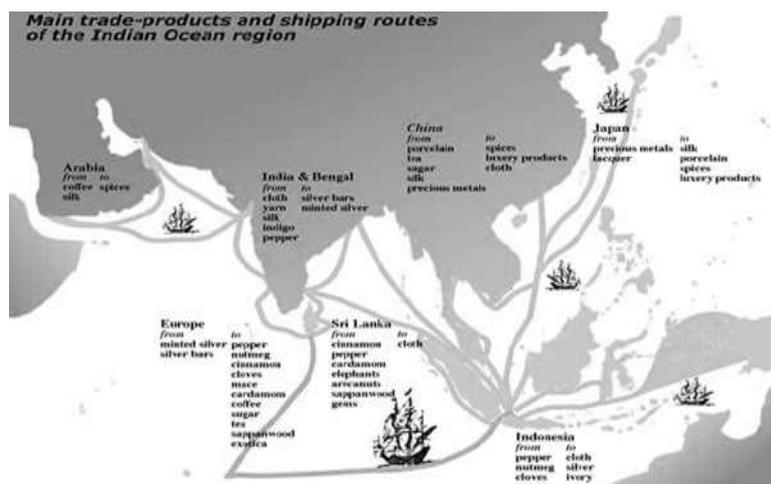
China's growing influence Actually, China's interest in the Indian Ocean region is old. Interest in this area of China in the Southern Song in the 12th–13th centuries ran high during their reign. Between 1405 and 1431 AD, the seventh military action was taken by China in the maritime region to establish dominance in this region. But the Chinese Navy has been in the Indian Ocean for a long time. Unable to maintain its pressure, the Chinese Navy returned to the Pacific Ocean (China Sea). The Navy is expanding. China's defense is three

times more than that of India and it is the second largest budget in the world after America. China is in second place. At present, India has missiles with a range of 5000 to 8000 km, which India has deployed in Tibet as a target. At this time, China's real intention is to establish supremacy in the Indian Ocean and to give a new direction to the rate of its economic development so that it can establish itself as an economic superpower. China has occupied a vast territory from East Africa to the Chinese islands of Hainan. Establishing their bases, these bases are being built as ports, logistics centers, surveillance centers, and military bases. These Chinese bases are very close to India's borders, thereby limiting India's natural edge in the Indian Ocean.

In 2005, American scholar Bruce Allen Hamilton described this policy of encircling India as the pearl of China. The garland was named Aijatapadah VI Mantra. In 2005, the US Department of Defense referred to Asia as the 'future of energy'. T of an intelligence report there is a garland of pearls. This report from the Pentagon has given a detailed description of the string of pearls being prepared by China in the sea. The plan is that China has also prepared the Hambantota port in Sri Lanka located on the southern tip of India. A Chinese submarine has been sighted at this port. It is clear from this that even if China says that it will completely close the ports in other countries. Preparing from a commercial point of view, but the presence of these submarines has made it clear that these ports can also be converted into military ports if needed. China Pakistan Gwadar Port The construction of this port is very important from an economic and strategic point of view.

To the south, including India, the security concern of Asian countries is bound to increase as this port is only 460 km away from India and is adjacent to Iran, and from here all merchant ships coming out of the Strait of Hormuz can be monitored. State-of-the-art ships equipped with nuclear submarines and missiles are being deployed in the port from the Chinese side. If Pakistan, with its nefarious intention, facilitates China to build its sea base at Gwadar sea base, it is undoubtedly a matter of serious concern for Indian security penetration, similarly, China is developing a port in Maldives. And expanding its reach in the Maldives. He also influenced the internal politics there. They have done and destabilized the stable politics there. Along with encircling India's neighborhood in the Indian Ocean, China is also strengthening its position in West Asia and East African countries. In the past, the Indian Ocean naval base has also been built in Seychelles, a small island established to protect its ships from pirates, but it is part of China's string of pearls, which runs from China to Sudan. Is being built till the port of

Now India is also laying siege to China in the Indian Ocean from Churro



Talking about Jatpadah Vichimantse in the context of India, China has established its bases around India and is strengthening it further. The Burmese port of Sited is being prepared, not far from Calcutta. Also, not only an air pump and military base have been built on Coco Island, Myanmar in the Strait of Malacca, but an entire unit for collecting electronic intelligence has also been set up here. It is only 45 kilometers away from Coco Island Andaman and Nicobar. Is. From where the activities of the Indian Navy are monitored. All the missile tests and satellite launches from the India-China base are strategically important as the work is done on the east coast. India's neighbor China has built a container port for itself at Bangladesh's Chittagong port. This port is being modernized by China. Its purpose is to connect the port to China's western region (Yunnan) by rail and road.

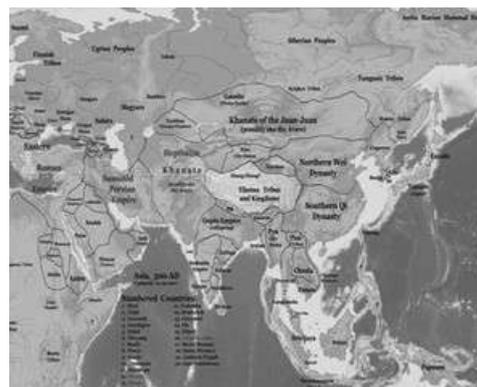
India's Malabar Naval Exercise



Strategically and diplomatically very important. 1992 between India and America This exercise is going on since. In the year 2015, Japan also started participating in this exercise regularly. Japan had also participated in a joint military exercise once in the year 2007, but due to opposition from China, it was postponed for a few years. Till now did not participate in this exercise. 10 to 17 after increasing tension between India and China on the Sikkim border Till July, India, Japan, and America practiced war, which China considers against itself. Other than this India is conducting bilateral naval exercises with Singapore, Indonesia, and other East Asian countries to strengthen its situation has strengthened.

Asia Africa Growth Corridor

The Belt and Road Initiative: Six Economic Corridors Spanning Asia, Europe and Africa



Asia Africa Growth Corridor – (AAGC) between the Governments of India and Japan There is a quality economic cooperation and development agreement. The main approach of the AAGC project is to trace the ancient sea routes. Rediscovering India and South Asia, the new routes connecting the African continent with the countries of South East Asia Created sea corridors. Under AAGC, Africa's Djibouti will be connected to Gujarat's Jamnagar and Kolkata will be connected to Sited Port of Myanmar. In this way, India is in the middle of the Asia-Africa Growth Corridor. The middle will be located. India's special position in the Indian Ocean will give it significant advantages as it is closer to African countries. Simultaneously, it will be able to establish direct access to the markets of South East Asian countries. Thus it is China's One Belt One Will prove to be an alternative to the road. Cahaba port from Iran: By compromising, India has given a befitting reply to Pakistan and China. This is India's strategy And it is very important from the point of view of the business. Cahaba Port is located in the Sistan-Baluchistan provinces of Iran. of Oman, This Bay of Bandar connects the southern sea coast of Iran with the western sea coast of India. In this agreement, India, Iran, and Afghanistan are included. This port has multipurpose importance from India's point of view. of India Access will be done to Afghanistan and Central Asia through this port. From Pakistan to go here now Have to go through. Thus it will be an alternative to Pakistan. Cahaba Port is near the Strait of Hormuz. Go that is the main way of trade from the Persian Gulf. Along with this, it is only 72 kilometers from Gwadar port. Is at a distance of. Through Gwadar port, China was gaining its edge in India and the Indian Ocean. Whose Chabahar port is proving to be an alternative?

Sagarmala Project



The project is also a major part of Indian maritime policy. Announcement of Sagarmala Project 15 In August 2003, the then Prime Minister Atal Bihari Vajpayee did this project to connect all the ports of the country. Related to adding in. It was called Sagarmala because all the major and non-major cities of the country are covered under this project. Major ports have to be equipped with new technology and promote sea trade. Modi government again from 2014 Speed has been shown on the project According to Prime Minister Modi this project will not only develop the port but also Development will also be ensured through the port. In this, all the ports will be connected through road projects, rail projects, and airports. Will be linked to the project It is estimated that if everything goes according to plan, then the government from Sager Mala There will be an average savings of Rs 40,000 crore annually. Apart from this, this project is also important from a strategic and strategic point of view, because China's reach has become very close through the neighboring countries of India, the alternative of which is it is being seen as many defense experts believe that India has devised a new strategy to challenge China's String of Pearls strategy.

Necklace of Diamonds



They have made a necklace which they name Necklace of Diamonds. But there is no such declared policy from the Government of India. Is. Yes, the Government of India is trying to strengthen its commercial and strategic position in the Indian Ocean. Due to this, India is developing various commercial and strategic ports. Which he can use. In Indonesia, Salang Port is the main one which is close to the Strait of Malacca and through this port, the main entrance to the Indian Ocean At the door which is very important through the business approach can gain its edge. Singapore's Changi is also setting up its naval base at the port. The main route to the South China Sea passes through this port. Passes. It is very important strategically, apart from this, the use of Oman's Dump Port is also now India's. Which is strategically very important. Even though India already has access to Cahaba port in Iran It's done. These two ports can prove to be very important for India because this port is part of the Hormuz Water Treaty. Very near. This strait connects the Indian Ocean and the Persian Gulf. All mineral oils of the Persian Gulf This is the only trade route for the trade of. Along with this, it is also important for India because here with this, India can counter China's Gwadar Port. The establishment

of a naval base at Epsom Island with Seychelles India has agreed about. A naval base in Empson Island, China is being considered as India's answer, India This decision will increase the strategic power in the Indian Ocean as China has established its naval base in Djibouti in the Indian Ocean itself.

Conclusion



The rising global status of China has changed its thinking about world politics. China from its coastal area coming out introduced its aggressive policy in the Indian Ocean region. through the string of Pearl's policy Not only has it strengthened its strategic position on the main trade routes and choke points of the Indian Ocean, but The main coastal countries of the Indian Ocean, limiting India's natural advantage, have access to the ports of its main neighboring countries. We have established our strategic bases in India, which is proving to be a threat to India's security. In addition to CPEC India's sovereignty is being challenged through (China-Pakistan Economic Corridor) India is facing these challenges through various strategies like India with US and Japan Malabar is doing military exercises together. Quadrilateral Security Dialogue (FNC) countries India, America, Australia, and Japan It is a group of countries whose objective is to protect the interests of democratic countries in the Indo-Pacific region and to respond to global challenges. Have to face. Quad to ensure an independent free and prosperous Indo-Pacific region based on international laws Committed to. China opposes the Quad considering it as an organization set up against it. Apart from this, through projects like the Sagarmala Project, and Necklace of Diamonds, India is strengthening nine military bases. is providing so that it can counterbalance the challenges posed by China. Although India and China are mutual rivals in the Indian Ocean region, there is mutual opposition between the two on many issues, but both are two important emerging powers of Asia, and both are developing countries, in the Indian Ocean. There is immense potential for. If both together explore the possibilities of development, the result would be far better. This will establish peace, stability, free movement facility, and prosperity in the Indo-Pacific region.

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A Study on Contemporary Status of Digital Transactions in India

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Abstract

In the present era, the Indian government has been carrying out various initiatives for the promotion of digital payments in the nation through its flagship program, " Digital India". The main aim of this program is to ensure transformation of the country in a technologically liberated society. With the development of ICT, the modern methods of payments have become easy which can be easily done within a very less time. The emergence of smartphones and access to internet made people's lives easier which also helps to move forward in the way of digitalization. This not only enhances trade and commerce but also provides convenience and prompt payment options. In this paper, an attempt has been made to study the present status of digital transactions and to ascertain the contribution of different modes of digital payment system in India. In this study, secondary data sources have been used. The findings of the study indicates that digital transactions in India are increasing steadily. The promoters of growth of digital payments includes Unified Payments Interface (UPI), Credit cards and mobile banking.

Keywords

Digital transactions, digital payment modes, E-wallets, UPI, debit cards, credit cards, cashless economy.

Reference to this paper should be made as follows:

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Prof. S.K. Batra,
Prof. Virendra Kumar
Gupta**

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Introduction

Digital Transactions refers to the monetary transactions done in digital modes without the use of cash. This means that both the payer and the payee exchange money electronically. The government of India has taken a number of steps to support and promote digital payments. As part of the “Digital India” initiative, the government aims to create a “digitally empowered” economy that is “Faceless, Paperless, and Cashless” (Rastogi & Damle, 2020.)

The actions taken by the government demonstrate its dedication to a “Faceless, Paperless, Cashless” economic system. Digital payments can be made in a variety of ways. Digital payments can be accepted at both online and physical sites. By 2023, 66.6 billion transactions totalling \$270.7 billion in India are expected to shift from cash to cards and digital payments.

Methods of Digital Payment Systems

The following digital payment solutions are now available in India as a result of the adoption of Cashless India. Some strategies have been in use for over 10 years, while others are quite new.

1. **Bank Cards:** As an alternative to cash, people in India, regularly utilise debit/credit cards, prepaid cards, and gift cards or banking cards. Cards are preferred because of multiple reasons, including, but not limited to, convenience, portability, safety, and security. This is the only mode of digital payment that is popular in online transactions and physical transactions alike.
1. **Unstructured Supplementary Service Data (USSD):** USSD was introduced to those sectors of India’s population who did not have access to dependable banking and internet services. USSD enables mobile banking transactions to be conducted without the requirement for an internet connection by dialling *99# on any required feature phone.
2. **AEPS, or the Aadhaar Enabled Payment System:** AEPS is a digital payment paradigm led by banks. It was developed to take advantage of Aadhaar’s presence and reach. Customers can transfer money between two Aadhaar-linked bank accounts using their Aadhaar-linked accounts under this system. According to NPCI data as of February 2020, AEPS had surpassed 205 million.
3. **Unified Payments Interface (UPI):** UPI is a payment mechanism that merges numerous bank accounts into a single application to make it simple to transfer money between any two parties. PI is significantly more defined and standardized across banks than NEFT, RTGS, and IMPS. With just a few clicks, you can start a bank transfer using UPI from any location. The advantage of using UPI is that you can make payments directly from your bank account without having to enter your card or bank information. More than 2 billion transactions were made using this method in 2022, making it one of the most widely used digital payment methods.
4. **Mobile Wallets:** As the name indicates, mobile wallets are a sort of wallet in which one may carry currency but in a digital version. Through these wallets, bank accounts or credit cards of the customers are connected so that they can make frequent online payments safely. Adding funds to a mobile wallet and then transferring funds using that balance is another way to use wallets. A large number of banks have introduced their wallets at present. Famous private companies have also made their presence known in the mobile wallet market. Paytm, Freecharge, Mobikwik, mRuppee, Vodafone M-Pesa, Airtel Money, Jio Money, SBI Buddy, Vodafone M-Pesa, Axis Bank Lime, ICICI Pockets, and others are some examples of widely used ones.
5. **Internet Banking:** The practice of carrying out transactions and other banking functions via mobile devices is known as mobile banking. This is typically done through the bank’s mobile app. Most banks now offer mobile banking apps that can be used on computers, as well as handheld devices like smartphones and tablets. Due to its simplicity, speed, and convenience, mobile banking is regarded as the banking industry of the future. Mobile banking apps offer a single platform for all digital payment methods, including IMPS, NEFT, RTGS, IMPS, investments, bank statements, bill payments, etc. Banks themselves encourage customers to switch to digital because it streamlines their own operations.

Review of the Literature

The accompanying past studies were explored as under:

Singh (2017) in their study evidenced how demonetization contributed to the rise of digital wallets and payments in India. People found it convenient to use the internet as a substitute for cash because of the rapid growth in internet usage and the rise in smartphone adoption. In this study, he also made note of the competition that various digital wallet companies were facing in order to enter and grow in the Indian market, which offered them the best chance to establish their businesses. It was also predicted that India would eventually transition to a cashless society, and that as a result of digitalization, people would undoubtedly start using digital methods of payment.

Baghla A. (2018) in their study, identified the trends for India's adoption of the digital payment system. The paper also discusses how people began using digital platforms for transactions after demonetization. Further discussion is given regarding the government initiative to make our economy cashless as well as how consumers will adopt such a system. To gather information and determine the future of India's digital payment system, a structured questionnaire was used.

Pandey and Rathore (2018) throughout their study covered the effects of digital payment systems. It was crucial that people accept the modern form of payment because of modernization and globalization. The study is based on secondary data, a variety of sources, including government and past-paper literature. To determine the impact and level of consumer adoption of digital payments, all collected data was analyzed.

Pushpa S. Abbigeri and Rajeshwari M. Shettar (2018) in their study, discussed how the Digital India flagship program encouraged a significant number of people to begin using digital wallets. People began using these wallets because there were numerous cash back offers and coupons available. Numerous mobile wallet companies entered India following the launch of the digital India flagship program, and use of NEFT and UPI also increased. The government's and RBI's initiative were well received by the public due to the use of these strategies.

Shivathanu B. (2019) throughout their study on the adoption of digital payment systems during the demonetization period, placed special emphasis on how the public used or embraced digital payment systems. It was founded on a conceptual framework with a 766-person sample size. The data analysis suggested that resistance to innovation and behavioral intentions affected actual usage.

Objectives of the Study

The objectives of the present study are:

- To study the present status of Digital Transactions in India.
- To identify contribution of various modes of digital payments in our country.

Research Methodology

The current study is descriptive in nature since it comprises facts and numbers. The study is based on secondary data. Secondary data was gathered from different periodicals, magazines, and bulletins, including the RBI Report. The data in the study has been taken for past five years and analysed through MS Excel and SPSS. The tools used in data analysis were Graphical Representation, Percentage and Frequency Analysis.

Data Analysis and Interpretation

There has been gradual increase in payments through digital modes. This is evident from the rising Digital Payments Index (DPI). The Reserve Bank of India assess DPI two times in a year. First in March and then in September. It depicts the extent of digital transactions in the country over different periods of time. It is comprised of the five factors listed below:

- facilitators of payment
- Payment performance,
- customer centricity

- payment infrastructure supply-side variables
- demand-side factors
- payment infrastructure

These are all important considerations. Also, numerous other parameters are used to calculate the DPI. The growth of digital payments over the previous five years in the nation is depicted in the graph:

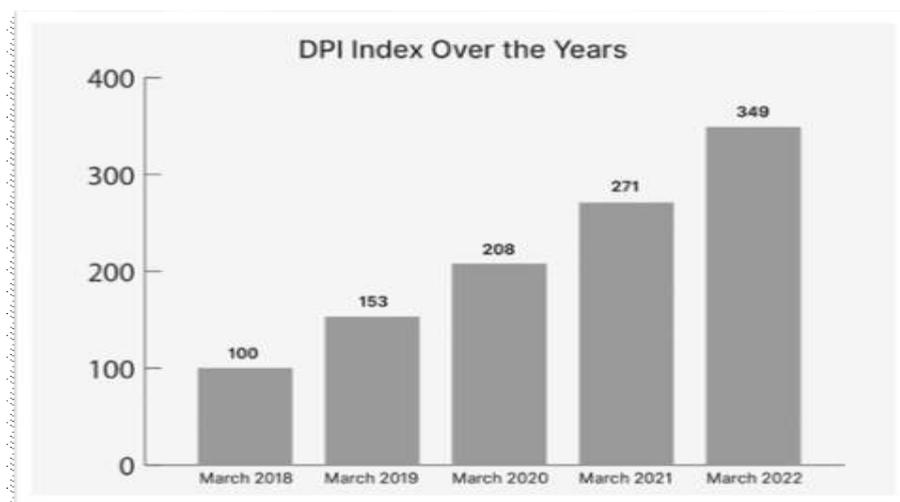


Fig. 1 Source: RBI website

Interpretation: In the Fig 1. Shown above, it can be seen that India's DPI in March 2018 was 100, which then increased to 153 in the year 2019, and 208 in 2020. It is showing increasing trends and stood up to 271 in March 2021 and ultimately it comes to 349 in the year 2022. During the past five years, there was an increase of 37 percent approximately in digital payment index and this is one of the world's quickest rates in terms of growth.

Unified Payments Interface (UPI)- The Primary Accelerator:

UPI, a particular, real-time, domestic, mobile-enabled system, has accelerated the adoption of digital payments. The graph below summarises this year's UPI transaction volumes:

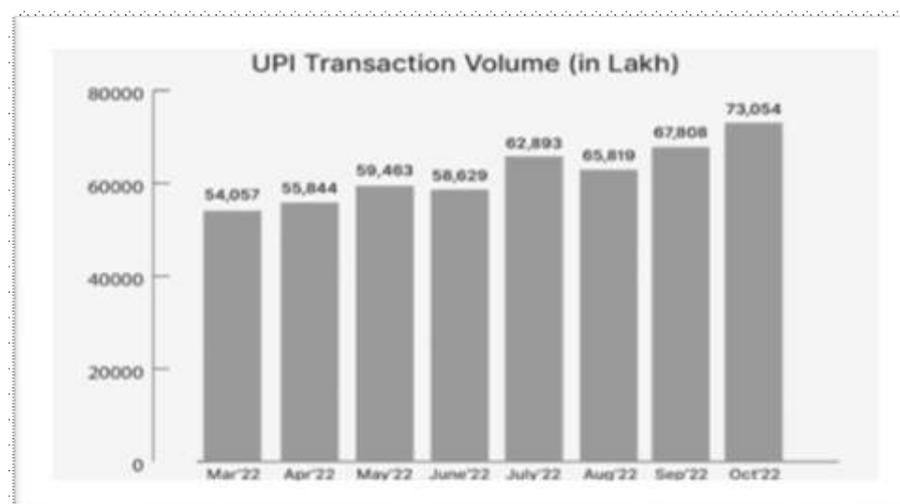


Fig 2. Source: RBI website

Interpretation: As per the Fig 2. Shown above, the current state of UPI transaction volume has been depicted. It shows that in the year 2022, in the month of March, UPI Transaction volume was 54,057 Lakhs which rose to 55,844 Lakhs in the next month then in October it stood at 73,054 Lakhs showing a high growth in the short span of time. The number of banks who participate in these transactions was increased to 314 in March and it stood to 365 in the month of October 2022. Furthermore, in March, the RBI released UPI for

feature phones, which has the potential to reach 400 million rural customers. According to the most current NPCI data, the number of UPI transactions rose by 35% between March 2022 and October 2022.

Credit Card Payments

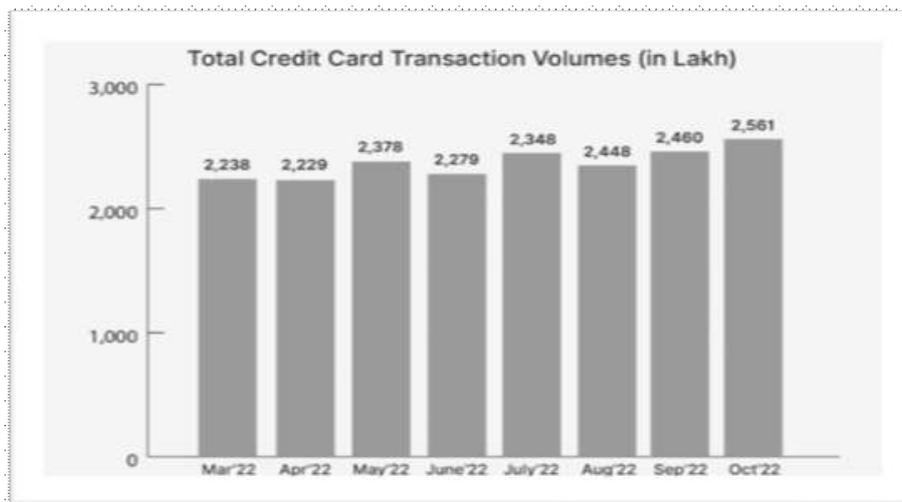


Fig 3. Source: RBI website

Interpretation: In the figure 3. shown above, the total credit cards transaction volume is shown. It is evident that the overall number of credit card transactions risen up by 19% yearly to 2,238 lakhs in March 2022. Over the corresponding time span, there was a growth in transaction values by 48%. As per the most current data available at Reserve Bank of India website, the number of credit card transactions climbed by 14% between March 2022 and October 2022, hitting 2,561 lakhs. Although, values of transactions hiked by 21% in that period of time.

Debit Card Transactions

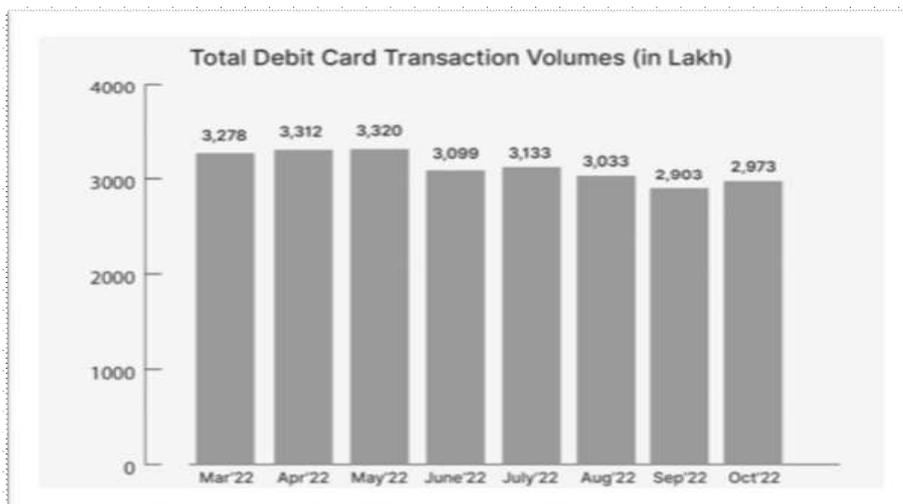


Fig 4. Source: RBI website

Interpretation: In the figure 4. , the total debit card transactions volumes are shown above. In March 2022, there were 3,278 lakh debit card transactions, a 13% decrease annually. During that period, transaction values declined by 5%. According to the most current RBI data, there was a fall by 9% to 2,973 lakhs in the month of October from March in the year 2022. Nevertheless, values of transactions rose up by 5% in that time period.

Digital Wallet-based Transactions

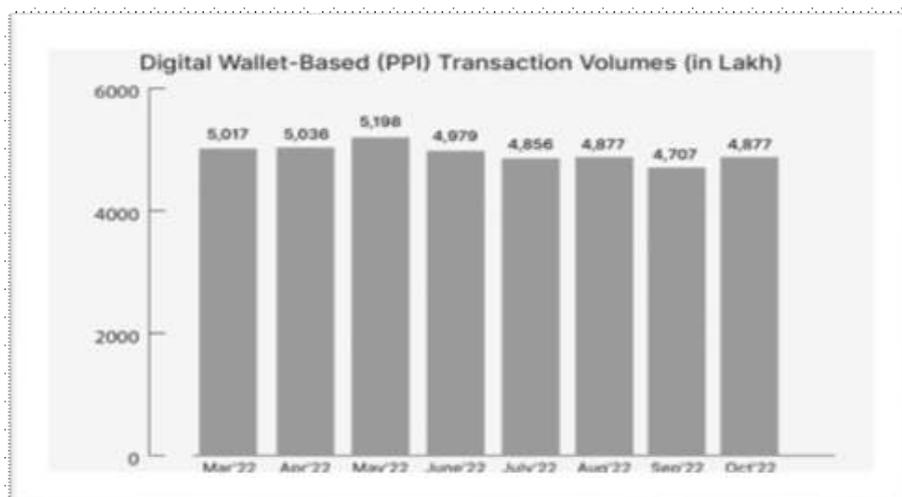


Fig 5. Source: RBI website

Interpretation: From the figure 5. Shown above, it can be depicted that there was an increase in the transactions based on digital wallets. During the month of March 2022, the volume of transactions based on digital wallets increased by 20% yearly to 5017 lakhs. Also, in that particular time frame, value of transactions based on digital wallets also expand by 35%. As per the most recent RBI data, the volume of digital wallet transactions declined by 3% and stood to 4,877 lakhs between the month of March and October. Also, in that time period, there was a decline in values of transactions of 8% approximately.

Cash withdrawals at Automated Teller Machines (ATM's)

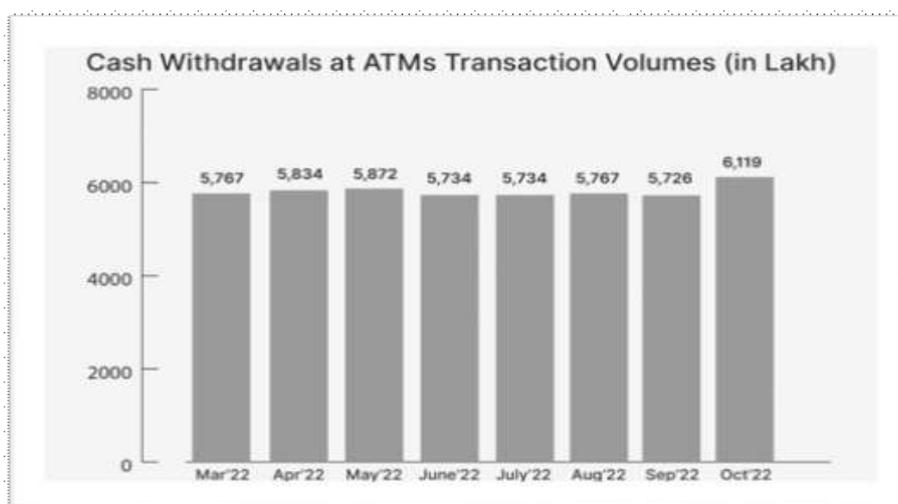


Fig 6. Source: RBI website

Interpretation: The figure 6. shown above states that Cash withdrawals at ATMs grew by 6% from March 2022 to 6,119 lakh transactions in October 2022. In that time cycle, the transaction value of transactions of cash withdrawals from Automated Teller Machines risen up by 4%. It is to be noted that the primary motivators for ATM withdrawals are Debit cards. It has been shown that there was 99.47% of withdrawals of cash in March and 99.45% in October, respectively. Also, Credit cards accounted for only 0.12% of all withdrawals made between March and October 2022. Prepaid cards were utilised for 0.40% of cash withdrawals in of the month of March, but not at all in October 2022.

Contribution of Various Digital Payment Modes

An overview of the contributions made by various payment methods to the total amount of digital payments made in the year 2022 is shown below as:

Table 1. Source: RBI website

Source of Payment	Digital Wallet	UPI	Debit Card	Credit Card	Others	Total
Mar 2022	6.28%	67.81%	4.12%	2.81%	18.98%	100%
Apr 2022	6.28%	69.68%	4.13%	2.77%	17.14%	100%
May 2022	6.06%	69.21%	3.86%	2.77%	18.10%	100%
Jun 2022	6.00%	70.66%	3.72%	2.76%	16.86%	100%
Jul 2022	5.53%	71.68%	3.57%	2.67%	16.55%	100%
Aug 2022	5.37%	72.67%	3.35%	2.68%	16.15%	100%
Sep 2022	5.09%	73.36%	3.15%	2.66%	15.74%	100%
Oct 2022	4.92%	73.85	3.00%	2.59%	15.64%	100%

According to the table 1. depicted above, In October 2022, UPI's proportion of all digital payments boosted up by 9% in contrast with March 2022. Conversely, credit cards, debit cards, and digital wallets' part has declined in that fiscal year. Credit cards' proportion of total digital payments has fallen by 8%, in addition to debit cards' which has fallen by 27%, and digital wallets' part has fallen by 22%. Others include, Prepaid Payment Instrument cards, instruments based on paper, debit or credit transfers, and other digital payment mechanisms have lost 18% of their market share (according to the RBI Report 2022).

Conclusion

Digital payments not only assist individuals in sending and receiving money, but they also perform multiple functions, such as providing reminders regarding the due dates of any kind of payments that need to be made, offering various offers to the user, and it saves a great deal of time, according to the government of India's initiative to create a digital India. This is one of the key factors for making a digital India, and as a result of the rise in smartphone sales and the availability of internet at a high speed and at an affordable price as is also time saving. The use of digital payment systems will increase further in the near future, and the digital India mission will undoubtedly be a great success. The key findings of the study are that the digital transactions in India are growing continuously. There is a significant contribution of various digital transaction modes including UPI the key accelerator followed by credit cards, debit cards and mobile wallets. This was also stated in a study by Rastogi & Damle, 2020. Our reliance on cash has significantly decreased with the emergence of many digital payments option, first as a result of demonetization and then as a result of COVID-19 and India's push for cashless transactions. These methods offer additional protection, cost savings, and adaptability in addition to being straightforward and user-friendly.

The Reserve Bank continued its efforts to build cutting-edge payment and settlement systems in the country for a society that uses less cash, with a focus on improving efficiency, customer convenience, outreach, and payment system safety and security. (RBI Report 2022).

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Vibrant Role of Spices in Order to Cure Disease by Chitra Banerjee Divakaruni's the Mistress of Spices

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Abstract

India's rich cultural legacy is renowned for its myths, magic, and enduring traditions. However, as its people seek out new lives in far-off places like America and Europe, what becomes of the heritage they leave behind? In Chitra Banerjee's acclaimed novel, "The Mistress of Spices," spices take center stage as vibrant characters that are not only used for cooking but also for healing the ailments of immigrants in America. Certain spices denote a specific destiny of people and Tilo, Chitra Banerjee, as a diasporic writer, draws upon her personal experiences to create a unique style of storytelling that encompasses various genres such as realistic fiction, fantasy, myths, and magical realism. Her protagonist possesses the remarkable ability to communicate with spices, adding an element of mysticism to her work.

Keywords

Magical Realism, Diasporic, Enduring Traditions, Immigrants, Realism.

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**Himanshi Satyawali,
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Introduction

The Indo-American woman writer Chitra Banerjee has given metaphorical representation to Indian Spices in order to show ethereality beyond science. Symbolical spices or flat characters are shown in a vibrant way. They can have words with Tilo, Tilottama, The Protagonist or Mistress of Spices or owner of spice store symbolizes Til, Sesame Seeds, Spice of Nourishment, Goddess of Power, Mysticism and Knowledge. She has multiple qualities as she says in the beginning.

“I am a Mistress of Spices.

I know their origins, and what their color signify, and their smells. Their heat run in my blood. From Amchur to Zafran, they bow to my command, But the Spices of true power are from my birthland, land of ardent poetry, aquamarine feathers. Sunset Skies brilliant as blood” .

Tilo’s present life stands in stark contrast to her childhood as Nayantara, also known as the “Star of the Eye,” who grew up in poverty and lived on the dusty roads. Despite her humble beginnings, Nayantara became famous for her unique gift of foresight, which allowed her to see into the future and predict forthcoming troubles. Unfortunately, her newfound fame also attracted the notice of pirates, who became aware of her mystical abilities and eventually murdered her parents. As a result, her once-prized name became a curse that haunted her for years to come. “I Nayantara, who had long since forgotten the other meaning of my name: Flower that grows by the dust Road. Who did not know then that this would be my name for only a little time more. Meanwhile the travelling bauls sang my praises, gold smiths impressed by likeness of medallions that were worn by thousands of luck, and merchant sailors carried tales of my power across the harnessed seas to every land. That is how the Pirates learned of me.”.

Chitra Banerjee takes us into a separate world of Culinary Genre with a literary-sensory explosion of color, fragrance and touch of exotic spices which is called Oakland, California. We can compare this novel with ‘Tiffin’ by Sonal Ved and Preethi Nair’s ‘Hundred Shades of White.’ Tilo takes care of each customer by learning their heart’s desire, complications, problems, and rising fears. The Spices always act according to Tilo’s personal choices like foreign bodies. Spices are symbolized just her companions warn her emotionally and ethically. As she was taught by her first mother that the spices will be source of her companion, parents, and good luck, but she is bound with an ancient set of rules that if she steps out of shop and will be in romance with male must be punished by the spices. The author of the novel portrays the spices as having anthropomorphic qualities and highlights their ability to cure various diseases in different chapters. Throughout the book, the spices are personified by the author, giving them a unique voice and personality. The moment when the protagonist holds a spice in her hand, it speaks to her with a voice that is reminiscent of an evening, or the start of the world itself. The first spice introduced in the novel is Turmeric, which is given a particular character and job in the story. It is utilized for restorative purposes, to delete flaws and kinks, suck away age and fat yet each flavor has a day extraordinary to it. For Turmeric it is Sunday. Turmeric, an auspicious spice or Halud and called Haldi symbolizes yellow color of daybreak and conch-shell sound. It is a preserver that keeps food safe in a land of hunger used for luck to newly born, sprinkled over coconuts at pujas and the brides use in their haldi ceremony.

“I am Turmeric who rose out of ocean of milk when the Devas and Asures Churned for the treasures of the Universe. I am Turmeric who came after the poison and before the nectar and thus lie in between. You are Turmeric, Shield for Heart’s Sorrow, anointment for death, hope for rebirth”.

In the novel, Turmeric reveals to Tilo the secret power of healing, describing itself as a shield against heartache, an ointment for death, and a source of hope for rebirth. Using spices as characters, the author sheds light on the concept of feminism. For example, one of Tilo’s customers, Lalita, wants to lead an independent life but is held back by her husband, Ahuja. This storyline highlights the struggles faced by women in patriarchal societies and how they are often denied the freedom to pursue their own dreams and aspirations. His words were shattering like “Aren’t I man enough I man enough Man enough.” Tilo cures her problem by giving Haldi with some healing words. It will help their rebuilding the relation.

Chitra Banerjee here tries to beautify the novel by Dry Chili, Spice of Danger, the most potent spice with blister red skin Chilli, spice of red. Thursday called day of Reckoning. Daughter’s uses it to prevent from

negative vibes but easy to burn in a flame, it is difficult to put it out. The writer takes example from the Ramayana and says that These lines above reflect on the protagonist's attachment to Lanka, the city that was once the enchanted kingdom of the ten-headed demon king, Ravana. Despite the city's eventual destruction, the protagonist remains steadfast in her fondness for it. It is also referencing the spice of red Thursday, which is known as Chili. This spice is associated with the day of reckoning when individuals are prompted to reflect on their existence and shake it inside out. This day is described as a day of suicide and murder, alluding to the idea of self-destruction or transformation.

Overall, it hints at the novel's exploration of themes related to death, rebirth, and the cyclical nature of existence. The next Spice is always available in our kitchen and loaded with numerous health benefits called Cinnamon (DaalChini), Friend-maker presents as warm brown skin called destroyer of enemy and it gives strength to reawake. The specific Spice is given by Tilo to Jagjit the Conqueror of World. Tilo keeps it under his Turban so that he can make his more friends. Tilo gives Dhaniya Jeera powder to the young ladies who hustles in the child on her hip to pickup some Dhaniya powder: The draining is it awful still and it will help on it.

The writer also mentions Fenugreek seeds in the novel, highlighting their unique properties. The seeds are described as hard, pebble-like objects that bloom when exposed to water. In the kitchen, Fenugreek (Methi) has a special place, as it can help reduce the risk of diabetes, improve milk production, flow, and reduce inflammation and pain. In the book, Fenugreek is associated with Tuesday and is given to Ratna, who is suffering from poison in her womb.

The author also includes a famous song about Fenugreek seeds in the novel. According to the story, Methi was first discovered by Shabari, the oldest woman in the world, who used it for medicinal purposes and spread its use throughout the world. This depiction of the spice and its historical origins highlights the importance of traditional remedies and the knowledge passed down through generations.

"I am fresh as river wind to tongue planting desire on a plot turned barren. I Fenugreek who renders the body sweet again ready for loving. I Fenugreek who renders the body sweet again, ready for loving".

Describing the significant of Spices Divakaruni apprised in UCTV interview that Yes, the spices in "The Mistress of Spices" are portrayed as characters with personalities of their own. They are given their own sections in the novel, where they play a significant role in Tilo's story and develop a unique relationship with her. The spices speak to Tilo, expressing their love and anger towards her and helping her navigate her powers as a Mistress of Spices. Through the spices, the novel explores themes of identity, memory, and the interconnectedness of all living beings.

Whenever Tilo tries to break the rule Chilies take revenge to make suffer her customer. Which is unbearable for Tilo. The Spices warn Tilo by non-verbal gesture such as firing Chillies, broken relationship with customer, Jagjit's annoyed behavior, Geeta's rood behavior towards family and eventually Harun's unpredictable accident.

"For a moment I hold their glances and the air around us gross still and heavy. A few Chillies drop to the floor scattering like hard green rain."

Tilo can cure by spices to her customer but for her its not applicable. She wanders aimless, sad, dissatisfied in the store. For each one who comes in the store is special spice that is called

MahaMahamul The Root Flavor to improve fortune to give achievement or pleasure and to turn away sick karma. However, she was bounded with strict rule of Mistress. She was taught by her first mother that Equivalent love to all, specific love to none-and to all whom she has cherished as she shouldn't, disorder comes. The author uses the Pudina Leaves to symbolize childhood and the memories associated with it. The leaves are described as green as wood and evoke a sense of nostalgia for the reader. The spicy and hot taste of the leaves also brings a sense of joy and happiness. The concept of feminism is again highlighted through Geeta, Tilo's customer. Geeta is a pretty and sweet-speaking girl who faces restrictions from her family, particularly her grandfather, when she goes out of the house at midnight. Tilo tries to convince the grandfather to let Geeta be by reminding him of her positive qualities and suggesting ways to bring harmony to the home.

Through these interactions with her customers, Tilo not only dispenses spices but also provides emotional support and guidance, highlighting the role of women as healers and nurturers. The novel shows how traditional knowledge and practices can be used to address modern-day issues and challenges, including gender inequality. Geeta who is India and America all combined as one into another tune, be excusing of an elderly person who clutches his past with all the strength in his faltering hands calling purported American culture but he got more angry and says that

“Girls and Boys are still girls and boys, Ghee and a Lighted Match, put them together soon or late they will catch the power”.

She offers to chill her system with a bottle of Brahmi oil. It first functions miraculously but strangely reverses after Tilo comes into contact with Firangi (the Raven). She constantly hears the Spices' Pull Away warning. Pull Tilo away before you are bonded to the ground, but Tilo gets too near. The next Spice, which is Fennel, day of Wednesday, the day of averages, used by middle-aged people. Fennel, brown as mud and Barle and its leaf moving in fall span, possessing an aroma like changes to come. Tilo offers it too Ahuja's significant other and her better half says that miracles zest which will refresh the expansiveness and help processing and will give a psychological strength for fundamental work. However, her greatest danger comes through a young fellow from America. Although Tilo was aware from all these omens. The person who keeps on wondering in her store and has a strange effect on her. She actually falls in love with him. Many times, she was made being beware by Harun and Grandfather.

“Ladyjaan, you must be more carefull why you let in the store after dark. All kinds of bad people roaming around here neighborhood. A sahib like him. Not one of us. Keep away Tilo.”

She offers kesar for lovely and romantic life, mild coconut to connect the hearts, Garlic for more sexual and Lustrous Power, Brinjal Bharta with coriander for sexual pleasure.

It is worth noting that Ginger, in addition to its healing properties, is also associated with wisdom and awakening in the novel. Tilo also uses other spices, such as Poppy seeds and Kalu Jeera, for their unique properties and to help her customers with their specific needs. The store is closed on Mondays, which is considered a day of silence, and Tilo also uses Mungbean, which is sacred to the moon, on this day. As for Raven, Tilo is conflicted about their relationship because it goes against the rules of being a Mistress of Spices. She ultimately decides to break it off and asks for a day to help him before they part ways. This shows Tilo's growth and development throughout the novel, as she begins to prioritize her responsibilities and her own well-being over her desires. “For the first time admit I am giving myself to Love. Not the worship I offered the old one, not the awe I feel for spices. But Human love, all tangled up, at once giving, demanding, and porting and ardent. It frightens me, The risk of it.”

She encounters Makaradwaj to make her beautiful. Tilo asks him that make me beautiful, Makaradwaj, such beauty as on this earth never was. Beauty a hundred times more than he can imagine. For one night so that his skin will dazzle, his fingertips be branded with it for always. So that never again will he be another woman without remembrance and regret.

But Makaradwaj remains silent because Tilo is going to break the rule. The Zest giggles and cautions her adage that do you want It more than you wanted us on the Island ensembles. The day when you would have hurled yourself off the rock precipices had the main mother said no. She is now trapped between love and power. In between she offers Blackpeper cultivated for its fruits which are usually dries and used for medicine purpose. The Mistress of Spices used it to understand the hidden desire of native American as it has the ability to sweat secrets from you. Tilo gives of this spice to Daksha and informs her to boil it and drink and learn to say “NO.”

Kalojire and Neem Tilo introduced a new spice. They used Neem paste to cleanse the skin and enhance its beauty, while Cummin Seed was used for Harun. Different spices have varying purposes, such as lotus root, which is believed to help with long-lasting love, and Dhania which can sharp vision and purge old guilt when soaked and consumed. Amchur is known for its capacity to mend the taste buds and bring back the adoration for life, while Mahamul is viewed as a root zest that can upgrade one's fortune. Finally, Tulsi, otherwise called

the Basil plant of lowliness, is accepted to fix self image and decrease the craving for power by turning one's contemplations internal and away from experience. Eventually Tilo thinks about all the people and decides to arouse Shampati fire. She leaves a note to Raven that:

Raven forgive me, the note will say, I don't expect you to understand, only to believe that I had no choice. I thank you for all you have given me. Our love never have lasted, It was based on fantasy yours and mine, of what it is to be Indian. To be American, but where I am going. Life or Death, I don't know which I will carry its brief aching, sweetness Forever (The mistress of spices, 248). Tilo has faced some punishment from the Spices for breaking their rules and getting involved with Raven. The loss of her youth and beauty may be a result of this punishment. However, despite her devastation, she still holds onto memories of the people and moments that touched her life while she was the Mistress of Spices. It is possible that this experience will change her forever, not just on a physical level, but on a deeper soul level as well.

As the Spices stopped to tell her, they responded on her appeal. But she is no more Tilo she will know by the name of Maya, Materialistic World. The earthquake that destroyed Oakland can be seen as a metaphor for the internal earthquake that the protagonist goes through. The collapse of the spice shop symbolizes the end of her old life and the beginning of a new one. By freeing herself from the Spice Bazaar and the walls of society, she is able to start a new and create a life for herself that is not bound by societal expectations. The use of magical realism in the story allows the reader to experience the transformation of the protagonist on a deeper level. The spices are personified and have a voice, making them characters in the story. This adds a layer of complexity to the narrative and highlights the power of nature and the importance of respecting it. Overall, The Mistress of Spices is a powerful work of literature that explores themes of identity, transformation, and the power of belief. Banerjee's use of magical realism and her incorporation of ancient knowledge of spices make this novel a unique and unforgettable reading experience. In this novel Chitra Banerjee throws light upon Identity Crises. How Tilo keeps on changing her name according to situation. She has been changing her name from Nayantara as a good daughter then to Bhagwati during her stay with Pirates then to Tilo or Tilottma and eventually Maya to find out her true love. The love defines everyday world of desire, pain, and joy. Maya represents the illusionary power of world. She says:

“For all of them she burnt Tulsi, plant of humility, Curver of ego.”

Chitra Banerjee weaves a creative novel with elements of Magical Realism, Diasporic World, Identity Crises, The relation of Internal with External society. Chitra Banerjee's use of magical realism, combined with the knowledge of spices, creates a unique and captivating story that encourages readers to explore their own imagination and belief in the power of nature. Literature, in general, has the ability to transcend cultural, social, and geographical boundaries and connect people on a universal level. It can inspire readers to reflect on their own lives, beliefs, and values, and encourage them to see the world from different perspectives. Banerjee's "The Mistress of Spices" is a great example of how literature can not only entertain but also educate and enlighten the readers.

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Girl Child Education: NEP 2020

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Abstract

Education is a basic need for achieving human values. In that order Girl child Education also plays important role to develop knowledge and skills from all the aspect such as caste, race, religion, schools and college profession etc. As, we know everyday Girls face barriers in education caused by culture norms and practices, conventional rituals, poor infrastructure etc.

In this way to overcome issues and gender problem the NEP 2020 has brought girls into mainstream through its addressing problems and solutions. As, we had have a need of well concerted and pragmatic approach to resolve it.

Keywords

Pragmatic Education, barriers, Existence, NEP 2020.

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Introduction

“A girl is not a statistic or a piece of property. She is a child who deserves a future”. Women in ancient India were entitled through rites of ‘Upanayana’ means right to study. They could also become the part of Vedas. Unfortunately, later they were separated from it. Woman in the age of Muslim Empire again exploited by male Dominated society. Somehow, flourished in Jainism and Buddhism and in British Era eventually, after independent era in India. Under dependence or in 20th C there has been a kind of genuine progress of education because of universalisation of primary education. Women education went through a better progress due to mainly public awareness. In the year of 1913, British Government forced to prepare NEP for woman and recommended special curriculum of practical utility like art and craft, music etc. But the Educationist of India were dissatisfied with it. They wanted to form a new NEP for their existence.

In 1916 Pandit Madan. M Malviya founded BHU and Sir Syed Ahmed Aligarh Muslim University for girls. Raja Ram Mohan Roy eradicated the Sati Paratha for advocating the Right to Property then I.C.Vidyasagar became another reformer from Bengal. M. Gandhi started Vardha or Basic education 1937 free and mandatory for development of Girl Child Education. All these steps in woman’s liberation movement made their contribution among woman. In result to that the progress of literacy rate raised from 8% to 39% in 1991.

Impotence of Girl Child Education

Women play a vital role in a nation’s development and society. From as a wife to mother, sister, and daughter. No nation can grow by underutilised them. A famous quote proves the importance of Education.

“If you educate a man, you educate an individual. If you educate a woman, you educate a nation”.

To remove uprising problems from society NEP 1986 took initiative Under Rajeev Gandhi Govt. and called for “special emphasis on the removal of disparities and to equalise educational opportunity specially for women”. There is a National programme for Education of Girls at Elementary Level (NPEGEL). There are many benefits of Girl education such as Higher female Literacy rate reduce the child mortality so, education will become a tool to lower crime rate. It will empower marginalized Girls to bring in to mainstream. Education of woman will be able to narrow down of social disparities and inequalities of society Moreover, it will indirectly contribute to one of the goal of sustainable Development of India. Girl child education will help to maintain social, economical and financial boundaries. Empowering girls will prevent violence, poverty less family, child marriage etc.

NEP 2020 in Context to Girl Child Education

The New Education Policy 2020 is a framed work designed by KasturiRangan committee. Its a long time change in education on behalf of Gender equality. NEP 2020 has recommended to setup a Gender Inclusion fund to provide education to Girls. The free education will be provided to remote area girls along with safe and healthy environment. Those live far from school can stay at hostels. Kasturba Gandhi Schools will be more modified and accessed in order to increase GER in education. The quality education will be provided to socially, economically challenged girls. It will be a booster program to be connected with school. For long connectivity to the school environment some activities would be including such as puppet show, regional language, outdoor games, play, story telling etc. The vocational and moral education will be added in primary and secondary classes of the school. The faculties of schools will take care of Girls they will be trained by the system so that girls are being counselled by the teachers. Another important proposal is to emerge the number of women on serving positions of Institutions like Principal, teachers, and wardens including other accountable members. Which will help in dealing or council issues based on equality and safety of the Girls.

The NEP 2020 will ensure the security of school going Girls both inside and outside of campus. The school will have to provide anti harrasment and domination free environment. It is introduced to fillup the space of gender gap among male and females’ literacy rate point of view. NEP will ensure to adopt the technology in learning and teaching assessments. The learning should be based on Holistic, integrated, engaging and most importantly enjoyable approach. The teachers will be trained for new teaching style based on Andragogical and

pedagogical teaching learning practices. According to India's latest education policy which Govt. called a tailored.

“ For the demands of 21st century”. May probably be a bump in the road for girls' education.

Conclusion

To make more strong education system Govt. has taken some initiatives such as Right to Education 2009, National Education policy 2020 with build a good pathway to bring students to schools and ensure girls learning over there. Education Ministry is working and supporting adolescent to develop skills required for innovation, problem solving and leadership. To keep a check on this alarming and deteriorated condition of Girl Child education PM Narendra Modi launched **Beti Bachoo Beti Padao** in 2014. The objective is to improve current sex ratio in society. NEP 2020 has raised a hope in context to Girl Education, introduced changes towards gender gap in male and female so that, the safety and security can be ensured both inside and outside the campus. Moreover, the Anganvadi workers, the local social entrepreneur will be trained to deliver proper counselling to conduct awareness program.

In a nutshell NEP will bring Girls in to the main stream by transforming the education system in the country.

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Recent Changes and Development in View of Cashless Economy: A Theoretical Perspective

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Abstract

All over the world many countries have moved towards cashless or paper less economy through various electronic aids because of its great advantages. Also, under the guidance of our honorable prime minister, government of India with the visionary to transform into Digital Economy is also at a high pace under the moment of 'The digital India Program'. The main ambition and role is to have 'Faceless, Paperless and Cashless' a transparent economy. Covid 19 Pandemic all over the world had also heavily pushed this drive to digitalization and electronic transfers. Here, in this paper the main objective to understand the recent development and changes in view of cashless economy, along with theoretical view, different availability of modern modes, its advantages and challenges faced by them and SWOT analysis post its implementation and to identify the reasons of weakness of cashless economy and how to overcome them with conclusion and suggestions.

Keywords

Cashless economy, issues and challenges, SWOT analysis.

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Introduction

The digital India Program is a flagship program of Government of India with the vision to transform India into digital empowered society and knowledge economy. ‘Faceless, Paperless and Cashless’ is one of professed role of digital India.

In fast moving economy, when monetary currency - notes and coins or either physical form of money are mainly replaced by use of plastic money- credit card, debit card or digital modes of payments via PTM, Google pay, Net banking, RazorPay, Rupay, etc. Such economy is called paperless or cashless economy. Here all the transactions move through electronic channel like NEFT, IMPS, RTGS, etc. in banking sector. Indian government has emphasized with an initiative of Digital India during the process of Demonitisation in November, 2016 and thereafter. There was fast growth of e-payment system in the country. Different types of digital payment modes were launched and were widely used. Also, the impact of pandemic Covid 19, lead to additional fuel in the usage of digital payments and uplift of cashless economy.

Cashless economy is broadly classified into three areas:

- Mobile modes - Modes through different Mobile phone applications
- Plastic money - Debit/Credit cards
- Net banking - Banking accounts – NEFT/RTGS/IMPS with nominal transaction charges.

These cashless economy system payment modes are made easier of this fund transfer through various platforms and applications.

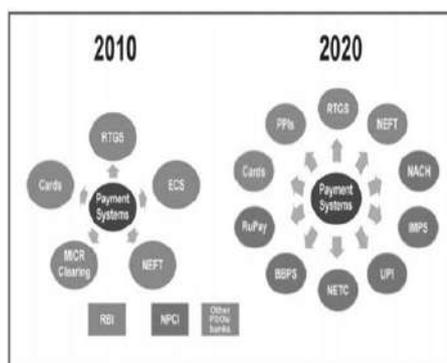
Modern Modes of Digital Payments

There are many digital modes available since past few years. It has been growing tremendously due to digital payment movement pushed after time of demonitisation and pandemic covid 19. Different digital platforms available are:



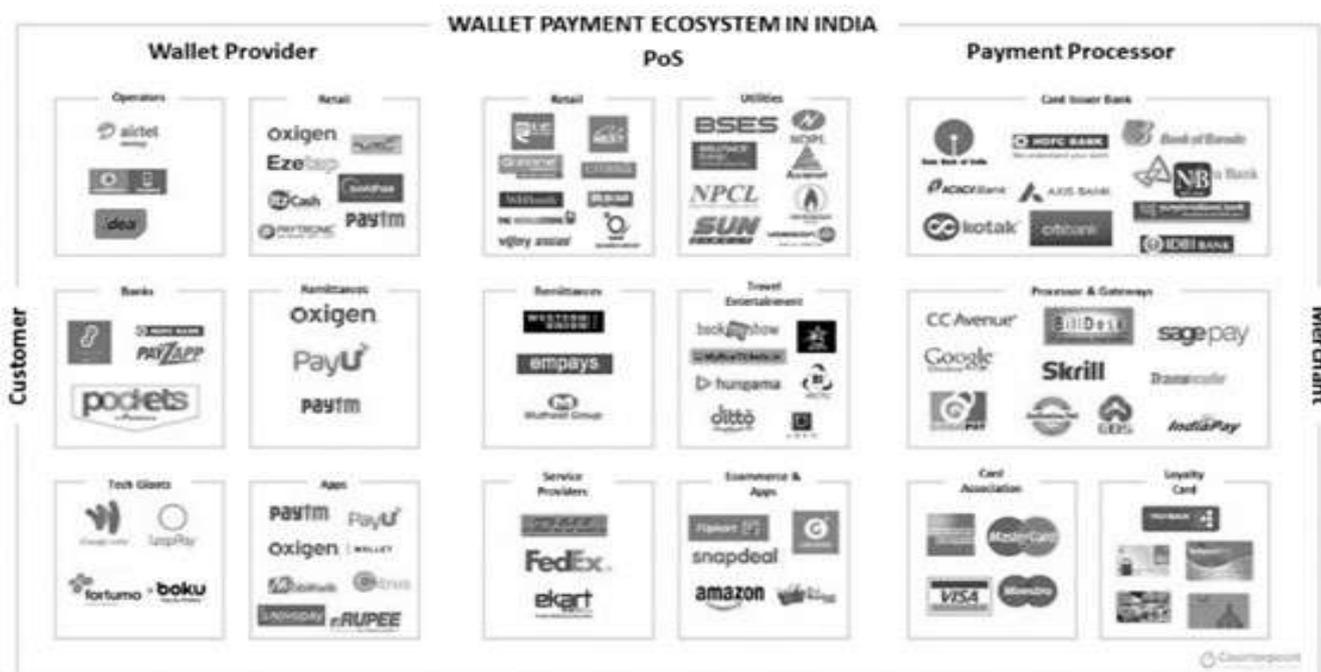
Source: <https://digiteckworlds.wordpress.com/2016/12/13/a-step-towards-digital-india-types-of-digital-or-cashless-payment-mode-available-in-india-digiteck/>

Development in varieties/options of different modes over the year can be seen from following figure learnt from secondary source. This shows how the usage have almost increased to more than double in past ten years.



source: <https://factly.in/review-how-have-the-digital-payment-systems-evolved-in-the-last-decade/>

The following diagram shows various growth of Mobile Payment market in India through various diverse platforms.



Source: <https://www.counterpointresearch.com/growing-mobile-payment-market-in-india-part-i/>

Advantages

Some of the advantages of cashless economy and digital payments are -

- One can have control over false currency circulations in the economy.
- Cash less transactions and digital payment systems brings more transparency and accountability towards economy.
- Helps RBI and economist to improve regulation of money market in more improved manner.
- Reduces issues over carrying hard cash, there storage and safety issues.
- Digitalization will reduce production and usage of paper currency notes.
- Instant fund transfers anywhere and in any currency denomination could be made possible.
- Easy for exchange.

Issues/ Disadvantages

Some of the issues faced are discussed below -

- Digitalization leads to increase in usage of technology and its dependence.
- Lack of acceptability by people who follow traditional method of payments.
- Inadequate awareness and knowledge pertaining to digital payment system.

Review of Literature

Some studies were under taken which were relevant for the study:

Dr. Jain and others (2022) in her study focus on to understand cashless economy concept, methods of cashless transactions, advantages of cashless economy and issues & challenges of cashless economy.

Maddela Shireesha (2022) in her study focuses on the concept of a cashless economy, as well as its benefits and drawbacks, as well as the different types of cashless transactions and found that the government of India’s digital India initiative was a key initiative with the goal of transforming India into a digitally empowered society and knowledge economy.

Nasira and Ibrahim (2022) in the research paper analyze the trends and progress of digital payment for transactions in India and the developments to make India a cashless economy. They also examined whether a

long-promised cashless society would become a reality, or would currency continue to play a critical role in everyday transactions.

Swot Analysis

<p>Strength</p> <ul style="list-style-type: none"> - Help on Artificial intelligence - Multiple payment modes available - On the spot payments - Increased potential market - Usage by young population - Increase in entrepreneurship - Options of financing - Knowledge and its accessibility - Skill manpower - Improved service providence - Highly developed automated machines - Strong CSR 	<p>Weakness</p> <ul style="list-style-type: none"> - Lack of improved infrastructure - Limited resources - Lack of skills - Technical immaturity - Inadequate customer service - High internet required
<p>Opportunities</p> <ul style="list-style-type: none"> - Increase in revenue - Technology-Employment level increased - Increase in transparency, and curb of black money market. - Economic growth - GDP have increased - Growth of Digital economy - Constant development in Research and Development - Increase in Foreign Direct Investment opportunities - Improvement in skills - Development of interpersonal relationships - Attract new customers and new markets - Development of customer relationship culture - Online engagements with brands - Opportunities for new journey and innovations 	<p>Weakness</p> <ul style="list-style-type: none"> - Lack of improved infrastructure - Limited resources - Lack of skills - Technical immaturity - Inadequate customer service - High internet required

Conclusion and Suggestions

From the above, we can learn that though online trading and cashless economy do have widen up usage in current time, though have some challenges and weakness, but it is an need of an hour. As all countries have developed into this digital payment system, India too is not far behind. But still needs to overcome the limiting issues and make online trading more secure and effective. New programs with internet security can be improved. Cyber crime laws should be made more strict and banking transactions can be made more secure.

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Work from Home a New Norm for Start-Ups: Covid-19

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Abstract

The outbreak of COVID-19 pandemic has caused considerable degree of fear, tension, and uncertainty in the lives of people. This has presented unprecedented challenges global economy in general, and businesses especially startups in particular. Many governments were forced to implement lockdown measures to prevent mass transmission; this leading to drastic shift from on-site to digital platform while working from home for smooth functioning of Startup's "business as usual". For startups, survival is the need of an hour; and to ensure greater adaptability and higher productivity for business latest technology adaptation and digitalization is relevant. Thus, the present paper provides an insight into the challenges entrepreneurs face as a consequence of the pandemic. It also provides better understanding of the guidelines to be imbibed by Startup's employees for rapid growth and innovation while working from home during COVID-19.

Keywords

Covid-19, Work from Home, Startups.

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Work from Home a New
Norm for Start-Ups: Covid-
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Introduction

The outbreak of COVID-19 (corona virus) pandemic is expeditiously spreading across the world and it has become a matter of concern inducing a considerable degree of fear, tension, and uncertainty in the population of a country at large and among certain groups in particular, such as old people, adults, children, and people with elemental health conditions. It is significantly impacting global economy in general, and businesses especially startups in particular. As governments were forced to implement lockdown to prevent mass transmission, startups are adjusting to the changing needs of their employees and clients while navigating the technical, financial, and operational challenges. The impact of the COVID-19 is being felt by all startups around the world (Kuckertz et al., 2020). At this time startups must adhere to the principle of being agile, dynamic, and flexible not only to survive this pandemic crisis, but to come out stronger, so that startups can change easily in future. Moreover there has been four times increase in the work from home jobs in 2020 in comparison to 2019 (Bhattacharyya, 2020).

Startups are high energy companies where very close coordination is required by the team members as they work on cutting technologies. COVID-19 forces startups to evaluate their working strategies, keeping human resources as startups priority. The role of technologies, and digital platform has become essential during COVID-19 while working from home for smooth functioning of “business as usual” (Waizenegger et al., 2020). To keep the employees engaged in their respective jobs, founders can embed options to adopt new technologies to keep young workforce engaged, and motivated while keeping productivity high. Startups have been carefully estimating the possible impact of the COVID-19 slump on their future business activities, including designing new work standards, fundraising opportunities, sales forecast, marketing overheads, and providing new learning opportunities for employees, and optimizing capital spending (Singh, 2020).

Startups also have a unique advantage as their majority of workforce is young, tech savvy, adapted, and working in highly fluid environments. This also comes with added responsibility of keeping workforce motivated, productive, and energized, as these qualities have huge impact on odds of startup succeeding. This also has presented startups with opportunity to rethink ways of operating, reimagining business, workforce utilization, expenses optimization, and maintaining the continuity of business operations. Covid-19 may also results in disrupting model of human resources, and majority of workforce working from home permanently becoming a new norm. In scenario like this, the role of human resources is crucial as they have to perform work under unseen circumstances especially in Indian context.

Key Human Resource Challenges Faced by Early Stage Companies/Startups during Covid-19

As startups moves toward uncertainty of Covid-19, managing human resources has become a key challenge. Many startups are struggling in this transition as early age companies typically don't have Business Continuity Plans. Covid-19 has heightened this aspect, and brings to light importance of productive and motivated human resources to front. But there are certain challenges in regard to human resource that are being faced by startups at this time of pandemic. These are as below:

- Keeping employee's productivity, and motivation high.
- Developing a belief system as it involves a lot more effort to get everyone together.
- Maintaining working standards, and support networks.
- Creating virtual engagement technologies.
- Creating employee-centric work policies that ensures smooth business operations.
- Ensuring employees work in collaboration, and instilling trust among the team members.
- Creating flexible leave structure to ensure safety of employees.

Guidelines to Work from Home during Covid-19

Given the surge in Covid-19 cases, and in order to ensure Health and Safety of employees, startups must introduce Work from Home (WFH) option for employees. Guidelines should be imbibed following points:

- When working from home, the employee must abide by the confidentiality clause.

- Human resource manager must ensure to create a work from home plan to ensure business continuity.
- The company's policies detailing the terms and conditions of employment that are in effect at the office must also be followed at the home office.
- The employee should formally commit to upholding the organization's information management, information confidentiality, and information and communication technology security policies with regard to the management and security of the company's owned assets.
- The employee should acknowledge that appropriate measures will be taken to avoid loss, misuse, or theft of tools and data, as well as unauthorised access to corporate systems and information disclosure.
- All employees must have email configured on their phone so that they can be easily reachable.
- In case of work from home, no official meeting should be conducted outside office premises, the objective being no exposure to the public place, and transport etc (World Health Organization, 2020).
- Employees working from home must send their manager weekly progress report, and manager on their part provide proper feedback on their performance.
- Employees should adhere to general office timings as it facilitates better coordination among team members.
- Manger must be proactive in setting up team expectations, work schedules login, and logout hours, review meetings and presentation schedules
- Communication technologies should be leveraged to promote work culture; some suggested communication tools are:
 - o Google Hangouts for video calls, voice chats, voice calls, telecommunicating, teleconferencing. (Bloom et al., 2020)
 - o Google Messenger, Google Spreadsheets / docs, Slack app, Zoom, Adobe Connect etc. (Hern, 2020)
- Communication by team members should be promptly responded so as to avoid project delays.
- All client requests should be acknowledged by employees at earliest time possible. Communications must be through email even though discussions can be verbal.
- The uncertainty caused by the pandemic has been affecting physical, emotional, and mental health of employees. To overcome this, startup founders must communicate with employees to find out about their well-being, and keep motivating them to boost their morale (Arora & Suri, 2020).
- Employees who have personal obligations at home, such as caring for children or the elderly, will be expected to handle these obligations in a way that enables them to successfully fulfill their work obligations.
- Team bonding activities must be conducted which includes online quiz between different office teams, games like know your colleagues, treasure hunts, and so on to reduce the level of stress, and tension (Evelin, 2020).

Leave

- When taking a leave of absence while working from home, the employee must obtain the relevant manager's clearance.
- The process of leave application should remain the same as during the normal working days. Employees can avail CL, SL, and EL as per requirement and with manager's approval (Yadav, 2020).
- Employees should not undertake any outstation travel while at work from home. Any outstation travel during this period should be treated as leave. Employees must keep their manager informed on any domestic/ international travel they may undertake.

Method

To understand the impact of COVID-19 on Human Resources policies of technology driven startups, I have conducted interviews with management team of five different startups working in areas of Artificial

Intelligence (AI), Software product, and Software Services. Every interview was audio-recorded and then transcribed in-language. All interviews lasted from 30 minutes. Following were the key observations:

1. Technology teams where task can be easily subdivided with individual ownership will remain as work from home jobs in near future.
2. High contact roles like marketing, UX designing are likely to be a combination of work from home and in office.
3. Going forward cost to company of various employees would reflect a component pertaining to work from home examples, internet allowance, office setup allowance, metro allowances incase of employees returning back to office.
4. COVID-19 has a positive impact on bottom line of technology startups as the second biggest expense after salaries was office rentals.
5. Above observations are already in line with declaration by leading IT companies like TCS, IBM, INFOSYS etc. promoting large scale work from home (nearly 80 percent of staff work from home) in coming years.

More or less these above changes would be permanent in nature.

Opinion/Suggestions

- Startups must keep employees up to date, and well informed about every development as this result into high level of mental resilience, and productivity during COVID-19 pandemic.
- Continue to acknowledge, recognize, and praise employee's exceptional efforts to boost their morale.
- Startups must maintain clear, consistent, and honest communication with their team members through virtual technologies. Communicate about strategic business plans, and the systems employ for achieving those plans.
- Success of any startup at this time depends on their creative thinking, collaborating work with their employees, and how they tap the opportunities available around them.
- In order to achieve positive long term output, virtual learning programs must be organized by startups for their employees.
- For engaging employees during virtual live sessions, set up meetings in advance.
- Working from home doesn't mean employees should put professional growth on hold. Employees must use this time to learn new skills by enrolling in e-learning courses, and adopt innovative working style to grow professionally in their career.
- To keep employees safe, establish policies, and practices of social distancing.
- Contextualize updates from the World Health Organization (WHO) with specific instructions on how your startup will be adapting recommendations and moving forward.

Summary

COVID-19 is here to stay and this would be a permanent tectonic shift. Nobody knows how long it will last and it is important to be prepared for all scenarios. Considering technology and market is changing every day, it is essential for startups and small-businesses to re-visit business strategies by keeping track of their finances, revenue and cost. Here, startups will have to play a very active role to ensure business continuity plans, and also it may be a good idea to revisit business model to sail smoothly. So, during such testing times, founders will have to adapt to a new set of working patterns to allay risks, and to survive the slowdown caused by the impact of COVID19.

This uncommon occurrence has offered startup business owners the opportunity to learn the most efficient and effective ways to support staff as they adjust to new ways of working and living. Both the entrepreneurs and the employees must have a common vision and believe in the product to maintain morale strong. As part of the shared vision, each team must consider the past, what they have accomplished collectively, and what they can do in the forthcoming future.

In wake of the current situation managers are advised to promote work from home until and unless; employee's physical presence is required in the office. For startups survival is the need of the hour and to ensure business can sustain latest technology adaptation and digitalization is relevant. Digital computing technologies, and work from home are the future, and this is the time for these transformations. COVID can be well avoided by maintaining social distancing, and hence, all employees are strongly recommended to avoid any social gathering and public places.

Going forward more startups will allow work from home, making work from home guidelines suggested in the paper critical.

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Smart City Program in India: It's Key Areas & Challenges

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Abstract

A smart city is an urban area that uses technology and innovation to improve the quality of life for its citizens. The concept of a smart city involves the integration of various technologies, including the Internet of Things (IoT), artificial intelligence (AI), and big data analytics, to create a more efficient, sustainable, and livable environment.

The Smart City Program is a government-led initiative was launched in 2015 with the aim of transforming urban areas into more inclusive and sustainable environments. The smart city approach aims to address the challenges faced by urban areas, such as traffic congestion, air pollution, and inadequate infrastructure, by leveraging technology and data-driven solutions.

Keywords

Smart city, innovation, urban, technologies.

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Introduction

The program focuses on developing smart cities that provide a high quality of life to citizens by improving urban planning and governance, developing smart solutions for urban challenges, improving infrastructure, and encouraging citizen participation. The Smart City Program is being implemented in several countries around the world, including India, China, and the United States.

The Smart City Program has the potential to transform urban areas and improve the quality of life for citizens by providing them with access to better services and infrastructure. However, the program also faces several challenges, including funding, implementation, citizen participation, and sustainability. Addressing these challenges is crucial to the success of the Smart City Program and the creation of livable and sustainable cities for the future.

Smart City Program: Key Areas

The key areas of focus for the Smart City Program in India include:

- 1) **Urban Planning and Governance:** The program aims to improve urban planning and governance by creating a more efficient and responsive system that can meet the needs of the citizens.
- 2) **Smart Solutions:** The program aims to develop smart solutions for urban challenges such as traffic management, waste management, energy efficiency, and water management.
- 3) **Infrastructure Development:** The program aims to improve the infrastructure of cities by developing better transportation systems, public spaces, and affordable housing.
- 4) **Citizen Participation:** The program aims to involve citizens in the decision-making process and encourage their participation in the development of smart cities.

Smart City Program: Challenges

Despite the ambitious goals of the Smart City Program, there are several challenges that need to be addressed. These challenges include:

- A) **Funding:** Financing is one of the biggest challenges when it comes to the Smart City Program in India. The total investment approved under the smart city plans of 100 cities has gone up to Rs. 2.05 lakh crore (\$28 billion), but the actual funding is still a challenge.
- B) **Implementation:** The implementation of smart solutions requires coordination between different government agencies, as well as private sector partners. This can be a challenge due to bureaucratic hurdles and a lack of coordination.
- C) **Citizen Participation:** Despite the aim to involve citizens in the development of smart cities, there is still a lack of awareness and participation from citizens. This can hinder the success of the program.
- D) **Sustainability:** The Smart City Program aims to create sustainable cities, but there are concerns about the long-term sustainability of the projects. It is important to ensure that the projects are environmentally and socially sustainable in the long run.

Key Development Initiatives

Under the Smart Cities Mission program in India, several development initiatives have been undertaken to create smart cities across the country. The program aims to develop 100 smart cities by 2024, with a focus on improving urban planning and governance, developing smart solutions for urban challenges, improving infrastructure, and encouraging citizen participation.

Some of the key development initiatives under the Smart Cities Mission program in India include the implementation of smart transportation systems, such as intelligent traffic management systems, smart parking solutions, and electric vehicle charging stations. The program also focuses on developing smart waste management systems, including waste-to-energy plants and smart garbage collection systems. Another important area of development under the program is the implementation of smart water management systems, such as smart water meters and water treatment plants.

In addition to these initiatives, the Smart Cities Mission program in India also focuses on the development of smart energy systems, including the installation of smart grids and renewable energy solutions. The program also aims to improve citizen participation in the development of smart cities through the use of technology, such as mobile applications and online portals.

Conclusion

Overall, the Smart Cities Mission program in India has undertaken several development initiatives to create smart cities across the country. While the program faces several challenges, including funding, implementation, citizen participation, and sustainability, the development initiatives under the program have the potential to transform urban areas and improve the quality of life for citizens.

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Impact of Social Media on the Life of Youth in the Present Era

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Abstract

It is well-known fact that majority of the youth is using social media platforms for different (social, personal, and official) purposes. The present study is related to consumer opinion about different social media sites using in the Dehradun city. This study is based on primary as well as secondary data. Secondary data were collected from various reports, manuscripts, newspapers and official sites of different media while the primary data were collected through questionnaire served to 110 respondents belongs to Dehradun city. The collected data were analysed on the different dimensions as age group, time spending on social media sites. It is found from the study that more than 70 percent youths is using social media for sharing post, entertainment, and fun which has a positive impact on the lifestyle and social relations of youths. On the other side of the coin, social media is used by some miscreants and they do cyber-crime which leaves a negative impact on the society. The level of using social media is higher which create happiness and motivation to youth not to accept respect from stranger.

Keywords

Social Media, Social Networking, Positive and Negative Impact on the life of youths.

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Introduction

Social Media refer to the use of an application such as WhatsApp, Facebook Twitter, LinkedIn and YouTube etc. The sharing information through website by peoples. Social media provide better opportunities for interaction between two or more peoples and to learn a different foreign language also. With the help of social media, people communicate and connected with each other within fraction of second, exchanging their ideas during short time, communicating information, comments, etc between the area of interest and issues as an when required.

The National Youth Policy (NYP-2014) has defined 'Youth' as a person in the age group of 15-29 years. A Youths and students are using social media for various purposes i.e. for learning, entertainment, and also for motivating to each other and group of the different age groups. Impact of social media on youth having both directions i.e. positive and sometimes it's negative impacts.

Positive Aspect: With the help of social media people can communicate and stay upto date within groups of community peoples, as family and friends around the world, and find new friends and communities, network with each other people who have similar interests or ambitions. And also discover the valuable sources of data and information for learning in different field of technology areas.

Negative Aspect: While peoples use the social media, which increasing isolation and disconnect among family members as well as others authorities. It is also seen among the technology users/ social media users ,their thinking is shrinking to discuss personally with each other caused suffering from depression and anxiety to be mentally and physically and unhealthy situation in the society or a family. Social media platforms such as Twitter, and Hotspots spread hurtful romours, lies and abuse that leave emotional scars. Selfies and all your innermost thoughts on social media can create unhealthy ,self centered and distance from real-life connection.

Literature Review

Kusuma. A (2020), examined the impact of social media on youth. In the present-day social media play an important role in connecting people and making communication effective between groups of community with each other via social media sites such as Facebook, WhatsApp, Pinterest, Twitter, Reddit, Instagram, etc. Data collected and analyzed from social data analytical gathered and people share with connected people.

Ahmed. J & et. al (2021), focused on the effect on the youth of social media from education to healthcare, sport to fashion, and online buying to better communication. From the study, it is found that youth engaged in social media awareness about the facilities and communicated and connected with groups of community people. In this study, 151 people have been selected from the survey. The questionnaire has been utilized as a 5-point Likert scale. After collecting the primary data, use spss software for analyzing the data.

Rawath .S (2019), examined that the present generation has been engaged in social media sites. Social media became an important part of the everyday life of human beings. The data was collected from a primary source through framed questionnaire from 50 respondents. From this study, it is found that social media has a positive and negative impact on the present generation.

Dhara.A (2019), examined that social media became very useful in the present era. This paper mainly focuses on social media. Data were collected from primary sources through a structural questionnaire Google form. In this, study 36 responses, out of which 61% were male. Apart from which 55.6% spend time 1 to 2 hours on social media, 52.8% had the opinion that social media make the youth intelligent. It is one of the effective tools of communication.

Statement of Problem

There is no doubt that the social media creates awareness among peoples regarding day-to-day activities related to the society. But it is also fact that some social medias are spreading rumours in the society taking false information. However, now a day our government is quite active to check such social media activities and channels so that peaceful atmosphere may be maintained.

Objectives of Study

This study is done with the objective to check the impact of social media’s on the life of peoples especially youth.

Research Methodology

The required information was collected from 110 youth generations who were using different social media sites i.e. WhatsApp, Facebook, Twitter, Instagram, and YouTube. The household were selected and interviewed randomly from the city of Dehradun, Utrakhand. The random sampling technique was used for selection of household and collection of primary data from 110 respondents. The mastersheet of the collected data were prepared and tabulation work also done .The coding of the data was also utilize during the preparation of master sheet as required. The mean and percentage tools were used for analysis the data and presented and results were interpreted.

Data Collection and Analysis

Table - 1: Detail of sample household according to age group

Age Group	No. of Respondents
Below 18	20(18.18)
18-25	56(50.91)
26-30	34(30.91)
Total	110(100)

1. (Source: Author’s Primary survey data) 2. Figures in Parentheses indicator percentage to total

The above table shows the distribution of respondents according to the three age groups which were i.e. Below 18 years (first group), Above 18-25years(second group), and 26-30years(third group), where the age group 18-25 years had higher respondents i.e. 56 persons belonging to 50.91 percent of total sample size. This indicated that this age group was more user of social media sites as compared to other age groups .

Table - 2: Access mode for social media application

Mode of Access	No. of Respondents
Mobile Device	99(90)
Laptop	3(2.7)
Desktop Computer	8(7.3)
Total	110(100)

1. (Source: Author’s Primary survey data) 2. Figures in Parentheses indicator percentage to total

The above table revealed that the mode of access to social media systems i.e. Mobile devices, laptops, and Desktops, are the major mode which are utilising by the public.it is further seen from the table that 90 percent public using mobile mode followed by desktop computer and laptop also. It shows mobile electronic items are prime choice of the public as compared to non-mobile items.

Table - 3: Tools used social media

Tools	No. of Respondents
WhatsApp	33(30)
Facebook	18(16.4)
Instagram	44(40)
Twitter	12(10.9)
Other	3(2.7)
Total	110(100)

1. (Source: Author’s Primary survey data) 2. Figures in Parentheses indicator percentage to total

In Table-3, it is seen there are four major tools using by the mass for their different purposes i.e.interaction ,entertainment, payments, business,banking,sale &purchase,education ,etc. It is also observed that Instagram is

the first choice of the public followed by WhatsApp among the sample household. While other tools are the last priority of the owner of the electronic item mobile etc.

Table - 4: Time spend on social media

Parameters	No. of Respondents
1-2 hrs	28(25.5)
3-4 hrs	66(60)
More than 4 hrs	16(14.5)
Total	110(100)

1. (Source: Author's Primary survey data) 2. Figures in Parentheses indicator percentage to total

The present investigation shows the time spent by users on social media Apps/tools. It is seen from the table that 3-4 hours are the common time spent by majority of the public i.e. 60 percent followed by the time 1-2 hours. However, only less number of electronic media users spending more than 4 hours in a day which may be due to urgent time bound work load which could not be avoidable at users levels.

Table - 5: Purpose of using social media

Purpose	No. of Respondents
To keep updated with new	22(20)
To feel the sense of belongingness	8(7.3)
Communication & Connect with friend & family	23(20.9)
Sharing post	33(30)
Social awareness	20(18.2)
Other (online shopping)	4(3.6)
Total	110(100)

1. (Source: Author's Primary survey data) 2. Figures in Parentheses indicator percentage to total

In the present manuscripts, there are six major purposes for which public using social media mode. It is seen from the table that sharing post was having first place among all six purposes. While communication among friends, family relatives, officials, and trade personality are the second choice of the public followed by update knowledge about surrounding, country, events and international level also having knowledge about upto date information are now day became a power of individualism as well as government and other intermediaries machineries.

Table - 6: Personal benefits/Positive impact of using social media

Parameters	No. of Respondents
Learning	20(18.2)
Staying connected with friends	22(20)
Entertainment and fun	38(34.5)
Digital Reputation	10(9.1)
In quest of job opportunities	8(7.3)
Others	12(10.9)
Total	110(100)

1. (Source: Author's Primary survey data) 2. Figures in Parentheses indicator percentage to total

Social media now a days became a beneficial tools to individual. The above table shows six positive relation of human life who were developed through the use of social media and found that entertainment and fun is the prime benefits of the peoples followed by making connection with friends and other personalities within fraction of time which was not possible during the period of absent of these social media system. Social media also become a learning mode /education during short period or without waiting long time or go to any institutional organisation. Social media is a time effect in which any incidence or a co-incidence became a one part of the word which will be known to the world population without wasting time and money.

Table - 7: Dis-advantage /Negative impact of using social media

Negative Impact	No. of Respondents
Cyber Theft	40(36.35)
Health Issues	32(29.1)
Time waste	22(20)
Wrong Text Abuse	10(9.1)
Others (Culture issues)	6(5.45)
Total	110(100)

1. (Source: Author's Primary survey data) 2. Figures in Parentheses indicator percentage to total

From the present analysis of social media, it is fact that the different technology which is now day utilizing by the mass of people having relation in two directions i.e. positive aspect of every technology to the human being activities which is described in Table no-6. The second aspect of technology is negative relation with human life or daily activities of the people. In this aspect the technology having negative relation with important activities of people. The list of negative aspect i.e. Cyber theft, health issues, time waste are the major drawback of the available technology utilising by individual. This is alarming to the younger and future time population which may take care on the mention negative aspect of the technology which may be protect from different directions to the future population and present younger so that they can utilise their best direction in the interest of itself, others, society, and country as a whole. The table itself indicated that cyber theft in which the huge money of the account holders hacked by the miscripant, and technology have a bad effect on especially child and younger eyesight and mental health.

Table - 8: Status of mind during the use of social media

Parameters	No. of Respondents
Motivation and Learning	28(25.4)
Happiness	32(29.1)
Boost self Esteem	12(10.9)
No fear of being left alone	14(12.7)
Inspiration	18(16.36)
Others	6(5.45)
Total	110(100)

1. (Source: Author's Primary survey data) 2. Figures in Parentheses indicator percentage to total

The said table indicated personal feeling of the technology users. It has been seen from the table that the majority of individual feeling happiness whenever they are under the use of any social media technology i.e. mobile, laptop because they are mentally engaged mostly in entertainment programmes while the second place taken by the self motivation from the available technology which is utilising by the individual. There are certain program broadcasting by different channel which are having full entertainment on different channel of T.V, the same are available in mobile also. There are certain educational program are Launch by govt and other private channels from which literate and illiterate population educating about day-to-day activities of the government and unwanted activities and incidence happened in the day. Social Media is the knowledge oriented program to all without age-bar, community bar, location bar and also religion bar.

Findings

It is found from the above study that the majority of youth respondents belong to the age group of 18-25 years, users social media i.e. 56 youth respondents (50.91 percent). This indicates that this age group is addicted to social media i.e. WhatsApp, Instagram, Facebook, Twitter, YouTube, etc. A great number of respondents uses social media through Mobile device i.e. 99 respondents (90 percent). It is followed by desktop computer users i.e. 8 respondents (7.3). Majority of youth uses Instagram i.e. 44 respondents (40 percent) followed by WhatsApp users i.e. 33 respondents (30 percent), and a smaller number of respondents uses other media such as YouTube i.e. approximately 3 percent of respondents. The maximum respondent spends time on

social media is 3-4 hours followed by 1-2 hours on social media sites i.e. WhatsApp, Facebook, Instagram, etc. The purpose of using social media sites of 30 percent of respondents is sharing posts which may be formal or informal i.e. 33 respondents. The positive impact of social media on youth in the present era is that using for entertainment and fun and for staying connected with friends. It shows that cyber theft is a negative impact on using social media and creates health issues of using social media because youth are engaged in social media sites to spend much time getting late night. As a result they go to sleep late and getting late food which creates abnormal health issues. The majority of respondent comes under the happiness category using social media sites followed by the motivational tool. The acceptance level of request from stranger is not favorable i.e. 58 respondents (52.7 percent).

Limitations

1. Language is one of the limitations faced by investigators during data collection
2. Lack of local cooperation of local people during data collection is also a constraint.
3. Time is one of the constraints faced by investigators during data collection.
4. Transport Infrastructure /mode of transport was a constraint faced by investigators.
5. The study is restricted only to Dehradun.

Conclusion & Suggestion

It is concluded that Social media plays a positive as well as a negative role in our society. Its positive impact on youth is that connected people with groups of the community, have a positive impact on the lifestyle and social relations of youths. In another hand, social media is used by some ill-minded persons and cyber theft has a negative effect on people and their activities. As a result, there is stress and depression due to heavy losses and social negativity in society.

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Anatomy and Histology of Leaf Gall Tissue on *Ficus Glomerata* Roxb. Induced by *Pauropsylla Depressa* Crawford (Homoptera-Psyllidae)

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Abstract

Pauropsylla depression Crawford is an insect that produces gall. *Ficus glomerata* Roxburgi is a plant that develops galls on its leaves as a result of insect damage (Fig. 1). Females occasionally lay eggs on the upper surface of the gall after copulation, but usually they laid eggs singly close to the midrib or side veins on the ventral side of the leaf. The first instar nymph will begin sucking plant sap from the leaf at a specific location after hatching, and in doing so, it will inject saliva that will drive the production of galls because the saliva contains an enzyme or chemical that will cause regulated metaplasia in the leaf tissue surrounding the nymph. In the architecture of immature galled leaves, the epidermis is composed of cells that are less frequently stomatal and are significantly narrower and longer (elongated). Spongy tissues are continuously hypertrophied close to the base of the gall, particularly right below the palisade's surface. An ostiole on the dorsal side of the leaf leads to the opening of the pear-shaped cavity (Cystolith), which is surrounded by a layer of sclerenchyma cells in the architecture of mature galls. The cytoplasmic organelles, which include the nucleus, are in a deteriorated state. The infestation of the insect that feeds on the host tissue appears to be the cause of the degeneration of cell organelles and a decrease in the protoplasmic contents of the cells in the galled tissue.

An extremely little enlargement was seen in the case of the old gall anatomy. The chlorophyll-containing cells that surround the edge of the gall producers are currently dividing. The inducer chamber is now covered in flat cells, and the nutritive tissue has vanished. The 5th instar nymph's developmental stage in the gall liberates its precise size. The cortical cell enlarges and vacuolated more. Medullar cells, on the other hand, are smaller and less vacuolated. Two or three layers of densely cytoplasmic cells form a rigid structure that lines the inducer chamber. On the ventral side, a newly formed lacerated hole (0.4 to 1.2 mm) allows the fifth instar nymph to emerge. After the emergence of the nymph of the fifth instar, the gall tissues are still alive for a few weeks before they start to decompose.

With the exception of the eggs and adults, all *P. depressa* life stages are completed in the gall. The first instar begins gall creation by feeding and injecting saliva after emerging from the egg, and it then enters the gall. The fifth and mature instar, the last instar, emerges from the gall and moults onto the leaf surface to become an adult.

Keywords

Pauropsylla depressa; *Ficus glomerata*; Gall anatomy; Old gall tissue; Mature gall tissue; Young gall leaf tissue; Hyperplasia.

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Kumkum

Anatomy and Histology of Leaf Gall Tissue on *Ficus Glomerata* Roxb. Induced by *Pauropsylla Depressa* Crawford (Homoptera-Psyllidae)

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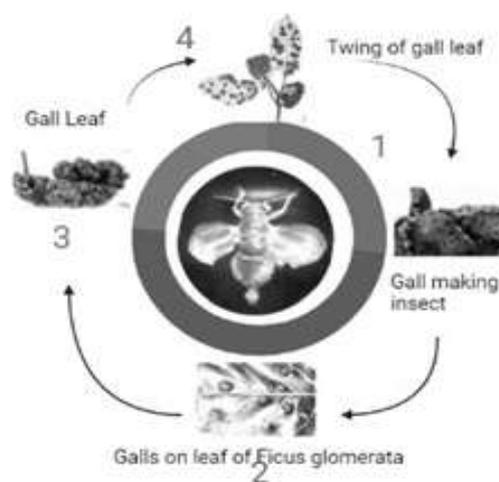


Fig. 1. Diagrammatic representation of gall formation by gall-making insect

Introduction

Pauropsylla depressa Crawford is an insect that produces gall. *Ficus glomerata* suffers severe damage to its foliage as a result of insect galls on the leaves (Fig. 1). Females occasionally lay eggs on the upper surface of the gall after copulation, but usually they lay eggs singly close to the midrib or side veins on the ventral side of the leaf. The first instar nymph will begin sucking plant sap from the leaf at a specific location after hatching, and in doing so, it was inject saliva that drives the production of galls because the saliva contains an enzyme or chemical that was cause regulated metaplasia in the leaf tissue surrounding the nymph. By feeding on the progressing nymph stage (i.e., first, second, third, fourth, and fifth instars), the gall's size increases. Therefore, the injection of saliva into the leaf tissue, which contains enzymes that cause metaplasia, is the cause of gall growth.

Agglomerate masses make up galls. It is epiphyllous, simple, globular, sessile, typically also in huge meaty and unilocular and multilocular, (Kumkum)[1]. Maximum infestation occurs from August through October, when relative humidity ranges from 55 to 93% and temperatures range from 19⁰ to 32⁰C. From March to June, there was the least amount of infestation.

. The top and lower epidermal layers are depicted in the leaf's anatomy. The cells of the upper (Adaxial) epidermis are larger than the cells of the lower (Abaxial) epidermis and have thick cuticles. On the underside of the leaf, stomata are visible. An outer circular band of undifferentiated parenchyma that encircles the core gall chamber is enclosed by the epidermis. The annular parenchyma has concentric layered proliferating cells that are fragmented and asymmetrical. In the parenchyma, many veins are dispersed both superficially and deeply. On the underside of certain juvenile galls, a little fistular entrance can be seen, however, in mature galls, cell growth causes this route to close almost completely. Calcium carbonate is found as a crystalline substance that is kept inside of a sizable cell. Gall development causes numerous histological and structural alterations in the leaves. Therefore, this inquiry on "Histology and anatomy of leaf galls of *Ficus glomerata*" is presented to learn about all these alterations.

Materials and Methods

Procurement of Plant Material

The Saharanpur district and surrounding areas, where the primary host plant of *F. glomerata* Roxb. is abundantly found, were the only places where field observations were conducted. *F. glomerata* fresh leaf galls were procured from the Saharanpur district and surrounding regions of Uttar Pradesh. For several research, the materials and techniques listed below were used.

Preparation of Plant Material

A healthy branch of *F. glomerata* with newly emerging leaves was chosen for the purpose of observing gall formation. A newly mated *P. depressa* female was released inside of the fine muslin cloth covering these leaves to begin egg-laying. Following oviposition, the female was taken out. As a mature 5th instar emerged

from the gall through a lacerated aperture, gall size and colour were measured at regular intervals up until that point. With the use of a binocular microscope, the gall's size and shape were recorded. From several locations in the Saharanpur district, healthy and gall leaves of *F. glomerata* were also collected and preserved in various fixatives for histological and anatomical analyses.

For Histological and Anatomical Studies

Tyler et al. (1977) [2] utilised a magnifying glass lens and a basic light microscope to observe the morphological structures of the plant leaf. By removing the infected leaves of *F. glomerata* that had the gall in all phases, it was possible to see the structure of monolocular and multilocular gall.

Samples of leaves with galls in various phases of development were preserved in FAA (37% formaldehyde, Acetic acid, and 50% ethanol, 1:1:18 v/v), dehydrated with ethanol series, and then embedded in paraffin wax for anatomical studies (Johansen, 1940)^[3]. A rotatory microtome was used to cut transverse and longitudinal series sections that were 6, 8, 10, and 12 mm thick. The 1% safranin, 0.5% fast green, 0.5% fuchsin, and 0.5% astra blue were used to stain the histological sections. The mounting material utilised was D.P.X. mountant. A few observations were also made using manually cut pieces of the living substance. The most effective stains for routine use were orange "G" and ironalum haematoxylin from Heidenhain. Some of the slices were also stained with safranin and gentian violet. Under a trinocular Nikon Alphaphot microscope, slides were examined, and a photomicrograph was taken.

Results

There are several possible subheadings for this section.

Macroscopic and Microscopic Examination

(i) Histological Changes

Histology of Healthy Leaf

The epidermal tissue that covers the leaf blade's outer surface is followed by the photosynthetic mesophyll, which has vein-like vascular bundles dispersed throughout. The vascular bundles penetrate through the petiole and join the blade and stem. A healthy leaf section has the following tissue cell types.

Epidermis

The walls of the epidermal cells that make up the outer layer are cutinized, creating a rough outer surface. Trichomes, or hairs, are affixed to the epidermal cells. There is no intercellular gap and cells are rectangular in shape. The epidermal cells contain cuticle (Plate 1. B & C).

Ground Tissue

Ground tissues' parenchymatous cells are separated into palisade and spongy mesophyll. The majority of the chloroplasts are typically found in the columnar cells of the palisade layer, which is located underneath the top epidermis. Spongy parenchyma has cells with uneven shapes and more room between them. Sclereids have also been noted (Plate 1, A and C).

Vascular Tissue

The xylem and phloem are typically found on opposite sides of vascular bundles. Small veins typically have a layer of parenchyma cells (bundle sheath) covering them. These cells serve as a conduit for materials conducting between the veins and the mesophyll tissue.

Histology of Young Gall

The epidermis of immature galled leaves has less frequently occurring stomata and is composed of cells that are comparatively narrow and more elongated. Spongy tissues are continuously hypertrophied close to the base of the gall, particularly right below the palisade's surface.

Both of these tissue types significantly enlarge as a result. There are significantly fewer intercellular gaps between spongy parenchyma (Plate 2, A, B, and C). The cells of the gall are undifferentiated big spherical parenchyma around the apices and in the surrounding area of the gall cavity. In the gall parenchyma, vascular bundles are dispersed in an uneven pattern.

Histology of Mature Gall

An ostiole on the dorsal side of the leaf leads to the opening of the pear-shaped cavity (Cystolith), which is surrounded by a layer of sclerenchyma cells in the architecture of mature galls. The regular epidermis of the leaf continues into the epidermal layer of the gall. The simple undifferentiated parenchyma that makes up the mesophyll does not differentiate into palisade and spongy parenchyma. Calcium carbonate is found as a crystalline substance that is kept inside of a sizable cell. Cystolith is the name given to this crystalline mass, which has a pear-like shape (Plate 3. A & B). Compared to healthy leaves, the number, size, and shape of chloroplasts in the infected galled tissue are significantly reduced. The thylakoid membrane becomes floppy and thin. It is impossible to distinguish between grana and stoma. On the other hand, the galled tissue exhibits a rise in the quantity and size of mitochondria. In fully developed cellular tissue, mitochondria and other cell organelles have completely deteriorated. A layout Central vacuole is enclosed by a considerably smaller protoplast that is present on the periphery of the cells of the galled tissue (Plate 5. A & B). The cytoplasmic organelles, which include the nucleus, are in a deteriorated state. The infestation of the insect that feeds on the host tissue appears to be the cause of the degeneration of cell organelles and a decrease in the protoplasmic contents of the cells in the galled tissue.

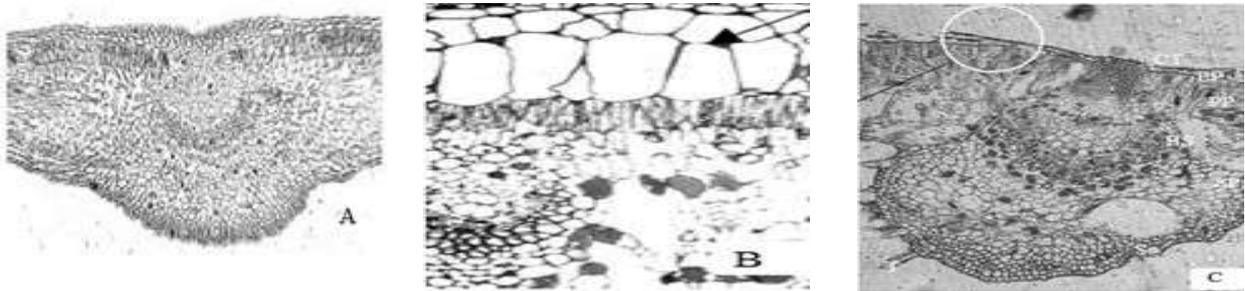
Histology of Old Gall

There is a very little bulge on the abaxial surface of the leaf epidermis, which resembles an asymmetrical green spot. The chlorophyll-containing cells that surround the edge of the gall producers are currently dividing. A few days after oviposition, cells in the area of the attack show signs of hypertrophy and hyperplasia. The gall takes on a horizontal and vertical shape. The gall's outer cells continually divide. This causes a spherical gall to form. The first instar binds to the substrate with its claws for moulting after 5 to 11 days and then releases a pressure that causes the second instar nymph to emerge from it. The gall contains the first instar's moulted skin (Plate 5. A & B). The gall grows larger during the second stage of the 2nd instar nymph's development, and its surface takes on a waved appearance with a depressed area that corresponds to the light green mark. In the depression, a primordial chamber that is only partially separated and contains the gall creator nymph is visible (Plate 7. A, B, & C). The epidermal cells show no changes. New cell layers are formed as the palisade and spongy parenchyma extend in an anticlinal manner. The freshly created cells may still include chloroplast. Its young moults into the third instar after 4 to 9 days.

The gall takes on an ellipsoidal shape and fissures matching to the structure of the epidermis are seen in the third stage of development of the third instar nymph. Phenolic compounds found in the outermost cortical cell layers are highly strained by safranin or basic fuchsin. There is only slight staining in the deepest cortical layers. There are one to two layers of nutritive tissue around the gall chambers. At this point, procambial strands are created and groupings of freshly produced parenchyma cells may resume meristematic activity. In fresh sclerites, groups of newly formed parenchyma cells can be distinguished. Some of them have crystals. The third instar nymph moults into the fourth instar after a growth period of 4 to 7 days. Within the gall, there is moulting. A *P. depressa* nymph in its fourth instar is discovered in the gall, and a periderm with loosely packed, big, poorly supervised cells phloem is seen. One layer of slender cells that are sometimes difficult to see makes up the phellogen. Flat cells surround the inducer chamber, and the nutritive tissue has vanished (Plate 8. A, B & C). The average lifespan of a nymph in its fourth instar is 5 days, ranging from 3 to 7. After this time, it changes into a nymph of the fifth instar by moulting via the ecdysal suture. The 5th instar nymph's developmental stage in the gall liberates its precise size. Two or three layers of densely cytoplasmic cells form a rigid structure that lines the inducer chamber. The ventral side has a newly formed lacerated aperture (0.4 to 1.2 mm) through which the fifth instar nymph emerges (Plate 6. A & B). After the emergence of the fifth instar nymph, the gall tissues continue to function for a few weeks. On the gall epidermis, there are no stomata visible. Cecidozoan are found close to the main xylem. In the secondary xylem, there are numerous cells that are packed with tannins. There is only one cecidozoan in the gall (Plate 4. A, B & C). The collapsing cells of the previous nutritive tissue line the cavity of the larva. With the exception of the eggs and adults, all *P. depressa* life stages are completed in the gall. The first instar begins gall creation by feeding and injecting saliva after emerging from the egg, and it then enters the gall. The fifth and mature instar, the last instar, emerges from the gall and

moults onto the leaf surface to become an adult. Cork and lenticels are afterwards formed by mesophyll cells found beneath the epidermis. The formation of gall causes these auxiliary tissues to grow. The bug emerges through a developed ostiole. (Plate 9. A, B & C) displays the sequential steps in the gall formation process.

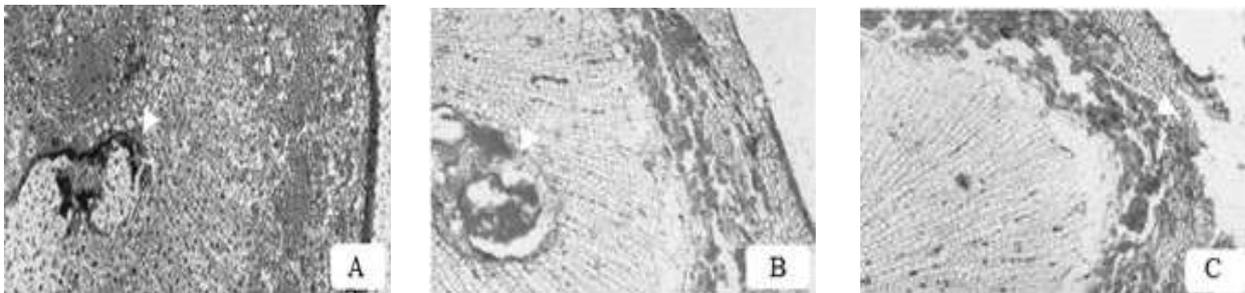
Plates



(a) (b) (c)

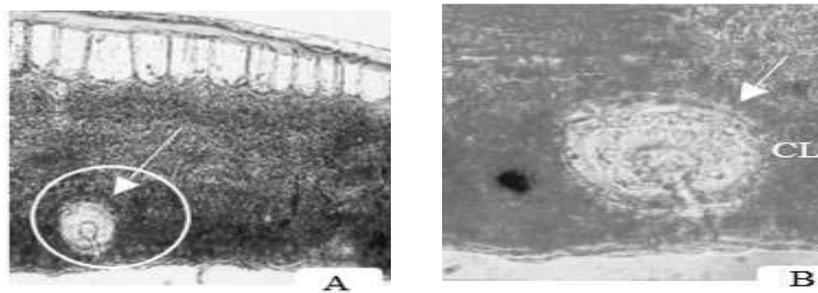
Plate 1. (A) T. S. of healthy leaf showing histological details; (B) A part of healthy leaf tissue.

Abbreviation: CT-Cuticle, EP-Epidermis, BS- Bundle sheath, PP- Palisade parenchyma, SP- Spongy parenchyma, T-Trichomes, S-Stomata



(a) (b) (c)

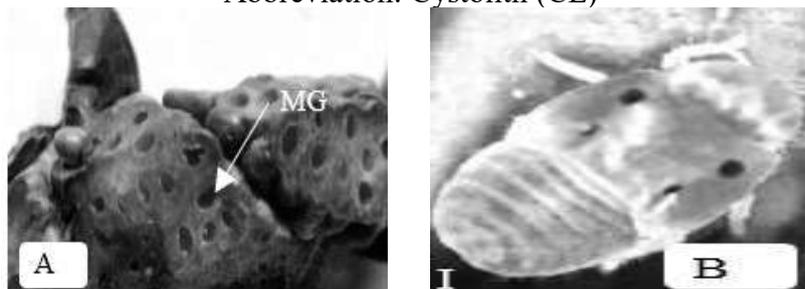
Plate 2. T.S. of infected leaf showing the formation of gall (A) Initial stage of gall formation; (B) Young gall formation; (C) Mature gall formation showing phenolic compounds in gall tissue.



(a) (b)

Plate 3. (A & B) T.S. of the normal leaf of *F. glomerata* is showing crystalline mass.

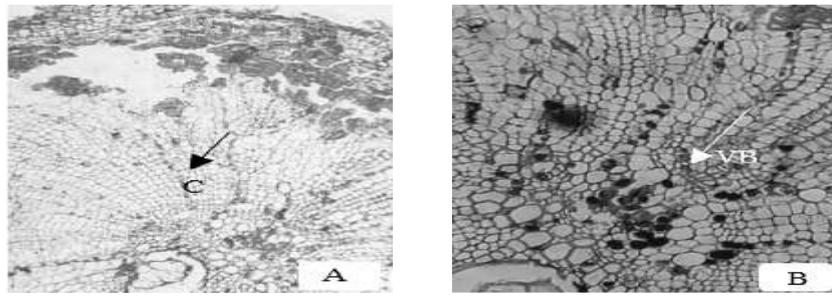
Abbreviation: Cystolith (CL)



(a) (b)

Plate 4. (A) A Collenchyma in gall tissue; (B) Vascular bundle in gall tissue

Abbreviation: Collenchyma (C) Vascular bundle (VB)

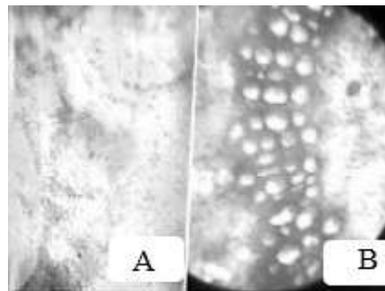


(a)

(b)

Plate 5. (A) Section through multilocular gall showing cavities; (B) Nymphal instar.

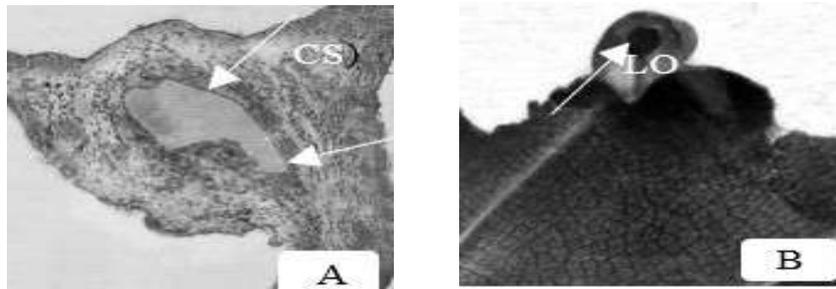
Abbreviation: Instar (I), Multilocular gall (MG)



(a)

(b)

Plate 6. (A). Chlorophyll in mature gall; (B) The mesophyll cells are filled with abundant chloroplast and the vascular bundles are embedded in this tissue.

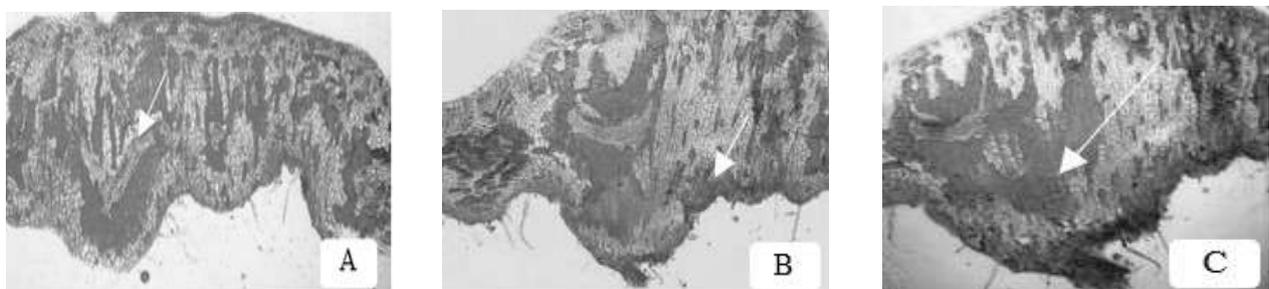


(a)

(b)

Plate 7. (A) L. S of the larval cavity in the mature gall; (B) L.S. of gall showing cavity and lacerated opening.

Abbreviation: collapsed cells (CS), Lacerated opening (LO)



(a)

(b)

(c)

Plate 8. (A-C) T. S. of old gall showing histological disintegration and cells adjacent to the cecidozoa disintegrate in old galls.

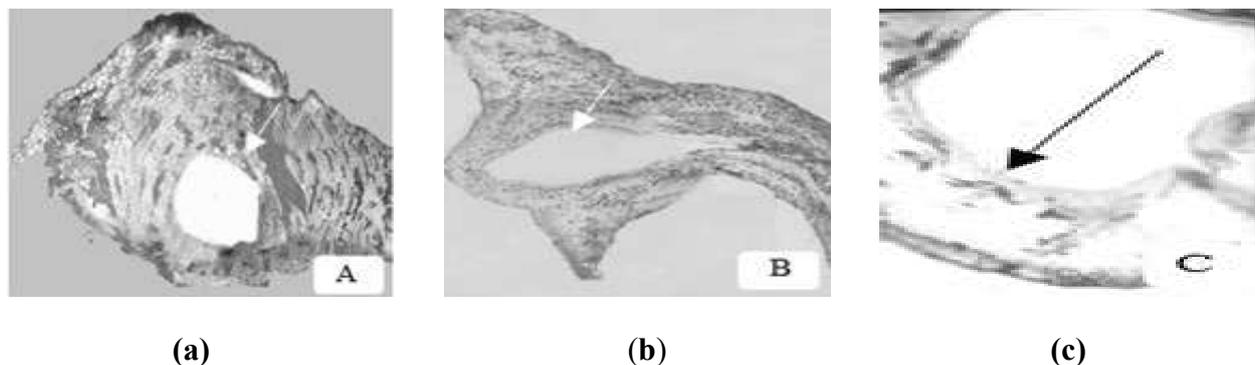


Plate 9. (A, B & C) The process of gall development is shown in sequence in of *Ficus glomerata*.

Discussion

Mani, (1973)^[4] also reported on the histomorphological alterations in the immature galled leaves of *Alstonia scholaris*. Salivary glands are said to be the source of the secretion of stimulating chemicals, according to Miles (1968)^[5]. Rangaswami, (1975)^[6] and Agrios, (1977)^[7] both documented reductions in the quantity and size of laminar bundles in diseased leaves. Similar results were found by Rathore and Singh (2001)^[15] in peach leaves infested by the aphid *Brachycaudus halichrysi*, with undifferentiated shrunken mesophyll cells and a decrease in the vascular tissue. Only the cecidonyiidae family (Diptera) has been linked to substantial changes in cells and tissues, according to anatomical research (Witham *et al.*, 1971)^[8]. *P. depressa* alters the galls on *F. glomerata* leaves histologically. The epidermal cells show no changes, and a partially divided primordial chamber containing a first-instar nymph of the gall producer is seen in the depressed area. Palisade and spongy parenchyma are mostly unaltered close to the gall chamber, but in the swollen area, the spongy parenchyma cells are anticlinally next to the palisade parenchyma. There may occasionally be an intercellular gap between the spongy and palisade parenchyma tissues. The neoformed cells may still include chloroplast. The vascular bundles exhibit changes. Separating the xylem from the phloem, parenchyma cells also divide in the periclinal direction. It's noteworthy to notice that the *P. depressa*-induced gall under investigation shows certain structural changes throughout the early stages of growth. A gall in *F. glomerata* provides food and protection for the insect that causes the disease as well as its offspring. The gall becomes a sink for various nutrients and energy that will be used for the instar's growth because *P. depressa* instars get all of their sustenance from gall tissue. According to Khattab and Khatab (2005)^[9], insects obtain their sustenance from gall tissue.

The pear-shaped gall cavity, which opens through an ostiole on the ventral side of the leaf, is surrounded by a layer of sclerenchymatous cells in the mature gall of *F. glomerata*.

Similar to this, Mani (1973)^[4] documented the structure in the galls of *Alstonia scholaris*. Rangaswami (1975)^[6] revealed that laminar bundles in gall had decreased in size and quantity. Spongy parenchyma cells in *F. glomerata* go through stages of hypertrophy and hyperplasia, but later, palisade parenchyma also goes through hyperplasia. Mesophyll tissue is present, but it is only a thin layer; parenchyma cells were dense in mature galls. The gall parenchyma tissue contains irregularly dispersed vascular bundles. Similar to this, *Brachycaudus halichrysi*-infested peach leaves by Rathore and Singh (2001)^[10] showed undifferentiated mesophyll cells and a decrease in the vascular tissue. Sclerenchyma layer in *F. glomerata* is thought to serve as a defence mechanism against parasitoids, giving gall tissues a mechanical stiffness. The nutritive tissue in adult galls of *C. langsdroffii* retains the same properties, which may be related to the maintenance of the cell's high metabolic activity as a result of the larvae's eating activity (Vechi, 2004)^[11].

The mitochondria and chloroplast of the cell degenerate or vanish in the histology of the old gall of *F. glomerata*. In all galled tissues, protoplast is likewise greatly diminished. Chloroplast degradation in mesophyll cells of speech leaves affected by the fungus *Taphrina deformans* has also been observed by Manohar *et al.* (2013)^[12]. Our findings support the finding made by these authors, Fink (1999)^[13]. It's interesting to observe that, contrary to typical plant tissue, the phloem in the vascular bundles of *Ficus glomerata* is orientated closer

to the larval chamber than to the xylem. According to Weng (2003)^[14], phloem in the vascular bundles of cecidonyiidae galls is directed closer to the larval chamber than xylem in enclosed kind of galls.

Conclusions

Galls are abnormal growths on plant leaves that interfere with the plant's ability to photosynthesize. Consequently, galls always harm plants and cause them to grow more slowly or unevenly. As factories for photosynthesis, leaves produce carbohydrates for plant growth, respiration, transpiration, and other processes. The histology of *Ficus glomerata* Roxb. leaf galls has thus far been studied. Crawford's *Pauropsylla depressa* caused this, leading us to consider the importance of insects.

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Qualitative Analysis of Salivary Gland Enzymes and pH of *Leptocoris Augur Fabr. (Heteroptera: Rhopalidae) Injuring Seeds of Kusam Plant (Schleichera Oleosa)*

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Abstract

*This study considers the qualitative analysis of salivary gland enzyme of *Leptocoris augur* (A pest of Kusam plant, *Schleichera oleosa* and gregarious feeder on seeds and bark), and by desapping habit loses the viability of seeds for germination (Dhiman and Gulati, 1986) [7].*

*Laptocoris augur is a polyphagous sap-sucking bug. Physiological examination of salivary glands of this bug has revealed the pH of 6.7 and enzymes- amylase, proteinase, polyglacturonase, phosphatase, invertase, lipase, esterase and polyphenoloxidase. Diet (fatty seeds of *S. oleosa*) influences the occurrence of these enzymes in saliva.*

Keywords

*Laptocoris augur; Salivary glands; Enzymes; pH; Polyphenoloxidase; *Schleichera oleosa*; Amylase;*

Reference to this paper should be made as follows:

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Qualitative Analysis of Salivary Gland Enzymes and pH of *Leptocoris Augur Fabr. (Heteroptera: Rhopalidae) Injuring Seeds of Kusam Plant (Schleichera Oleosa)*

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Introduction

This study considers the qualitative assessment of salivary gland enzyme of *Leptocoris augur* Fabr. (Plate-1) (*Heteroptera : Coreidae : Rhopalidae*), (A pest of Kusam plant, *Schleichera oleosa* and gregarious feeder on seeds and bark), and by desapping habit loses the viability of seeds. (Dhiman and Gulati, 1986) [7]. *Leptocoris augur*, a bright red polyphagous bug. Kusam plant is of great economic value for mankind and best quality of lac is cultivated on this plant by lac insect. Seeds are also eaten raw or roasted. Powdered seeds are also applied to remove maggots from ulcer and wounds of animals. A fatty oil obtained from the seeds is known as Macassar oil. It is yellowish, semisolid with faint odour of bitter almond. The oil has long been used for hair dressing, culinary and lighting purposes and for cure of itch, achne, burns and other forms of skin troubles. The oil cake has good manurial value and is also used for fuel (Kirt and Basu, 1935; Jamieson, 1943; and Chopra, 1935) [12,11,4]. For edible purpose, the oil should be properly refined and decolourised to remove cyanogenetic glucoids.

The seeds of this plant are rich in fatty oil contents and the oil has positive chemotropic response (Chatterjee, 1916) [3]. The bug pierces the testa of the seed and the stylet reach to the cotyledons. Then saliva is poured which dissolves the food and the saliva mix food is sucked up. To know the kinds of salivary enzymes in *L. augur* present studies have been taken up because the secretory process of salivary enzymes in heteropteran bugs is not always uniform and is affected by the dietetical nature.

Thus, the host of *L. augur* is of great economic value for mankind and the bug reduces the viability of the seeds (Dhiman and Gulati, 1986) [7] and damages leaves and bark of the Kusum tree.

Materials and Methods

For laboratory experiment *Leptocoris augur* were collected along with fresh leaves and seeds of kusam plant by hand picking method from the field (Horticulture Experiment and Training Centre, Saharanpur) in polyethylene bags.

Preparation of Salivary Enzyme Solution

The bugs were dissected in physiological salt solution (Ringer's solution) under a dissection microscope (10X) (MV tex DM-1, India). The exposed salivary glands were taken out. According to the object of the test, 12 or more pieces of glands were taken in distilled water and preserved at 2°C for one day. Then placed in 1ml of phosphate buffer (pH 7.2) for all assays. Enzyme solution was prepared by homogenizing the salivary glands tissues in the phosphate buffer solution (pH 7.2, having a pair of salivary glands/mL solution). This homogenate (Remi 8000 RPM, Mumbai) was then centrifuged for 15 minutes at 5,000 rpm at 40°C to remove debris. It was filtered through a filter paper. The supernatant was used as the salivary enzyme source.

Determination of pH Values of Salivary Gland

For determination of pH of salivary gland take out its liquid. This liquid was absorbed quickly by a strip of filter paper and it was immersed immediately in a corresponding pH indicator solution to determine the pH calorimetrically.

In another method salivary gland of *L. augur* was teased directly on BDH pH paper, and the debris of gland was removed. Then the colour of the paper was matched with the standard colour. The pH indicators used were (Bromothymol Blue) BTB (5.8-7.4), (Bromocresol purple) BCP (5.4-7.0), CPR (5.0-6.8), (Narrow range pH paper) MR (4.4-6.2), (Johnson test papers) BCG (4.8-6.2) and (Bromothymol Blue) BTB (3.0-4.6).

Assay for Enzyme Activity

Equal volumes of the salivary enzyme preparation, substrate and buffer were used in microtubes. The quantities varied from 1.0 to 2.0 mL., depending upon the type of substrate. Sorensen's buffers (Cowdry, 1952) [5] were used. A few drops of toluene were added to the reaction mixture in each tube as antiseptic and the tubes were plugged by surgical wool plugs. Prior to incubation, these tubes were chilled. The incubation was done at 37°C for 20 to 24 hours after which the reacted mixture was subjected to different chemical tests for the presence or absence of salivary enzymes (Bergmeyer, *et. al.* 1974) [2]. Each test was repeated four times.

Results

Hydrogen ion Concentration

The pH or hydrogen ion concentration of salivary enzymes of *L. augur* ranges from 6.5 to 6.9 and the mean of 25 observations has been calculated as 6.7. No differences in pH values of nymphal instars or adult sexes were noticed.

Enzymes and their Tests

Tests for the following enzymes were carried out chemically and results are summarised as under:

Amylase: The substrate used for the detection of this enzyme was a 1% solution of soluble starch (Merck's) containing a little one percent NaCl solution. The activity of the enzyme was tested at pH 6.7. The reaction mixture was incubated for 48 to 72 hours to give time for the complete hydrolysis of starch. At the end of incubation, the mixture was tested for the presence of reducing sugars as the end products and the enzyme was tested by three ways.

- a) Potassium iodide iodine test: One drop of potassium iodide iodine solution was added in the incubated mixture and the appearance or absence of blue colour was noted.
- b) Fehling's test: Two drops of Fehling A+B solutions were heated with the incubated mixture for a few minutes over a water bath. The presence or absence of brown or reddish-brown precipitate was noted.
- c) Picric acid test: Two drops of saturated aqueous picric acid solution and 1 drop of 10% solution of NaOH were mixed in a drop of the incubated mixture. The tube was then kept in an electric oven at 600 C and the change from yellow to reddish brown colour was examined.

In the first case no blue colour appeared, in the second test brown precipitate appeared while in the third test yellow colour was changed to radish brown.

Polygalacturonase: Pectid acid (Merck's) was used as a substance for polygalacturonase. The assays were performed at 37°C and the incubation mixture usually contained 1 ml each of 2% pectid acid, Mallvaine when buffer pH 5.0 and salivary gland extract. Toluene was added in this mixture as antiseptic and the mixture was incubated for 48 to 72 hours. Determine in the incubator mixture using the Somogyi-Nelson method (Hodge and Hofreiter, 1962) [9]. Polygalacturonase gave normal activity in salivary extract.

Proteinase: Due to the presence of at least two types of proteinases, the proteolytic activity was assayed separately at two different pH values. 1% solution of casein (Merck's) was used as the substance and the extract substrate mixture was buffered to pH 6.5 and 7.5 Mellvaine buffer was used. The incubation time was kept as 5 to 7 days. At the end of incubation 1% acetic acid was added drop by drop to the mixture. No precipitate appeared in the mixture which indicates the digestion of casein by the proteinase and presence of this enzyme hence remained in normal activity.

Phosphatase: 4-nitrophenyl phosphate disodium salt (Merck) was used as a substrate and 2.0 mL of saturated sodium carbonate solution for phosphatase activity at 37°C.

Invertase: 4% solution of sucrose was taken as substrate and then the activity of enzyme was tested at pH 6.0. Incubation was carried on up to 40°C to increase the rate of hydrolysis and after 48 to 72 hours, the enzyme was tested by Fehling's solution. Weak enzyme activity was observed.

Lipase: 0.3% emulsion of neutral olive oil was prepared and a few drops of 1% solution of sodium carbonate were added to it. In the reaction mixture, few drops of phenol red were added and incubation was done for 48 hours. Colour of the incubated mixture changed from pink to yellow which indicates the presence of lipase.

Esterase: An emulsion of ethyl butyrate was employed as substrate and rest test was performed like that of lipase. Enzyme was found in normal activity in salivary gland.

Polyphenol oxidase: The activity was determined by using a spectrophotometer (Peng et. al., 2010) [15], at 37°C. For determination of polyphenol oxidase activity, Catechol used as a substrate. The activity was then recorded 8 minutes after the beginning of the reaction. Polyphenoloxidase was determined in normal activity in salivary gland extract.

Salivary enzyme secreted into nutrient solution by instar nymph and adult of *L. augur* used for assaying enzymatic activity.

Plate

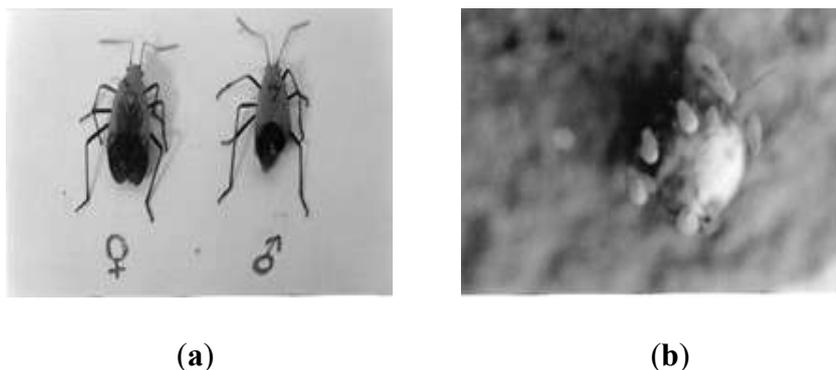


Plate 1. (a) Male and Female healthy bug, *Leptocoris augur*; (b) Bugs, gregarious feeding on the seeds of *Schleicheria oleosa*.

Discussion

The quantitative tests in the present study indicated that the Saliva of *L. augur* contains good number of enzymes such as amylase, polygalacturonase, proteinase, phosphatase, invertase, lipase, esterase and polyphenoloxidase. Reporting only few enzymes in the salivary gland of a single bug, Baptist (1941) [1] found amylase and invertase in the salivary glands of many heteropteran insects and said that not more than two enzymes are found in the saliva of particular species.

Goodchild (1952) [8] recorded one enzyme protein is in the salivary glands of *Dysdercus koenigii* and Nuorteva (1954) [14] in the saliva of certain wheat injuring heteropteran bugs. Rastogi and Dutta Gupta (1961) [16] recorded amylase and proteinase in the Saliva of *Odontopus nigricornis*, while Hori (1974) [10] had from the presence of polyphenoloxidase, acid phosphatase and polygalacturonase in the saliva of *Lygus disponis*. Laurema *et. al.* (1985) [13] mention that polygalacturonase, amylase, protinase, trehalase and invertase occur in the saliva of *Lygus rugulipennis*. Anhe *et. al.*, (2007) [17] reported Acid phosphatase activity distribution in salivary glands of Triatomines. Mehrabadi *et. al.*, (2014) [18] reported Salivary digestive enzymes of the wheat bug, *Eurygaster integriceps*.

Thus, it is well clear that there exists a variation in the salivary enzymes of heteroptera. The food of *L. augur* chiefly consists of fat besides carbohydrate and protein. Hence both lipase and esterase are found in the saliva of *L. augur*. It completes its requirement of carbohydrate and protein from the seed endosperm also and hence amylase, invertase and proteinase are also present in the saliva. The bug quenches its thirst by sucking the sap of adjacent herbs and shrubs reported by Dhiman and Gulati (1985) [6]. The sap meets the requirement of water, minerals and sugar.

Conclusions

The host, Kusam plant (*Schleicheria oleosa*) of *L. augur* is of great economic value for mankind and the bug reduces the viability of the seeds and damages leaves and bark of the Kusum tree.

Thus, present investigation has been taken which will arm the economic zoologist or entomologists to device a suitable control measure of the insect.

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Environmental Challenges and Sustainable Development

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Abstract

In today's world, the destruction of our environment directly affects the growth of the economy of most of the world's major countries. Soil erosion, depletion of the ozone layer, increasing pollution, an increasing number of dangerous flooding in various parts of the world due to the damage of natural resources, and various changes in our climate will create a harmful effect on people's daily lives. Maintaining the resources and environment of nature is the most important challenge of humans at the beginning of this new era and the growing need of improving the quality-of-life standards among developing countries is of crucial importance. The sustainability of the environment and growth are two important factors in planning, and in order to maintain balanced development and growth we should make balanced industrial development which is directly related to the concept of a balanced environment. In some parts of the world, the results and destruction due to the environment are the outcomes of irregular planning and their lack of coordination by the local administration, so legal considerations should be kept in mind while making any construction or settlement works in this area which is very necessary and important. The work of globalization in different parts of the world is continuously ongoing but the lack of making necessary arrangements for overcoming the effects of its avoidance at last results in destroying the habitat of the area. In this paper, India's challenges related to the environment in relation to development and mainly "sustainable development" has been discussed.

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Introduction

The world is currently facing numerous environmental challenges that have direct implications for sustainable development. From the erosion of soil and depletion of the ozone layer to increasing pollution and the occurrence of dangerous flooding, these issues have far-reaching impacts on people's lives and the global economy. It is essential to address these challenges and prioritize environmental sustainability to ensure the well-being of current and future generations. This research paper aims to examine the environmental challenges faced by countries, with a specific focus on India, and explore the importance of sustainable development in overcoming these obstacles.

I. Environmental Challenges

Soil Erosion: Soil erosion is a significant environmental challenge that affects agricultural productivity and land stability. Factors such as deforestation, improper land management practices, and climate change contribute to soil erosion, leading to reduced crop yields and increased vulnerability to natural disasters like landslides.

1. **Ozone Layer Depletion:** The depletion of the ozone layer, primarily caused by human activities like the use of chlorofluorocarbons (CFCs), poses a threat to human health and ecosystems. This phenomenon allows harmful radiation of ultraviolet (UV) to come to the Earth's surface, resulting in increased no of skin cancer cases, damage to marine life, and destroy crop yields.
2. **Pollution:** including soil pollution, water, air, and water, has become a pressing global issue. Industrial emissions, vehicle exhaust, improper waste disposal, and chemical runoff contaminate the environment, leading to adverse health effects, ecosystem disruption, and a decline in biodiversity.
3. **Climate Change:** The changing climate patterns, largely influenced by greenhouse gas emissions from human activities, have severe consequences. Increasing temperatures, sea-level rise, extreme weather events, and disrupted ecosystems pose challenges to agriculture, water resources, human health, and infrastructure.

II. Sustainable Development and Its Significance

1. **Balancing Economic Growth and Environmental Conservation:** balanced development targets to achieve a balance between, social development, economic growth, and environmental protection. It emphasizes long-term planning, resource efficiency, and the promotion of green technologies to safeguard the future of present and future generations.
2. **Protection of Natural Resources:** Sustainable development recognizes the importance of conserving natural resources, such as forests, water, and minerals, to maintain ecosystem integrity and support economic activities. Effective resource management strategies, including sustainable forestry, water conservation measures, and responsible mining practices, are crucial for sustainable development.
3. **Renewable Energy changeover:** Promoting the increased use of renewable energy sources, such as hydropower, solar, wind, and, is a vital aspect of sustainable development. By reducing reliance on fossil fuels, countries can mitigate climate change, reduce pollution, and foster energy security.
4. **Environmental Policy and Governance:** Effective environmental policies, regulations, and governance structures play a pivotal role in sustainable development Governments must establish and uphold environmental regulations., promote sustainable practices, and facilitate public participation in decision-making processes.

III. India's Environmental Challenges and Sustainable Development Efforts

1. **Rapid Urbanization and Industrialization:** India's rapid urbanization and industrial growth have put immense pressure on the environment. Issues such as air pollution, water scarcity, waste management, and habitat degradation need to be addressed through sustainable urban planning, cleaner industrial practices, and efficient waste management systems.

2. **Renewable Energy Transition:** India has made remarkable progress in the adoption of renewable energy, with the objective of attaining 40% of its energy from non-fossil fuel resources by 2030. The government has put into effect measures to encourage renewable energy initiatives, boost energy efficiency, and improve energy availability in rural regions.
3. **Biodiversity Conservation:** India is one of the world's biodiversity hotspots, harboring diverse ecosystems

Environmental crime refers to actions or omissions that pose significant dangers to the environment, thereby jeopardizing human life. These offenses can be classified into two categories: offenses against living entities of the environment, encompassing plants and animals, and offenses against inanimate components like climate, land, and chemical contamination... Recognizing the importance of environmental rights, the Indian constitution's 50th principle highlights the significance of safeguarding the environment to prevent harmful effects.

Historically, early laws such as the Civil Act (1929), Prey Act (1957), and Prey and Fishery Act (1968) primarily focused on specific aspects of the natural environment. However, the introduction of the Environment Conservation and Improvement Act (1975) marked a significant shift as it partially encompassed various environmental aspects, leading to changes in the structure of environmental conservation organizations.

To address the issue of environmental pollution and mitigate significant damages, the First Development Program incorporated special approaches. These included allocating a portion (1 out of 1000) of the income generated from the sale of products by workshops and factories in the country for activities related to environmental protection and management.

Global Environmental Damages Due to Development

Globalization, as a process of improving economies worldwide, can have detrimental effects on the environment if not properly balanced. This paper aims to explore the global environmental damages resulting from development and globalization. These damages encompass social, economic, cultural, and political aspects, contributing to increased inequalities, poverty, and environmental challenges. Additionally, the paper will highlight the importance of raising global awareness, promoting environmental responsibility, evaluating environmental penalties, strengthening democracies, and reinforcing social capital to address these issues

Increased Social Inequalities and Poverty

I. Economic Disparities

Globalization often leads to an imbalance between developed and developing countries, widening the economic gap. This disparity exacerbates social inequalities, with marginalized communities and nations facing limited access to resources and opportunities.

1. **Poverty Amplification:** The globalization process can contribute to large-scale poverty, both at the local and international levels. Economic restructuring, market liberalization, and unequal distribution of wealth can lead to marginalized communities being left behind, exacerbating poverty rates.

II. Environmental Challenges

Ecological Degradation: Rapid industrialization and unsustainable development practices associated with globalization contribute to environmental degradation. Deforestation, habitat loss, pollution, and resource depletion are significant environmental challenges faced by countries worldwide.

1. **Climate Change Impact:** Increased greenhouse gas emissions from industrial activities and energy consumption contribute to Rising temperatures, climate change and extreme weather sea-level rise pose threats to ecosystems, agriculture, water resources, and human well-being.
2. **Loss of Biodiversity:** Globalization can accelerate biodiversity loss through habitat destruction, illegal wildlife trade, and invasive species introduction. The loss of biodiversity disrupts ecosystems, affecting ecological balance and the provision of essential ecosystem services.

III. Addressing Global Environmental Challenges

Raising Global Awareness: Promoting environmental education and awareness campaigns at the global level can foster a better understanding of the interconnectedness of environmental challenges and the need for collective action.

1. **Environmental Responsibility:** Governments, corporations, and individuals must recognize their environmental responsibilities and prioritize sustainable practices. This includes adopting green technologies, reducing carbon emissions, and implementing responsible waste management.
2. **Reevaluating Environmental Penalties:** Environmental regulations and penalties should be revisited to ensure their effectiveness in deterring environmentally harmful activities. Stricter enforcement, adequate fines, and incentives for sustainable practices can help mitigate environmental damages.
3. **Strengthening Democracies:** Transparent and accountable governance systems are crucial for addressing environmental challenges. Governments should prioritize participatory decision-making processes, engage civil society, and promote environmental justice.
4. **Reinforcing Social Capitals:** Building social capitals, such as trust, cooperation, and community resilience, can facilitate collective efforts to address environmental challenges. Empowering local communities, promoting sustainable livelihoods, and strengthening social networks contribute to sustainable development.

Globalization, if not properly balanced, can result in significant global environmental damage. The widening economic gap, increased social inequalities and amplified poverty levels are intertwined with environmental challenges such as ecological degradation, climate change, and biodiversity loss. Addressing these issues requires raising global awareness, promoting environmental responsibility, evaluating environmental penalties, strengthening democracies, and reinforcing social capital. By prioritizing sustainable practices, engaging in collective action, and adopting comprehensive strategies, countries can mitigate global environmental damages and move towards a more sustainable future.

Sustainable Development and its Importance

Sustainable development is widely recognized as a crucial approach to addressing the pressing challenges of environmental degradation, social inequality, and economic instability. It emphasizes a balanced and integrated approach to development that considers the long-term well-being of both present and future generations.

One key aspect of sustainable development is its ecological supportiveness. It recognizes the importance of protecting and preserving the environment, including renewable resources such as forests, marine ecosystems, soil, water, and biodiversity. This ecological standpoint recognizes the interconnectedness between human actions and the natural ecosystem, with the goal of ensuring that progress does not jeopardize the capacity of future generations to fulfill their requirements.

The United Nations Environment Program (UNEP) defines sustainable development as a developmental trajectory that fulfills the requirements of the current generation without jeopardizing the capacity of future generations to satisfy their own needs. This definition highlights the significance of achieving equilibrium among economic advancement, social advancement, and environmental safeguarding.

In this context of balanced development, the concept of sustainability encompasses various dimensions. It involves using resources efficiently, reducing waste and pollution, promoting renewable energy sources, and adopting sustainable practices in sectors such as agriculture, transportation, and industry. Sustainable development also recognizes the importance of social equity, promoting inclusivity, and addressing poverty, gender inequality, and social injustices.

To differentiate sustainable development from unsustainable development, it is crucial to assess the nature of the connection and the intrinsic correlation between resources and activities. Sustainable development aims to establish a symbiotic connection between human necessities and the ecological system, guaranteeing that resources are utilized responsibly and in a manner that does not undermine their accessibility for future generations.

In summary, sustainable development is a comprehensive and future-oriented approach that strives to achieve a harmonious equilibrium between economic advancement, social development, and environmental preservation. Through the adoption of sustainable practices, societies can attain progress that fulfills present requirements while safeguarding the welfare of future generations. It is through sustainable development that we can aspire to create a more just, prosperous, and ecologically robust world.

The notion of “sustainable development” was initially introduced by the Brundtland Commission in their report titled “Our Common Future” in 1987. This report emphasized the incorporation of environmental considerations into economic practices and emphasized the significance of preserving the global environment while simultaneously fostering general well-being.

..Another perspective on sustainable development focuses on the conservation of environmental functions and the protection of traditional societies. It recognizes the significance of conserving lands, water, genetic resources, and plant and animal species. Sustainable development is not only environmentally beneficial but also technically feasible, economically worthwhile, and socially acceptable.

The Food and Agriculture Organization (FAO) defines sustainable development as achieving maximum and sustainable output. It highlights the multidimensionality of sustainability, including social, environmental, and physical aspects. This encompasses the conservation of the natural environment, social balance, and meeting reasonable human needs within the context of growth and change.

The primary goal of balanced development is to reduce social disparities, a dimension that has frequently been neglected by conventional development approaches. Scholars concur on the significance of involving a broader spectrum of individuals, particularly women, and youth, in order to expand freedom through democracy and utilize innovative development approaches that improve social well-being and alleviate poverty.

These viewpoints on sustainable development have arisen from global agreements such as the Rio de Janeiro Earth Summit (1992), the International Conference on Nutrition (1993), the World Summit for Social Development (Copenhagen, 1995), and the World Food Summit (Rome, 1996). However, despite the endeavors made, attaining the goals of sustainable development has proven challenging within alternative development models.

In conclusion, sustainable development encompasses the integration of environmental considerations into economic processes, the preservation of natural resources, and the advancement of societal well-being. It emphasizes the multidimensional nature of sustainability and the need to address social inequalities through inclusive participation, democratic processes, and innovative development approaches. Achieving sustainable development requires ongoing efforts and international cooperation to create a more equitable and environmentally conscious world.

Potentials and Hopes of Sustainable Development

Sustainable development holds great potential and offers hope for addressing various challenges and achieving a more balanced and equitable future. The different thought schools surrounding sustainable development provide insights into its potential and aspirations.

The economic school of thought emphasizes the importance of profitability and efficiency in sustainable development. According to this perspective, any approach or policy that does not result in enhanced profit and efficiency is deemed unsustainable. This viewpoint acknowledges the importance of economic considerations in fostering sustainable development.

The environmental school places its emphasis on safeguarding the environment and regards sustainability primarily in terms of environmental conservation. Policies or activities that result in environmental destruction, pollution, or disrupt the balance of natural processes are seen as unsustainable. This approach highlights the vital role of environmental protection in achieving sustainable development.

The social school of thought centres around preserving social resources and values. Sustainability is viewed in terms of protecting social values and maintaining social balance. Policies or activities that create

imbalances in the social environment are considered unsustainable. This perspective emphasizes the importance of social justice, equality, and the well-being of individuals and communities.

The United Nations (UN) defines sustainable development with a broader framework that includes non-traditional economic characteristics. It involves understanding the impacts of development, creating local development within the limitations of natural resources, and assisting marginalized populations who may be forced to engage in activities that harm the environment. This approach incorporates the economic, environmental, and social dimensions of sustainable development, recognizing the interconnections and interdependencies among these three aspects.

International conferences and legal commissions have addressed various aspects of sustainable development, such as achieving social justice and equality, meeting essential human needs, balancing environmental protection and development, redefining the concept of growth, poverty alleviation, and resource conservation. These discussions aim to promote sustainable practices, technological advancements, and a continuous development process that respects human values and improves living standards.

For countries like India, where agriculture plays a significant role in the economy and livelihoods, the concept of sustainable development is closely tied to sustainable agriculture. Sustainable agriculture involves the application of agricultural practices that neither harm the ecosystem nor put it at risk. It emphasizes the complete stability of the natural environment, the importance of production processes, and the protection and renewal of natural resources. Sustainable agriculture strives to address the evolving requirements of society while concurrently preserving or improving environmental quality and safeguarding natural resources.

In conclusion, balanced development offers potential and hopes for addressing various challenges and achieving a more balanced and equitable future. It encompasses economic, environmental, and social considerations and seeks to integrate them in a harmonious manner. Through the adoption of sustainable practices, societies can strive towards a future that achieves a harmonious equilibrium between the needs of current and future generations, all while preserving and safeguarding the environment and promoting social well-being.

Methods to Achieve a Sustainable Environment

Achieving a sustainable environment requires a comprehensive and integrated approach that considers environmental, economic, political, social, and cultural aspects. It involves long-term planning, the participation of various stakeholders, and environmental education and training. Here are some methods to achieve a sustainable environment:

1. **Environmental Education and Awareness:** Environmental education plays a crucial role in raising awareness about environmental issues, their impacts, and the importance of sustainable practices. It involves educating individuals, communities, and organizations about environmental conservation, resource management, and sustainable development principles.
2. **Sustainable Resource Management:** Sustainable resource management entails the responsible and balanced utilization of natural resources.
3. This includes strategies such as sustainable forestry, responsible fishing practices, water conservation, and energy efficiency. By managing resources sustainably, we can ensure their availability for future generations.
4. **Pollution Prevention and Control:** Implementing effective pollution prevention and control measures is essential for achieving a sustainable environment. This involves reducing emissions, improving waste management practices, promoting recycling and reuse, and adopting clean technologies. By minimizing pollution, we can protect ecosystems and human health.
5. **Conservation and Biodiversity Protection:** Conservation efforts are vital for preserving biodiversity and maintaining ecosystem balance. This includes establishing protected areas, promoting habitat restoration, supporting wildlife conservation initiatives, and combating illegal wildlife trade. Conserving biodiversity helps sustain ecosystems, supports ecological resilience, and maintains critical ecosystem services.

6. Sustainable Agriculture and Food Systems: Promoting sustainable agricultural practices is crucial for achieving food security while minimizing environmental impacts. This involves promoting organic farming, agroecology, efficient water and nutrient management, and reducing the use of chemical inputs. Sustainable agriculture aims to protect soil health, preserve water resources, and promote biodiversity.
7. Renewable Energy and Green Technologies: Shifting towards renewable energy sources and embracing green technologies is crucial in the effort to reduce greenhouse gas emissions and address climate change. Encouraging the use of solar, wind, and hydropower, along with energy-efficient technologies, diminishes dependence on fossil fuels and fosters a cleaner and more sustainable energy landscape for the future.
8. Policy and Governance: Strong environmental policies and effective governance structures are crucial for promoting sustainable development. Governments, organizations, and communities need to collaborate to develop and implement policies that prioritize environmental conservation, resource management, and sustainable practices. This includes enacting environmental regulations, providing incentives for sustainable initiatives, and fostering international cooperation.
9. Public and Private Partnerships: Collaboration between public and private sectors is vital for achieving a sustainable environment. Public-private partnerships can drive innovation, mobilize resources, and promote sustainable practices. This collaboration can lead to the development of sustainable infrastructure, sustainable business models, and green investment opportunities.

The objective of sustainable development requires the involvement of international, regional, and organizational policies to be effectively implemented. Without the integration of these policies, it becomes challenging to achieve sustainable development goals. The policies should encompass various factors such as specialized budgets, direct participation in environmental protection, incorporating environmental considerations in planning, monitoring policy administration by international organizations, resource protection, training initiatives, trade based on sustainability, responsible methods of resource exploitation, water resource management, public health, and housing, waste management (especially hazardous waste), sustainable agriculture, and mountain protection.

Training and education are pivotal in advancing the cause of sustainable development. It is vital for both organizations and individuals to undergo specialized training to deepen their comprehension of sustainable development principles. Training can be conducted at an individual or group level. It involves developing appropriate instructional materials and educational programs and establishing information networks within institutions that transmit information and knowledge about sustainable development to policymakers and the general public.

In countries like India, where there is significant ecological destruction, low awareness, and limited training and skills among the population, training becomes even more critical

The extent of training needed should be customized based on the existing level of environmental awareness and the degree of individuals' dependence on the environment.

Public interest and participation are essential components of development. Without the active involvement of well-informed and engaged groups and individuals, achieving development goals becomes impracticable. Therefore, broad participation of the population is indispensable, with individuals comprehending the significance of the environment and its transformations, and being motivated to protect available resources. This can be facilitated through the establishment of non-governmental organizations (NGOs) that promote sustainable development, collaboration with national and international organizations operating in this sphere, and public awareness campaigns conducted through media, group discussions, and educational programs.

Ultimately, the direct involvement of individuals in the ecological development of their environment is a vital approach. Empowering local communities to actively participate in sustainable practices and decision-making processes contributes to the overall objective of sustainable development.

Conclusions

Sustainable development is a holistic and interconnected concept that involves the harmonious relationship between humans, the environment, and technology. For sustainable development to be achieved, it is crucial to prioritize mass participation, responsible organizations, and comprehensive training for the public and specialized groups.

In regions like India, where agriculture plays a significant role in the livelihood of the population, sustainable development is closely linked to sustainable agriculture. Development projects that fail to consider the needs of succeeding generations, the environmental Security and resilience, and the well-being of the people are counterproductive and contribute to destruction and pollution.

To successfully attain the objectives of sustainable development, it is essential to engage informed and motivated groups in the process. This includes providing various forms of individual and group training to enhance awareness and knowledge. Additionally, seeking support and collaboration from international organizations such as the United Nations (UN), Food and Agriculture Organization (FAO), and World Health Organization (WHO) can further strengthen efforts towards sustainable development.

By embracing sustainable practices, prioritizing long-term benefits, and seeking collaboration on a global scale, societies can work towards achieving sustainable development and ensuring a promising future for both current and future generations.

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Management of Fruit Rot of Chilli Caused by *Alternaria Alternata*

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Abstract

Chilli (Capsicum species) is a cash spice crop. India is the major producer of chili, and consumer. Fruit rot of chilli caused by Alternaria alternata (Fr.) keissler is one of the important post harvest diseases. Chilli Fruit treated with different fungicides and food preservatives showed effective control of the fruit rot. Captafol (0.2%) and Mancozeb (0.2%) were found to be most effective against the fruit-rot. Sodium bicarbonate (0.5%) and potassium bicarbonate (0.5%) were also found effective in reducing the severity of the disease.

Key words

Chilli, Fruit-rot, Alternaria alternata.

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Introduction

Chilli is an important and widely grown cash crop in India (Joshi and Singh, 1975). Indian chili is exported to more than 90 countries of the world. Chillies are the green or dried ripe fruits of pungent forms of *Capsicum annum* (L.) and sometimes *Capsicum frutescens*. It is specially liked for its pungency, spicy taste, besides the appealing color it adds to the food. (Saini, 2021) Chili fruits has importance in our daily diet and is specially liked for its pungent and spicy taste. The pungency of fruit is due to the presence of a crystalline volatile alkaloid called capsaicin or capscution But according to recent knowledge, capsaicin is not a single compound but a mixture of various amides. These are denoted by the common name of capsaicinoids (Chadha and Kalloo 1993). Chilli fruit commonly suffer from fruit-rots caused by *Colletotrichum capsici* (Hiremath & Govinda, 1973), *Alternaria alternata* (Shawkat et al., 1978) and *Choanephora cucurbitarum* (Srinivasrao and Thirupathaiah, 1978). In the present study an experiment was laid out to see the effect of pre and post -inoculation treatments of Chemicals and food preservatives on the fruit rot of Chilli caused by *Alternaria alternate*.

Material And Method

Pathogenicity test was conducted on surface sterilized (0.1% HgCl, for 2 minutes, followed by 3 washing with sterilized distilled water), riped apparently healthy fruits. A surface injury was given on rind of fruits by pinpricking method and fruits were inoculated by 2 mm agar discs derived from periphery of 4-5 days old culture of test fungus. After inoculation, the fruits were placed in sterilized polythene bags, having moist absorbent cotton on the place of inoculation. The mouths of the bags were loosely tied and were kept in an incubator at $25 \pm 1^\circ \text{C}$. Proper control was also maintained.

Management of Disease

Chemical method

Five fungicides viz. Captafol, mancozeb, copperoxy-chloride, chlorothalonil and Iprodione were tested at 0.2% concentration as post-harvest fruits dips to control the disease.

Food-preservative treatments

Four food preservatives viz., sodium-bicarbonate 0.5%, potassium- bicarbonate 0.5%, Acetic acid 0.2% and citric acid 2% were tested for their efficacy in controlling fruit-rot. Investigations were undertaken by dipping inoculated fruits in the suspension of preservatives for 5 minutes and incubated at $25 \pm 1^\circ \text{C}$. The untreated fruits served as check. All the fruits were incubated at $25 \pm 1^\circ \text{C}$. Observations on fruit- rot development were recorded daily upto 6th day.

Four all experiments ripe, firm, healthy and uniform sized Chilli fruits were surface sterilized. And were divided in lots of 12 (3 replication and 4 fruits per replication) fruits for each treatment and allotted to two different experimental sets viz., pre-inoculation and post-inoculation treatment.

In this study, the method of inoculation was the same as described under the Pathogenicity test except treatment specified. Proper controls were also maintained in each experiment.

Data on per-cent disease incidence (PDI) and severity were calculated by using following formulae and disease assessment key given by Mayee and Datar (1986) after slight modification.

$$\text{Percent disease incidence} = \frac{\text{Number of infected fruits}}{\text{Total number of fruits assessed}} \times 100$$

$$\text{Per cent severity (Area \%)} = \frac{\text{Area of the fruits affected}}{\text{Total area of fruits}} \times 100$$

All experiments were conducted and data thus obtained were analyzed by following suitable statistical design.

Results and Discussion

Efficacy of fungicides against fruit-rot development All the fungicides significantly reduced the disease severity as compared to untreated control on both 3rd and 6th day of inoculation (Table-1). In the present study captafol (4, 5.60) proved to be the most effective fungicide in comparison to the rest of the fungicides tested. However captafol (4, 5.60) and mancozeb (6.50, 8.75) were at par on 3rd and 6th day of inoculation followed (1.80-10-09) by copper oxy-chloride and chlorothalonil (7.80, 10.00). Iprodione (9.77, 12.50) was found least effective. Various chemicals like Copper oxy-chloride, Metalaxyl, Carbendazin Captafol. Captaf. Mancozeb, Chlorothalonil, Iprodione, Diathianon, and Benomyl et have been tested and were found effective in checking the fruit-rot of chillies cause by *Alternaria alternata* (Jayasekhar et al., 1987: Sinha, 1990: Datar, 1996: Rashmi *et al.*, 1998 and Reddy et.al.2019).

Table-1 Effect of pre-inoculation treatment with fungicides on severity of fruit-rot in chilli incubated upto 6 days at 25±1°C.

S. No.	Common Name	Chemical Name	Severity (%)	
			3 rd Day of Inoculation	6 th Day of Inoculation
1.	Captafol	N (1,1,2,2- Trichloromethylthio) Cychohex-4-ene-1-2-dicorboximide	3.00	4.25
2.	Chlorothalonil	Tetrachloroisophthalonitrile	8.50	10.60
3.	Copper oxy-chloride	Dicopper Chloride Trihydroxide	6.00	7.60
4.	Iprodione	3 (3-5 Dichlorophenyl) N-isoprophyl-2, 4-Dioxoimidazolidine- 1- carboxamide	9.75	11.50
5.	Mancozeb	Manganous Ethylene	4.25	5.5.0
6.	Control	Bisdithiocarbomate	20.25	39.25
Sem ±			1.37	1.92
C.D.			2.87	4.04

Efficacy of food preservatives on fruit-rot development: Among food preservative treatments the rot could not be completely checked (Table-2), but the severity was significantly reduced with all the food preservatives over control, but the sodium bicarbonate (9. 25,12.00) was recorded as most effective. However sodium bicarbonate (9.25, 12.00) and potassium bicarbonate (10.18, 14.15) were at par followed by citric acid (14.95, 18.35) Where as acetic acid (17.85, 33.75) was registered as least effective. In food preservative treatment sodium bicarbonate proved effective in controlling the rot in pre as well as in post inoculation treatments (Fallik et al., 1997 and Aharoni et al., 1997)

Table- 2 Effect of post-inoculation treatment with food preservative on severity of fruit-rot in chilli incubated upto 6th day at 25± 1°C

S. No.	Food Preservatives	Severity (%)	
		3 rd Day of Inoculation	6 th Day of Inoculation
1.	Acetic Acid	17.85	33.75
2.	Citric Acid	14.95	18.35
3.	Potassium bicarbonate	10.18	14.15
4.	Sodium bicarbonate	9.25	12.00
5.	Control	20.75	36.20
Sem ±		1.61	1.89
C.D.		3.43	4.02

Conclusion

Fruit treated with different fungicides and food preservatives showed effective control of the fruit rot. Captafol (0.2%) and Mancozeb (0.2%) were found to be most effective against the fruit-rot. Sodium bicarbonate (0.5%) and potassium bicarbonate (0.5%) were also found effective in reducing the severity of the disease.

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An Analysis of Legal Provision for Violation of Intellectual Property Rights

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Abstract

Article 27 of The universal declaration of Human Rights says that everyone has the right to the protection of the moral and material interest resulting from any scientific, literary or artistic production of which he is the author. This right has been taken care in framing policies related to Intellectual Property Rights. Setting up of competent administrative machinery, penalties and fines on violations and other provisions are playing crucial role in enforcement of IPR laws. Strengthening of IPR laws and effectiveness of Intellectual Property Rights Policy of India leads to an improved Global Innovation Index issued by WIPO in 2019. This paper is an effort to bring out the legal mechanism available to safe guard the IPR of the creator. It will further analysis the effectiveness of IPR related legal provisions in force. Data for the research is collected from the secondary sources. In depth analysis of the data is done in order to drive reasonable fair conclusions. Furthermore, recommendations are based on in depth study of the topic and its relevance with present scenario. The finding of the study can be applied to further research.

Keywords

Intellectual Property Right, Legal, Provision, Enforcement, Violation.

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Introduction

An individual or business may own and have legal protection for a set of intangible assets known as intellectual property rights, which include inventions, creations, and contributions to the modern field of knowledge. Effective, targeted, and timely updated guidance in the area of intellectual property rights is required to support the economic growth, financial incentive, and motivation for advanced innovations embedded in the balanced legal protection of intellectual property rights. With the rapid pace of technological, scientific, and medical innovation that we are currently witnessing, intellectual property has come to play an increasingly important role. Additionally, the evolution of business models where intellectual property is a key component establishing value and potential growth has been influenced by changes in the global economic environment. To comply with international obligations under the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights, India has passed a number of new laws for the protection IPRs.

National Intellectual Property Rights Policy, 2016

Higher level of advancement in any field of knowledge is not possible without creativity and innovation. This is the base of consistent growth and development in every sphere of life. The Vision Statement of National Intellectual Property Right Policy, 2016, envisage the comprehensive motto “Creative India; Innovative India” has been raised by India’s National Intellectual Right Policy for future endeavours. IPR Policy is promoting a comprehensive and supportive ecosystem to enable intellectual property to realise its full potential for India’s economic development and sociocultural advancement while safeguarding the general welfare. The need to raise awareness of the value of IPRs as a tradable financial asset and economic tool serves as the foundation for the National IPR Policy.

The vision statement of National Intellectual Property right policy,2016, envisage-

An India where intellectual property encourages innovation and creativity for the benefit of all;

An India where traditional knowledge, traditional skills, and biodiversity resources are advanced through the use of intellectual property;

An India where knowledge is considered as primary engine of development and knowledge owned is shared with all.

While the mission statement encourages a dynamic, vibrant, and balanced intellectual property rights system in India in order to foster :-

innovation and creativity and promote entrepreneurship to enhance socioeconomic and cultural development, and improving access to proper healthcare, food security for all and environmental protection as a whole, taking care of other aspects of important social, technological and economical importance.

Intellectual Property Rights Litigation in India

The number of instances involving intellectual property litigation in India has increased over the past few years as a result of people becoming more conscious of intellectual property rights as a result of technological advances and knowledge-based societies. Due to the fact that the Hon’ble High Court of Delhi receives the majority of IPR-related disputes and cases, it is regarded as a hub for IP litigation in India. The offended party has two legal options, a civil remedy and a criminal remedy, when the intellectual property rights (IPR) of the IP owner are violated.

By bringing a lawsuit for intellectual property infringement and/or passing off in the appropriate court, civil remedies can be imposed. Furthermore, the right holder is eligible for the civil reliefs listed below in cases involving copyright, trademarks, and patents. Firstly, a party to a lawsuit may obtain an Interlocutory/Temporary/Ad-interim Injunction, which forbids them from acting until the case is resolved. It is a discretionary remedy that is only given if the plaintiff can show that he has a strong case at least on the surface, that the balance of convenience is on his side, and that if the temporary injunction is not granted, he will suffer irreparable harm.

Secondly, a Mareva injunction is given to prevent the defendant from disposing of their assets inside the jurisdiction until the trial is over or a judgement in the infringement action is rendered, protecting the plaintiff’s

interests during the course of the lawsuit. Thirdly, orders from the Anton Pillar can be executed. On a request by the plaintiff made *ex parte* and *in camera*, the court has inherent authority to order the defendant to grant the plaintiff access to his property so that she can inspect any pertinent papers and items, make copies of them, or remove them for safekeeping. The Anton Pillar orders are these.

When there is a serious risk that pertinent records and infringing items may be removed or destroyed, defeating the goals of justice, such an order becomes necessary. John Doe Orders is the fourth available remedy. This effectively translates into unrestricted powers in the hands of the plaintiffs, assisted by court-appointed local commissioners, to raid any places where infringement activities may be carried out. These orders are granted by the court to search and seize against unnamed/unknown defendants. The plaintiff's fifth option is a permanent or perpetual injunction, which is a final court order directing someone or something to do something forever or stop from doing something. The following civil remedy in an IPR lawsuit is damages or an account of profits. These are two remedies provided to the plaintiff that are mutually incompatible. To make up for the losses the plaintiff incurred as a result of the defendant's actions, damages are awarded to the plaintiff. A claim for an account of profits is an equitable remedy that calls for the defendant to pay the plaintiff the actual profits he actually made from the infringement-related actions. The final option is Delivery-up and Destruction, in which the plaintiff receives or has the infringing products destroyed.

Trademark Litigation

Both passing off and infringement are recognised under Section 135 of the Trade Marks Act. Infringement occurs when a registered owner's exclusive rights to a trade mark are violated without authorisation or consent from the registered owner/proprietor. Infringement typically comes in two flavours. Direct infringement occurs when an unauthorised person uses a mark that is identical, similar, or misleadingly similar to the registered mark. This unapproved and unauthorised use must be for the use and propagation of goods and services belonging to the same class.

Indirect Infringement: Although culpability exists for such an indirect infringement as well, there is no explicit mention of it in the Act.

Passing off, on the other hand, is a type of tort and cannot be brought if the mark is not registered. An action for passing off against a person, business, or other entity that deceives and misleads the general public may be brought by the owner or user of the goods, service, or brand. "No man can have the authority to represent his goods as belonging to someone else." Only when genuine damage or fraud has been done and proven by the harmed can relief from passing off be awarded.

Passing off litigation is used to protect ownership of an unregistered trademark. The aggrieved must satisfy a trinity test or demonstrate the presence of the three key components—goodwill and reputation—in order to allege the action of passing off. Using comparable marks in a misleading manner and causing harm to the harmed.

It is not essential to register a trademark in order to bring a civil or criminal action against trademark infringement. It is possible to file a legal lawsuit for passing off as well as trademark infringement. Additionally, trademark infringement is under the category of cognizable offences, therefore wrongdoers may potentially face criminal sanctions.

A lawsuit for trademark infringement may be filed before any District/High Court with Ordinary Original Civil Jurisdiction, per Section 134 of the Trademarks Act, 1999. Every Court that is not a District Court has jurisdiction to pass judgement. In cases of infringement and passing off, the only remedies previously available were temporary or permanent injunctions, damages, court costs, damages, accounts of profits, destruction of inventory, goods/products, and rendition of accounts.

In other situations, the aggrieved may petition the Honourable Court to appoint a Local Commission to conduct raids, searches, and seizures, to seal the property of infringers through an Anton Piller injunction, to freeze the assets, goods, and inventory of the defendant or infringer through a Mareva injunction, etc. IP owners

may register their rights over the relevant product or services with the Customs Department in accordance with the Intellectual Property Rights (Imported Goods) Enforcement Rules and therefore safeguard themselves against the importation of fake goods and products.

Patents Litigation in India

The Indian Patents Act, 1970 is the statute that grants a patent holder or patentee exclusive rights for inventions that either concern a product or a method. For the length of the patent's registration, these exclusive rights prohibit any third party from commercially utilising, exploiting, producing, offering for sale, selling, or importing for sale or use, the patented invention or its equivalent. The aforementioned safeguards apply to a patent registered under the Act for twenty years following the filing date of the patent application.

According to Section 104, anyone bringing a lawsuit for patent infringement, making a declaration under Section 105, or requesting any type of remedy under Section 106 must do so before a "district court" with the authority to hear the case. The plaintiff must satisfy the pecuniary jurisdiction of the three Chartered High Courts and the Delhi High Court before the matter is brought there. This jurisdiction is in addition to the territorial jurisdiction. The suit's value is used to determine the pecuniary jurisdiction.

The only option for patent owners to recoup their substantial investment in the research and development of their innovation is to get exclusive commercial rights over it. India had to establish appropriate adjudicating authorities in order to defend these exclusive rights by establishing laws against patent infringement. As market innovations continue to develop and improve, the legislation pertaining to patent infringement continues to expand.

Designs Litigation in India

The Registered Proprietor of a Design has rights and remedies under the Design Act, 2000. Legal Proceedings are covered in Chapter V of the Design Act of 2000. Section 22 of the Act, in particular, outlines remedies for "Piracy of a Registered Design."

Piracy of a Registered Design is, to put it simply, the identical or nearly identical imitation of a design that has been registered in accordance with the Act's provisions and whose Registered Proprietor has the complete right to apply it to a specific article in the class for which the design has been registered. A Registered Proprietor may file a suit for injunction and/or damages before a District Court with jurisdiction if they believe that their registered design is being illegally copied. It is important to keep in mind that the time limit for filing a lawsuit is up until the Registered Proprietor of a design has ownership of the design's copyright.

If a person violates Section 22 of the Act, they are subject to the following penalties: paying the registered proprietor of the design a sum of money not to exceed Rs. 25,000 that can be recovered as a contract debt; or, if the registered proprietor chooses to file a lawsuit to recover damages for any such violation and to obtain an injunction to prevent its repetition, paying the damages that may be awarded and be imposed.

With the caveat that the total amount recovered for any one design under subsection (a) shall not exceed 50,000 rupees.

It is crucial to make it clear that no party may seek damages in a Design Infringement Suit that exceed Rs. 50,000. The Rs. 50,000 cap, however, only applies when relief is requested in accordance with Section 22(2)(a). There is no financial cap on the amount of damages that a Registered Proprietor of a Design may seek in a suit for an injunction and damages under Section 22(2)(b); instead, the Court where the suit is filed and the evidence of losses presented in court have the discretion to determine the damages in such a suit.

Copyright Litigation in India

In the event of a copyright violation, the Copyright Act, 1957 provides for both civil and criminal sanctions. If the owner of a copyright believes that it has been violated in accordance with Section 51 of the Act, the owner may file a civil lawsuit against the offender.

A copyright owner has the right to bring a lawsuit for an injunction, damages, accounts, etc. against the offender before a court with authority under Section 55 (1) of the Act. However, the copyright owner in such a case can only seek an injunction and not any other remedy like damages or restitution if the infringer successfully demonstrates in court that on the date of the infringement, the infringer was unaware of the existence of copyright in favour of the owner. A copyright owner may request an Anton Piller order, a Mareva junction, a permanent injunction, or an interim or interlocutory injunction. The Court will have the option to award costs in favour of any party to the lawsuit.

A person who is being threatened by the owner of a copyright is protected by Section 60 of the Act from starting legal action over an alleged copyright violation. If someone is being threatened, they have the right to file a declaratory action, ask for an order to stop the threats, and seek damages if they have already suffered losses as a result of the threats.

The jurisdiction of the court where a party can bring a suit is significantly influenced by Section 62 of the Act. According to Section 62 (1), a civil lawsuit must be filed in a district court with relevant authority. According to Section 62 (2) of the Act, which serves as an exception to Section 20 of the Code of Civil Procedure, 1908, a lawsuit may also be filed at a location where the party submitting it voluntarily resides, conducts business, or engages in gainful employment.

Criminal liability may also be brought against the copyright violator in addition to civil liability. According to Section 63 of the Act, anyone found guilty of willfully violating a copyright or aiding in its violation faces a sentence of between six months and three years in prison as well as a fine of between Rs. 50,000 and Rs. 2,00,000/-. However, the punishment and fine imposed upon the offender may be lowered if the infringer is successful in convincing the court that the infringement was not committed for financial benefit in the course of business or commerce. If a violator who has already received punishment under Section 63 of the Act commits the same offence again, the violator will be penalised for a term between one to three years along with fine between one to two lakhs rupees.

According to Section 64 of the Act, police officers have the authority to seize property in cases of violations of Section 63 of the Act. Any copies of the work and any plates used to make unauthorised copies of the work may be seized by a police officer without a warrant, and they must then be brought before a magistrate. Possession of any plate for the purpose of producing illegal copies of any work for which copyright protection is in place is punishable by up to two years in prison in addition to a fine under Section 65 of the Act. The Court may also order the destruction of any copies or plates that the alleged offender is in possession of that are infringing under Section 66 of the Act. Furthermore, no court lower than the Court of Metropolitan Magistrate or Judicial Magistrate of the First Class has the authority to hear cases involving violations of the Copyrights Act of 1957.

Legal and Legislative Framework for New Order

The legislative framework is to be used to increase IPR law administration and enforcement efficiency and transparency.

In conjunction with stakeholders, review current IP laws as needed to update or to eliminate any inconsistency and discrepancies.

Negotiate international treaties and agreements in a positive manner while consulting stakeholders.

For clarity, simplification, streamlining, transparency, and time-bound processes in the administration and enforcement of IP rights, review and update IP-related rules, guidelines, procedures, and practises.

Continue participating constructively and actively in discussions taking place at various international fora aimed at creating international instrument(s) with legal force to safeguard traditional knowledge (TK), genetic resources (GR), and traditional cultural expressions (TCE).

In accordance with the guidelines in Article 4 of the UNFCCC, work to transfer clean technology and know-how from industrialised nations to India. This would help to achieve the goals of lowering anthropogenic GHG emissions and supporting initiatives for climate change adaptation.

Management and Administration of Intellectual Property Rights

The Department for Promotion of Industry and Internal Trade will now be in charge of administering the Copyright Act, 1957, as well as the office of the Registrar of Copyrights, which had previously been under the Department of Higher Education.

Modernise the physical and ICT infrastructure even more, keeping in mind the IPOs' rising needs, in order to speed up e-filing, e-processing, and other online services.

The usage of ICT and technological advancements in the Office of the Controller General of Patents, Designs, and Trademarks (CGPDTM), have changed drastically in recent years.

Work with diverse R&D organisations, universities, funding organisations, and chambers of commerce to provide advisory services that will enhance the creation, management, and use of IP.

To aid in the creation, promotion, and commercialisation of IP assets, the DPIIT should establish a Cell for IPR Promotion and Management.

Implement quality standards across the whole operational cycle in order to achieve ISO certification;

In order to continue working, communication can be established with Patent office and Design wing.

Conclusion

Intellectual Property has seen numerous modifications and innovations in itself. Different Intellectual Properties are arising which further needs to be taken care universally. This is the era of IP evolution, where software is expressly ousted from patent protection. New types of intellectual property rights are on the rise, for example, Data Exclusivity, Orphan Drug Exclusivity, Standard Essential Patents, etc. All through impact of implementation of National Intellectual Property Policy, 2016, can be seen in the recent trends but it is still lagging behind in several of these emerging trends. India need a consistent follow up approach to take care IP issues in today's scenario where technology is changing at a fast pace and new challenges and opportunities are emerging frequently. The legal framework of India needs to substantiate these issues more coherently while maintaining India's pro-public-benefit approach towards IP.

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Green HRM: An Initiative for Environment Conservation

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Abstract

Environmental issues have grown in importance worldwide. Businesses and industries are under pressure to adopt eco-friendly processes and products due to rising environmental awareness and global environmental management regulation. People are more prepared than ever to act ethically and recognize that their organizations must adopt green practices because they are a part of society. Academic researchers and professionals have recently expressed interest in green HRM. Despite the relevance of green HRM in a variety of contexts, research indicates that a comprehensive Green HRM process architecture has yet to be developed. Green HRM is a notion that the majority of people, including HR experts and academics, are least familiar with. This study adds better knowledge of green human resource management and related ideas by investigating numerous practises that must be implemented in order to make organisations green, as well as highlighting key empirical studies on Green HRM in India. Archival method was employed to review the current literature in order to attain these goals. The paper will increase knowledge, awareness, and comprehension of the green management concept.

Keywords

Green Human Resource Management, Green Practices, Environmental Performance, Going Green, HRM.

Reference to this paper should be made as follows:

**Prof. Surekha Rana,
Neelakshi Chauhan**

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Introduction

All parties concerned in environmental concerns, including businesses acting as business actors, now need a deeper awareness of environmental ethics as a result of environmental problems like global warming and pollution. Employees at all levels of the company must support the efforts of the company to protect the environment. (Jackson et al., 2011). Business Resource Efficiency Guide states that adopting eco- friendly practises can help businesses save money, use resources more effectively, perform better for the environment, and enhance their reputation. Human resource management is an essential organizational function for overseeing employees .HRM allows corporations to foster productive habits among workers and other associates.. Additionally, it is believed that HRM helps businesses mould their employees' ecologically friendly behaviour. A innovative idea, GHRM is regarded as an essential component of HRM. Both in the academic world and the real world of HRM, this idea is groundbreaking. (Stojanoska, 2016). Wehrmeyer first used the phrase "Green HRM" in 1996. The majority of people are unaware of this idea, and those who are aware of it are only vaguely familiar with it. There are some GHRM idea advances, but they have little to do with the Indian setting. More research is required to provide a comprehensive understanding and awareness of GHRM because it is regarded as a new and growing area in the Management domain, and particularly in HRM literature.

Objectives

"Objectives of study include" :-

1. "To investigate and describe concept of Green HRM and related concepts".
2. "To highlights various GHRM practices"
3. "To highlights key empirical studies on GHRM in India".

Green

Green' means environmental. Green has become a buzzword due to corporations' and individuals' understanding and consciousness of the fact that they consume more resources than are readily available. Consequently, the concept of "sustainable and greening" emerged. There are four key effects of "becoming green" on HRM:-- 1. safeguarding the ecological environment 2.Preserving the natural environment 3. Environmental pollution reduction. 4.The establishment of natural heritage. (Opatha, 2013); & (Opatha & Arulrajah, 2014).

Green Human Resource Management

A new fangled term "Green HRM" first emerged in 1996 in mundane work of mechanical world. For many it was to swim away from the marshy island of paper and machine work that industry entailed, thus, greenie concept was welcomed by all. Wehrmeyer in his edited book (1996) entitled, "*Greening People: Human resources and Environmental Management*", beautifully captured the preservation of natural resources that industries encapsuled in their working schedules. Green human resource management refers to organisational policies & practices that stimulate employees green behaviour for preserving and conserving the natural environment. (Opatha & Arulrajah, 2014).Green HRM refers to the process of creating and implementing a system that stimulates employees green behaviour in the organisation. It is the part of HRM that is associated with moulding employees conventional behaviour towards employees green behaviour in pursuit of the organization's long-term goals. (Opatha & Arulrajah, 2014). GHRM policies are crucial for boosting employee morale and ensuring his job satisfaction, which enables the business to increase employee engagement and involvement. (J. Cherian & J. Jacob, 2012).

Significance of Green HRM

Green HRM is crucial for achieving goals including cost reduction and corporate social responsibilities and getting an advantage over rivals. The following are its benefits:

1. Contributes to staff retention.
2. Reduces employee turnover.
3. Increase worker morale.

4. Assists in creating the company's image to attract talent.
5. Enhancing firm's internal and external quality.
6. Enhance brand image
7. Reducing practices that cause environmental degradation.
8. Enhancing environmentally responsible use of resources.
9. Improved public image.
10. Improvement in productivity.

Green HRM Practices

In the study, five green HRM practises were looked at. Included are “ green job analysis and design, green performance management, green reward management, and green recruiting and selection, green training and development”.

Green Job Analysis And Design

The purpose of a job analysis is to compile information on the skills, experiences, and knowledge a person must successfully carried out specific work. (Aswathapa, 2012). In job design, decisions have established in advanced on the roles, responsibilities, resources, human resource needs, and working relationships that will make up each job. (Mwita & Buberwa, 2016). Job descriptions furnish an authoritative structure for describing positions; it can specify the individual duties, obligations, requirements, general objectives, competences, and expertise that the employer seeks. (Barbouletos, 2011). From this point of view, organizations may use job analysis and design to assure that workers are required to carry out their tasks in an ecologically sustainable manner and also they possess the necessary environmental awareness to accomplish this. Green job analysis and design is a method used to collect data for a particular job with a objective of creating a job description and job specification that will subsequently results in the hiring of the workers who can carry out their obligations in environmental manners. It seeks to ensure that the organizations determines , abilities, knowledge, competencies, roles & responsibilities for a given position in order to make an employees environmentally friendly and accountable while doing his or her duties. (Marin-Garcia and Tomas, 2016).

Green Recruitment and Selection

Recruiting is regarded the organization's entry point. It enables organisations to create a pool of applicants from which the most qualified can be selected. Green recruitment is defined as a minimally impactful, paperless hiring procedure. Online channels like email, online application forms, and the Global Talent Pool are used to solicit applications. To reduce any environmental impact associated with travel, interviews are performed over the phone or via video whenever possible. Thus, organisations are doing their best to recruit the most qualified applicants while minimising their impact on the natural world. (Kiruthigaa and Viswanathan, 2014). E-recruitment minimises the energy usage and pollutants caused by production, transport, and redemption of paper products. Reducing the amount of paperwork connected with resumes, advertising, and onboarding facilitate direct cost savings. (Diana, 2016).

In green selection, the selection procedure can also conducted with minimal use of paper, such as during behavioural observations, interviews, & presentations. Furthermore, people who are more ecologically aware and kind, or who have a true enthusiasm for sustaining the office's green environment, may be given preference. (Hosain, 2016). This indicates that whichever measure employed to evaluate job prospects, must be created in such a manner that increases the likelihood that individuals who are knowledgeable about environmental conservation and willing to save the environment would be chosen, among other criteria.

Green hiring and selection generally refers to the process of locating and selecting qualified candidates who are actually capable and willing to fill available jobs in businesses utilising eco-friendly techniques, methods, and technology. When picking employment candidates, a variety of variables are taken into account, and environmental conservation skills and willingness are always verified. Green initiatives should be properly included at this point because hiring employees strongly rely on recruiting and selection. Employers will be

more inclined to select candidates who are prepared and equipped to embrace green practises as a result. Additionally, this would make it simpler for businesses to develop environmentally conscious beliefs and behaviours in their recently hired employees. (Diana, 2016).

Green training and Development

Because of the complexity and rapid evolution of the modern business environment, investment in training and development is crucial. The ultimate beneficiary of training and development is not only to the employees, but the company as a whole. (Khan, Khan, & Khan, 2011). The goal of green training and development is to raise workers' awareness of the importance of Environmental Management, teach them how to implement practises that lower their energy consumption and waste output, and give them a chance to contribute to solving the organization's environmental problems. (Zoogah, 2011). Environmental sustainability-related knowledge and skills are not the only things that go into green training and development; the process itself also needs to be environmentally friendly. To lessen the consumption of paper, instructors can utilise digital case studies and study guides than on written booklets, brochures, books and publications. E-learning portals now have a chance of being involved in training and development initiatives. Using digital platforms could minimise paper usage, thereby conserving trees for present and future generations. (Hosain, 2016). Training on environmental issues has two basic objectives. firstly, company's environmental policy should be clearly explained to all employees, secondly, modifies employee behaviour to foster a more conscious and long-lasting attitude towards the environment. (Brorson & Sammalisto, 2008). Staff employees learn the value of ecological leadership and its numerous aspects through green training and development programmes. As a result, they are more likely to implement conservation measures, such as improved waste management at their workplace. Also, it enhances a worker's capacity of handling a wide range of environmental problems. (Ahmad, 2015). Green training is recognized to be most essential instruments of developing human capital and aiding the transition to a more environmentally friendly society. (Masri, 2017). Resultantly, green training and development encompasses imparting knowledge and skills to employees which is necessary to limit and eliminate environmental contamination and preserve the environment at the workplace. In addition to this, it entails the implementation of training and development programmes that make use of strategies and technology that are friendly to the environment.

Green Performance Management

Performance management is a technique for maximising a company's potential by growing its employees performance. (Armstrong, 2006). Performance management usually includes evaluating employees and teams based on predetermined standards and targets. Each organization are obliged to implement environmental management system, because there are environmental objectives that the organisation must accomplish. (Opatha & Arulrajah, 2014). Setting green goals for employees enables organisations to practise green performance management.. Employees and teams can be evaluated on their progress towards these goals on a regular basis. "green" targets should be incorporated into performance management systems . This transforms in green performance targets and which should be utilised as benchmarks when evaluating worker performance at all levels. (Deshwal 2015). Therefore, the term "green performance management" refers to a process by which business sets green objectives for its employees and teams, monitors their progress towards these objectives on a continuous basis, and employs a variety of management techniques to help its staff achieve its green objectives. (Lepak, Liao, Chung & Harden, 2006).

Green reward management

The conventional opinion holds that an effective compensation scheme may motivate employees to reach acceptable performance levels. The rewards scheme serves as a reliable indicator of how seriously a firm takes environmental sustainability management. (Bratton & Bratton, 2015). Employees must be rewarded for their green performance as part of a comprehensive benefits package that also recognises and promotes achievement of specific environmental efforts. (Clair & Milliman, 1996). Green reward management have

significantly aided in encouraging corporate management as well as staff towards environmental responsibility. At some organizations, employees who demonstrate exemplary commitment to the environment are recognised monetarily (through bonuses, incentives, cash) for their efforts. In some other businesses, Employees that do well with regard to of the environment are given non-financial rewards (prizes, trophies, special recognitions). (Arulrajah, Opatha & Nawaratne, 2015). Hence, green reward management is the act of systematically developing and enforcing strategies and policies to recognise and reward individuals and groups for their efforts to improve workplace environmental management.

Key Eminent Researches on Green HRM in India

Mandip, (2012) investigated the Green HR initiatives implemented by ITC limited. Methods used included a literature review and a case study technique. According to the results of the study, ITC Limited has implemented numerous green policies across the organisation to ensure its continued environmental sustainability.

Mishra, Sarkar & kiranmai, (2014) carried out a research titled “ Green HRM as a innovative approach in Indian Public Enterprises for sustainable development”. Data was collected from managers and employees through structured questionnaires and personal interviews from eight Central Public Sector enterprises in India. Study showed that only a few Green HRM efforts were currently in effect at the organisations. These initiatives had not been fully implemented, and they were not widely considered to fall under the Green HR paradigm. Researcher identified various GHRM that could be applied in central public services enterprises (CPSE) . The researcher also concluded that the organisations could improve their sustainable development through participation and involvement of employees in environment awareness programs.

Pooja popli, (2014) conducted research on Green HR practices in Nasik industries. The study’s primary goal was to determine whether or not organisations were aware of the green HR idea and, if so, what steps they had undertaken to go green. After surveying 18 large-scale manufacturing organisations, result was analysed using MS-EXCEL. The study’s findings showed that while organisations in Nasik were aware about the green HR concept that was proposed to help them preserve the environment but some have yet to bring it into effect across HRM’s several disciplines.

Parida, Raj, Sharma & yadav, (2015) . studied the various sustainable practises and policies implemented by IT organisations and assessed employees awareness of sustainable practises in each organisation. E-questionnaires were sent to 100 employees and 5 HR managers of big Indian IT organisations for the study. The survey found that employees were aware of environmental management systems and HR managers agreed that green HR policies increased profit share. Researcher concluded that Cost and programme maintenance were major obstacles to sustainable methods.

Mishra, (2017) conducted the study to comprehend state of Green HRM practises in the Indian manufacturing sector and to investigate elements that can promote Green behaviours. The findings implied that the organisations already engaged in some GHRM practises, however neither these practises were properly organised under GHRM efforts nor were they faithfully implemented. It also showed that, despite some organisations attempting to raise awareness through informal channels, very few of them offered environmental training. Organizations were only using internet portals and social media for recruiting and selection. Regarding performance evaluation, there was no specific point regarding green behaviours.

Jain & D’lima, (2018) examined the millennials perception regarding the firms using Green HRM. Using the use of structured questionnaires, the information was gathered from the 108 respondents. The study was carried out in Mumbai and Pune. The study’s findings demonstrated that millennials were concerned with sustainability and would like to collaborate with organisations that were already embracing green HRM.

Nafeesa, (2019) researched “Awareness of Green HRM practises and their positive effects among employees of IT companies in Ambattur, IT Park”. Data was acquired by questionnaire from 50 employees in medium-sized IT firms and processed using Regression. The study found that employees were growing more aware of such methods, and that GHRM practises influenced benefits to a greater level.

Kothiswari & Uthayasuriyan, (2019) “ examined the extent of awareness about Green HRM among different levels of HR managers from various organisation in Chennai”. Study used simple random sampling. Data was collected from 221 respondent through using both quantitative and qualitative research methods and was analysed using SPSS. Findings showed that managers were aware about Green HRM. Researcher concluded that Green HRM knowledge depended on various factors like foreign training and seminars should had to be conducted by the organisation, government had to incorporate Green HRM practices in labour laws and based on Green HRM concept organisation had to develop strategic HRM based policy to promote employees green behaviour in the organisation.

Arora & Kaul, (2020) investigated “Green HRM:- an empirical study of India”. The study’s primary objective was to compare the different sectors in terms of GHRM implementation. A study was undertaken on 16 companies from four industries (IT, Banking, consultancy and engineering) in India. According to the findings, most of the companies were aware about the Green HRM concept. The study determined that of the four sectors studied, the IT sector was the most active in implementing GHRM principles while banking and finance sector was the most reluctant to embrace GHRM.

Rizvi & Garg, (2021) investigated “ A study of Green HRM Practices in Indian organisations and its relationship with green culture and environmental performance”. Data was collected from 120 HR managers working in Indian manufacturing companies and was analysed using regression analysis. Both qualitative and quantitative research method was used in the study. The result of the study found that GHRM Practices had a significant effect on environmental performance and environmental sustainability culture mediated the relationship between them.

Conclusion and Future Scope

The aim of the study is to introduce and explore GHRM concept in further depth. Sustainable development in the business world is possible when companies implement green practises. This is possible only by effectively implementing GHRM ideas and practises within the organisation. Green HRM implementation in organisations benefits both individual employees and the organisation. Individual advantages include improved green individual values, green behaviour, and green competencies, as well as non-green work outcomes such as job performance, employee loyalty, and job happiness. At the organisational level, the application Green HRM provides numerous benefits, including the making of an environmentally friendly organisational culture, the reduction of unnecessary waste of money, the establishment of a positive company image, and the improvement of the organization’s economic performance.

Future researches could explore the variables like Green organisational culture, Green innovations, Environmental Consciousness, Employees green behaviour and could explore the other Green HRM practices:- green employee discipline management, green health and safety management, green employee participation and green employee relationship.

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SHGs' Impact on Empowering Rural Women as Entrepreneurs: A Study on Mission Shakti Odisha

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Abstract

Odisha is a rural state of which female labour force makes up about 53.90 percent and over 46.10 percent of women are unemployed. They perform hard labour at home, they take care of young children, old parents and sick. They also cook, wash the clothes of family members, and gather water for domestic use. This labour may be called as care economy, which is underestimated because it is unpaid and is not generally thought of as part of the economy. Besides this, they are time-poor and time-burdened workers, which has an effect on their wellbeing and health. Giving women the chance to work as entrepreneurs will set them free, indeed. The current study focuses on how self-help groups contribute significantly to the promotion of economically underprivileged rural women as potential entrepreneurs.

Keywords

Care economy, Time poor, Time burdened workers, Entrepreneurs.

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Introduction

In India, the Constitution provides protection for gender equality. It is vital to social fairness and human rights. Rural women are the most underprivileged group notwithstanding the constitution's protections. When it comes to the advantages of decision-making, employment, and self-employment, they are under-represented. Only illiteracy and cultural conservatism are to blame for this. They are not given the full benefit of the employment options and government-sponsored programmes offered in India, particularly those that encourage self-employment.

They must, therefore, be instructed and inspired to participate in skill-based training programmes that are employment-oriented under the various development initiatives of the Government of India. The primary challenge for the government of any welfare state is to eradicate poverty by safeguarding and promoting the economic and social wellbeing of the populace, based on the principles of equity. In order to address the issues of employment for a growing population across the country, women at the grassroots level must be taught and given the chance to become potential entrepreneurs by including them in various economic activities.

Literature Review

Regardless of the women's educational background, **Asis Kumar Senapati and Kalpana Ojha (2019)** found that microcredit without collateral is the primary factor in improving their economic situation.

Women Self Help Groups (WSHGs) operate numerous microbusinesses in developing nations like India in the twenty-first century, claims **Bh. Srivatsala (2018)**.

Danish Ahmad Ansari (2016) came to the conclusion in his study, that there are significantly less rural women entrepreneurs in India than in other nations.

According to **Dr. V. S. Dhekale (2016)** rural women business owners. make financial contributions to the community and to their own family's well-being. They generate employment for both themselves and others.

Hemant kumar, P. Bulsara, Jyoti Chandwani, and Shailesh Gandhi (2014) assessed rural women's entrepreneurship and improved the index of their economic and social well-being. They contend that female business owners spur on the creation of jobs. Similar to their male colleagues, they provide a significant contribution to the nation's GNP. But urban middle class women mostly benefit from government-sponsored development programmes.

R. Rajasekaran and R. Sindhu (2013) found that rural women are better adapted to self-employment in the twenty-first century thanks to the availability of microcredit without collateral and demonstrated that they are not in any way inferior to males in managing entrepreneurial businesses.

According to **Jatin Pandey and Rini Roberts (2012)**, joining a SHG has given rural women a sense of independence and social acceptance.

Research Gap

According to the research analysis cited above, WSHGs with microfinance without collateral are extremely effective at launching microbusinesses in India. The goal of the current study is to fill this knowledge gap by examining how Mission Shakti in Odisha motivates rural women to become future entrepreneurs by emphasizing socially and environmentally responsible investing.

Objectives of the Study

- 1) To study women literacy in Odisha as the driving force in economic empowerment of women.
- 2) To study the impact of self-help groups in promoting economically disadvantaged women as prospective entrepreneurs.
- 3) To study the impact of Mission Shakti in promoting economically disadvantaged women of Odisha as prospective entrepreneurs of 21st century with environmental and socially responsibility investing.

Methodology

As regards methodological aspects of the study data have been collected from secondary sources. The secondary sources include consultation of published materials both public and private, government circulars issued from time to time and policy guidelines issued by government of Orissa and the up to date census report of India, Economic Survey of India and Orissa, different official websites etc...

Literacy and Educational Attainment of Women in Odisha

There is an intrinsic link between Human Resource Development and Economic Empowerment. Odisha is endeavoring towards the development of human resource vis-à-vis increasing women literacy. The literacy rate of the State shows an upward trend narrowing the gender gap in literacy movement. One of the most important indicators for women empowerment is the status of educational attainment and the continued access to the same. As per the Table 1, Odisha performs reasonably well in the indicator of percentage of women who are literate with nearly 70 per cent of women falling under this category. Odisha's performance is quite close to the national average of 71 per cent.

Table - 1: Literacy Rate of Women as on 2021

State / Country	Urban/Rural	Literate women (in percent)
Odisha	Urban	81.9
	Rural	66.7
	Total	69.5
India	Urban	83
	Rural	65.9
	Total	71.5

Source: National Family Health Survey 5, 2019-21

Gender Equality and Empowerment of Women

Gender equality is paramount for the development of any society. Gender related issues are multidimensional and complex in nature which requires dedicated efforts in solving all such issues. Sustainable Development Goal 5 (SDG 5) aims to solve the issue of gender inequality through concerted policy actions that addresses the problem at multiple levels. Figure 1 below shows that, Odisha has been making steady progress in achieving SDG 5 goal of gender equality. The state saw a rise of 11 points in its SDG 5 score from 2019-20 to 2020-21 whereas SDG India Index shows a rise of 6 points score from 2019-20 to 2020-21.

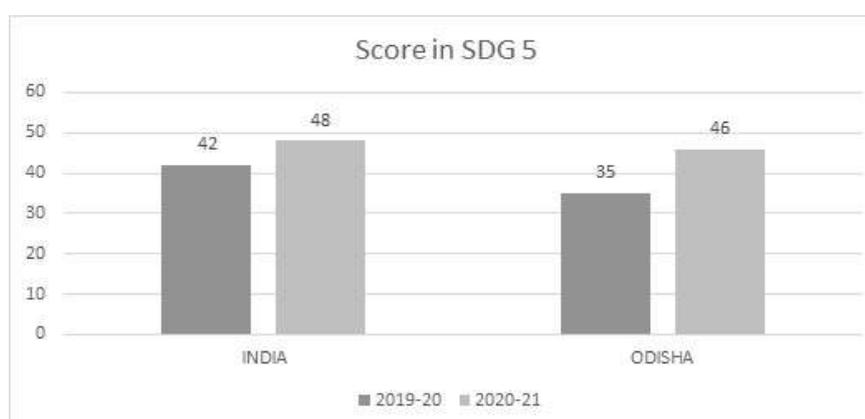


Figure - 1: Odisha's Performance in Sustainable Development Goal 5

Source: SDG India Index Report 2019-20 & 2020-21, NITI Ayog

Economic Empowerment of women through Mission Shakti in Odisha

Government of India has initiated various social development programs to provide sustainable income to rural poor particularly the vulnerable and marginalized sections of the society and women. National Rural Livelihood Mission (NRLM) is one of such programs. The NRLM aims at providing self-employment to rural people by organizing Self Help Groups (SHGs). SHGs are voluntary associations formed to empower the

economically disadvantaged rural women. They are constituted of women from the same socio-economic background who want to solve their economic adversity through self-help and mutual help.

The role of Micro finance in the credit delivery system to Women Self Help Groups (WSHGs) without collateral is a powerful mechanism to empower them economically, socially and politically.

Mission Shakti was launched in Odisha in 2001 on the eve of International Women's Day with the objectives to provide improved livelihood to the rural poor, especially women and empowering them through gainful activities by providing micro credit and market linkage. The Odisha Livelihood Mission formerly known as Orissa Poverty Reduction Mission (OPRM) made a holistic approach in forming and revitalizing WSHGs in Odisha. Women Self Help Groups are formed in each revenue village of the state taking the economically disadvantaged women. The WSHGs at revenue village level are federated into Cluster Level Forum (CLFs) and at gram panchayats as Gram Panchayat Level Federations (GPLFs). In Odisha a separate Directorate of Mission Shakti has been started under the Department of Women and Child Development and Mission Shakti (WCDMS) to strengthen the activities of the existing WSHGs and to undertake regular monitoring all over the year. Thus, in the course of time, Mission Shakti has become a noiseless movement in the state with 6,02,013 WSHGs comprising of 70,00,010 women in Odisha by 2020-21. The progress of WSHGs in Odisha as on 2020-21 is presented in figure 2.

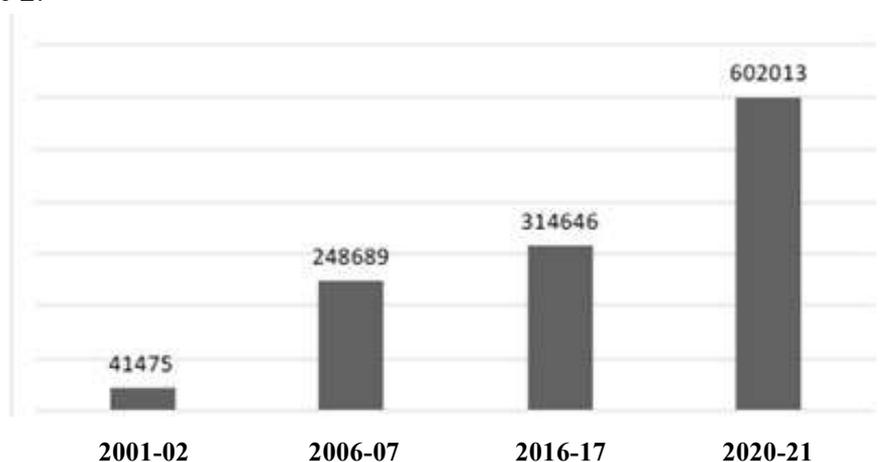


Figure - 2: Progress of WSHGs under Mission Shakti

Source: Mission Shakti, Odisha

Thus it is revealed from figure 2 that there is a sharp increase of 2,87,367 number of WSHGs within a short span of four years i.e. between 2016-17 and 2020-21 on account of the relentless approach of 'Mission Shakti'. Indeed, Mission Shakti gained a momentum in rural Odisha during last five years amongst the economically weaker section of the society. Under the aegis of Mission Shakti, of Odisha more than six lakh groups of WSHGs have been organized in all blocks and urban local bodies of the State. 2, 48,689 WSHGs were formed by 2006-07 which increased to 3, 14,646 by 2016-17 showing an increase of 65,957 WSHGs within a decade. A further number of 2, 87,367 WSHGs have come into existence on a mission mode since April 2017 consequent upon creation of the new Directorate WCDMS in the state showing a miraculous rise in the WSHGs. There are 6.02 lakh SHGs in Odisha with 70 lakh women members across rural and urban areas of the state as on 31st March 2021. "Mission Shakti" is the government's initiative to empower women by encouraging Women Self Help Groups (WSHGs) to engage in a variety of socioeconomic pursuits. The State has launched numerous programmes to support female entrepreneurs. Through "Pallishree Melas" and "Sisir Saras," the Odisha Rural Development and promoting Society (ORMAS) has expanded the reach of promoting WSHGs' products. The Mahila Vikas Samabay Nigam (MVSAN) offers funding to poor and needy women for training in traditional occupations so they can improve their abilities and market their goods. Through the creation of new WSHGs, training and capacity building, livelihood and skill development of all WSHGs in the state, the Mukhya Mantri Mahila Sashaktikarana Yojana (MMMSY) strives to socioeconomic empowerment of WSHGs under Mission Shakti.

Empowering Rural Women as Entrepreneurs

Under Mission Shakti, the MMMSY seeks to advance the socioeconomic and political status of WSHGs. One of the main goals of MMMSY is to create new WSHGs at the village level and federate them into CLFs, provide funding for skill-based training and capacity building for better livelihoods, facilitate connections with financial institutions so that participants can access microcredit without collateral at 0% interest up to Rs 5 lakh, and to shape them into future prospective entrepreneurs so that economically disadvantaged women at the village level can become independent. The State Government has made it a priority to promote women's empowerment as the key to the state's development. As a result, it gave WSHGs in the state government contracts of Rs. 50,000 crore each fiscal year. Additionally, by implementing an interest subvention plan, loans will be granted to eligible Micro Small and Medium Enterprises (MSMEs) at a discounted rate. In order to sustain livelihood support under the Craft Village Scheme, 134 SHGs covering 2010 Artisans of the state have received skill up-gradation qualitative training in addition to the free distribution of contemporary tools and equipment.

The State Government has offered financial aid to these organizations to establish the credit and investment worthiness of WSHGs and SHG Federations so as to establish bank links. In order to prioritize their urgent financial needs for starting new livelihood activities and to establish appropriate investment plans for the credit they accessed from institutional financing, WSHGs and its federations are continuously monitored and guided. The MSMEs of Odisha are crucial to the state's efforts to eradicate poverty and generate jobs. A total of 1,98,736 MSME units were developed with an investment of INR 109.75 crore during last five years. These units have activated production and created 6.28 lakh jobs in the State.

Mission Shakti Innovations

Mission Shakti instills pioneering initiatives through creative ways in the form of innovative projects in line with the mission's objectives and vision. The goal of these projects is to demonstrate an approach that is likely to have broad implications for maintaining the SHG Movement with secured physical and financial wellbeing of SHG members across the state and to offer strategic solutions to emerging challenges in the area of women's empowerment. The SHG Movement in the state is strengthened by such catalytic activity in overcoming gender stereo types, geographic isolation, and limited access to technology and digital space.

Portal for Bank Linkage and Interest Subvention

A significant Financial Inclusion project by Mission Shakti, the SHG Bank Linkage Programme aims to ensure that women SHGs have access to institutional financing. Since August 2018, Directorate of Mission Shakti has also served as the SHG Bank Linkage Interface for both rural and urban SHGs. A dedicated SHG Bank Credit Linkage and Interest Subvention online portal has been created by Mission Shakti to track SHG-specific bank loan, repayment, and interest subvention activities in order to meet the State Government's 5T mandate, which calls for using technology and transparency to transform people's lives. This invention strengthens the 'Mission Shakti Loan' execution process by integrating online technologies. Mission Shakti has linked MoUs with banks to share data with them using a cutting-edge Management Information System (MIS).

Activities of Mission Shakti in the Battle against the Covid-19 Pandemic in Odisha

Six lakh women SHGs in rural and urban regions of the state of Odisha have taken a number of crucial duties during last Covid-19 Pandemic. A total of 17283 Mission Shakti SHGs have been working in agriculture and related livelihoods, bringing in INR 109.85 crore.

Table - 2: Income Generating Activities (IGA) of WSHGs in

IGA	Number of SHGs involved	Turnover (2020-21) INR in Lakh	Profit/Commission (2020-21) INR in Lakh
Vegetable, Ration Shops & Mobile Vans	752	304.9	76.86
Marketing of Surplus Vegetables of Farmers	500	32.48	8.5
Vegetable Cultivation	2049	1738.89	521.66
Mushroom Cultivation	1071	874.71	283.94

Fish Farming in GP Tanks	4319	6227.09	3113.54
Dairy Farming	3170	1025.5	328.16
Goat Rearing	5422	780.93	312.37
	17283	10984.5	4645.0

Source: Mission Shakti, Odisha

The non-agricultural livelihood activities undertaken by SHGs during COVID-19 is given below in Table 3. There are 33,921 SHGs who have undertaken non-agricultural livelihood activities with a turnover of INR 797.08 crore. Provision for purchase of masks from women SHGs functioning under Mission Shakti for providing to the floor people in the state for combating Covid-19 pandemic' has also been covered as a project under the MLA LAD funds. Thousands of SHGs and Producer Groups having existing units have taken up cotton mask production across the state generating income and contributing significantly for a noble social cause.

Table - 3: Income Generating Activities of WSHGs in

IGA	Number of SHGs involved	Turnover (2020-21) INR in Lakh	Profit/Commission (2020-21) INR in Lakh
Mask making	1341	1101.9	440.76
Free Kitchen Management	8448		430.87
Preparation and Supply of Take Home Ration	556	26859.82	
Fair Price Shops under PDS	2538		1989.56
Aahar Kendra Management	157		399.00
Hospital Diet Supply	23	171.54	13.36
Paddy Procurement	562	44579.14	761.36
Farm Pond Supervisors	9019		363.4 9
Temporary Medical Camp (TMC)	1932		287.28
Urban Wage Employment Initiative (UWEI)	6937	6996	352.35
Jala Sathi (Members)	197	780.32	51.53
Swachh Sathi	2453		1177.93

Source: Mission Shakti, odisha

Women's entrepreneurship endeavours in the state have been greatly accelerated by the enabling environment, advantageous regulations, and encouraging governance. The 5T mandate has additionally aided in quick decision-making, teamwork in convergence mode, adoption of transparency measures, and technological integration, opening the path for fundamental transformation in Odisha's female empowerment. Because of the State Government's devoted approach to women's empowerment in the state, women SHGs serving as the vanguard of a new socioeconomic revolution in Odisha are no longer just a pipe dream.

Findings and Suggestions

1. That none of the WSHGs have made Climate-related Financial Disclosures (CFD).
2. That in the case of WSHG of Boriguma in the district of Koraput the principal secretary Mission Shakti praises with the words that the WSHG group have made an annual turnover of more than 5 Crores despite the same they have not published CFD.
3. That my humble suggestion to the Mission Shakti department to adopt the SLLS technique because of its importance in other fields. SLLS means Stop what you are doing against the climate. Look around. Listen to your surroundings and Smell your environment.

Conclusion

The study reveals that WSHGs in Odisha are working as change agents. Mission Shakti has indeed, enriched and empowered the rural women at the grassroots level. They are now engaged in many entrepreneurial activities. There are a number of success stories in most of the blocks of the state. The State Government is encouraging and motivating the WSHGs in different ways to rescue them from facing frequent economic

challenges and bringing them economic prosperity and opportunities. The State under Interest Subvention Scheme is compensating the interest to the WSHGs through concerned banks provided they make regular repayment of loan as per the bank Equated Monthly Installment (EMI) within the stipulated time frame. The latest news is that 50,000 SHGs will be converted into SMEs i.e. Small and Medium Enterprises in coming three years. Further the Government have decided to construct Industrial Park in all districts for the WSHGs of Odisha. The Government have entrusted the WSHGs for supervision and maintenance of all 5t Schools of Odisha. However the study revealed that neither government nor the SHGs pay attention on environmental and socially responsibility investing.

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Plastic Money: A Study on the Shift from Internet Banking to UPI

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Abstract

Cashless economy is an economy system of present scenario which represent the absence of cash transactions in the economic. A cashless economy or an e-payment system is a situation where there is little or very low cash flow take place in the society. It means that most of the transaction is made by electronic channels like debit and credit cards, mobile payment in the form of UPI system with the help various Apps available, and of course through Internet banking. These various tools are the intermediaries between the banking system and society for fulfilling the needs of their financial needs. It is the economy that mostly run-on plastic money or digital money, thus reducing the flow of cash or money in paper form.

The present article presents vivid picture of Internet Banking and UPI system which is vastly used, especially for Online Shopping and also in other services. The researcher is to analyze the importance of Internet banking and UPI, and how the plastic money is integrated and became helpful in promoting internet banking and UPI system with the advancement of technology.

Keywords

Cashless economy, Unified Payment Interface, Internet Banking, Demonetization.

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**Bhawna Aggarwal,
Dr. R.P. Badoni**

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Introduction

The 21st century or the advent of a new millennium gifted us with a new way of transaction, which we often in a common language call, a cashless economy or digital transaction. In fact, cashless economy is a new buzz that aims to expand the course of a new system of transaction around the world. This system of transaction nevertheless, regarded as the best form of modern economy by many eminent economists of the world. Few years back, the Union government of India deployed the policy of demonetization with the sole aim of taking paper economy system to fragile position. In fact, Reserve Bank of India (RBI) unveiled its document in 2018 on “Payment and Settlement System in India: Vision 2018” with sole aim of transforming India a cashless economy.

Now various countries across the world including India, are dependent on cashless transaction, in fact this has become possible only after the arrival of the cashless technologies. In this paper, we shall study how the arrival of internet banking and UPI system have changed the scenario of the entire marketing system as well as mode of transaction. The use of Debit/Credit cards, internet banking or mobile wallet etc. are the forms of Digital payment options which are in great demand and use at present. Thou, still it is just in an initial stage, and in future it requires to travel miles to change the course from the cash to cashless centric economy. Certainly, the future this mode is very glossy, as these modes of transaction are comparatively easy to use, allow customers to make purchase from anywhere and at any time than to carry cash currency. But for all this one requires a good connectivity of internet which makes the transaction faster and easier. Fortunately, India isn't far away in modifying the internet, now in a quick time we are at the door of reaching 5G speed, and surpassed a long journey from 2G to 4G.

The springing growth in the mobile and internet phenomena, and kicking of the Indian government dream project of cashless economy together have played a major role in promoting ‘digital India’. The high speed of mobile internet is the ramification of revolution in IT sector which has made people more aware and familiar with the use of mobile banking, plastic money in the new era of digital payments. Now a vast section of people uses mobile to pay for a wide range of services and goods, instead of depending on cash money, cheque or even credit cards. This new technology has inspired for the “Faceless, Paperless and Cashless” economy. Thou still a large section of people who live in the rural India aren't much interested or one can say have fear about in using such modes of transaction money. It is probably due to the lack in knowledge of the procedures, illiteracy or don't have the assess of android or smart phones, some even have fear of losing the money etc. As a result of the said reasons, still a minor population dare to go for cashless economy, despite the government policy to push for digital economy. In fact, the report reveals that India stands highest in the major block of the world in cash transaction, while China and Brazil are far behind us. But that doesn't that the picture isn't changing. Certainly, the changes are there, but far slow compare to the growth of market and economy. Therefore, it is essential to bring the changes in the attitude of common person who are living in the villages and slums of India, and secondly, Government require to develop infrastructure in the harsh terrains and in the interior parts of the country.

In the era of digitalization, UPI and internet banking are two commonly used banking tools which facilitate the user to perform several banking operations through the internet. Both the systems are mainly used to transfer funds. In other words, both are instant payment systems, but UPI is mainly use in transferring funds using various kinds of mobile applications. Whereas, Internet Banking offers fund-transfer with other banking option like loan application, credit card etc. In today's world, the percentage of people are increase who opt for UPI over Internet Banking. It is so because UPI is easy to access and there is a very little chance of transaction error.

Story of Constant Growth

The entrance of internet in the banking system has played a pivotal role in rising of technological advancement in the use digitalization in the banks. Today digital banking hasn't only increased in multiple, but

also attracted vast range of people because of its easy accessibility. From the nearest alley shop to malls, ticket and hotel bookings and bill payments everywhere, one can use it. It saves our time, as well as reduces the risk and hassle that comes with carrying large amount of cash. Today, when we talk about the digital transaction or cashless payment, mainly come across three mode- the plastic money, internet banking and Unified Payment Interface (UPI). Let's start with the basic that is the Plastic Money, and how it plays crucial role in the two i.e., Internet Banking and UPI.

Plastic Money or Debit, Credit Cards is a mode transaction of money. It has replaced cash payments to a large extent across the world and established itself in a form instant money. By the virtue of its advent the life has become easier, and further also alleviated the hassles that come in carrying the cash. The other advantage that one come across is reduction of crime against the customers. Though, hacking of the code create fear, but isn't it at regular phenomena. Definitely, it has built up certain degree of confident.

Internet Banking is a service that is offered by banks and financial institutions to facilitate the customers with access to the banking service via online platform. But for that, the customer has to register herself for internet banking at the respective banks. The customer needs to register customer ID and password because the e-bank account of a customer holds the important financial information, therefore security is given importance. For this the banks use two types of security modes, i.e., PINs/TANs and signature based Online banking. The Internet banking is used in payment of services and transfer of money, can be utilized in open a fixed deposit account. It also facilitates loan and credit card applications, and to download the account statements etc. Whereas, Unified Payment Interface (UPI) allows instant transfer of funds from one bank account to another. The transaction can be handled through a single mobile application. But before that one need to create Virtual Payment Address (VPA) to access the services offered by UPI. This VPA is linked to the user's bank account. By doing so, the user need not enter all the details of their bank account every time for the services of UPI. The services of UPI can be accessed anytime as the platform is completely digital, different bank accounts can be accessed in a single mobile application, the mobile banking personal identification is used to confirm each transaction, and QR code can also be used for transactions. There are as many as twenty-nine banks have agreed to provide UPI service to their customers, while twenty-one banks including SBI, have joined the UPI as payment service provider. Besides, range of cashless payment alternatives, UPI also play significant role in paying insurance premiums, merchant payments, disbursements etc.

Table - 1: Comparative Study of UPI and Internet Banking

Parameter of Comparison	UPI	Internet Banking
Speed of transaction	An average no. of touch from customer to complete a transaction is six.	An average no. of touch from customer to complete a transaction is fifty.
Cost of fund transfer	No extra charges.	Per transaction cast small fee; Rs. 5 to Rs. 15.
Banks offering service	Overall, twenty-nine banks.	Almost all banks.
Additional beneficiary	Only the VPA of the beneficiary is required.	Beneficiary's detail like bank account number and IFSC code is required.

Literature Review

Babita Singla & Manish Bansal (2015), expresses that the shopkeepers are happy with cashless mode of transaction, as they find more convenient because they feel of getting rid from the currency problem, whereas, NourielRoubini (2015), shows her stain about lack of trust, fear of failure, high charges and poor familiarity that affect payment. Besides, security feature of internet, banking facilities, quality of services are also affecting in the adoption of e-payment. Further, the New York-based economist said that this is the true Fin Tech revolution in revolution in digital payment systems, as today billions of users are transacting at very low or I fact no cost.

A report of Reserve Bank of India (RBI) (2022), in its report reveals that the country has made significant progress and moved to a leadership position in large value payment systems and fast payment systems, which play key role in rapid growth of digital payments. Boston Consulting Group (BCG) and PhonePe Pulse report

(2020) together express an estimated digital payments market in India to be more than triple to \$10 Tn in the coming five years. In which cashless contribution reaching nearly sixty-five percent of the total payments. This gives an indication that nearly two out of three transactions will be digital.

Vander Crujisen et. al (2015) expresses about the IT sector who works tirelessly 24*7 i.e., 366 days a year. This technological advancement has also boosted the financial sectors, especially in terms of plastic money and other transactional apps. Browne. F. X, & Cronin. D (1997) observe- ‘Buy today-pays tomorrow’ is a solace mantra of present India in credit cards, as per the report by the Internet and Mobile Association of India (IAMAI), factors like making Internet entrance, improvement in electronic business and the simplification of online bits have induced this movement. Now, the things have changed a lot since 1997, mode of transaction has modified at large extent due to the high-speed internet services.

Evaluation of UPI system in perspective of Indian Market- Ever since, the change in the landscape of market, a new mode transaction also invented and brought into the market to easily accommodate with new ways. COVID 19 brought a new wave of transaction, when more and more people relied upon on the Online shopping instead of going into the market. UPI has proven to be the best mode of true cashless payments in the COVID ravaged times. Presently, whether one is paying a flower vendor or to a street Fast food vendor, or even to some extent cross-border, UPI plays a key role in the payment. Isn't that has become interesting as well easy way of transaction? The answer is always in ‘Yes’. In an interview, the Finance Minister of India stated that in next five years UPI target crossing one billion transaction per day, a mammoth task, but definitely not impossible, when we observe year to year steady rise in the platform of UPI. A report of 2019, prior to COVID reveals about the contribution of UPI, which was much higher than the other form of transaction like card, wallet, bank transfer, EMI etc. Definitely, now the things have become much better for UPI. It is very true that UPI payments have also triggered a behavioural change in a large section of society. But more important role has been played by demonetization and thereafter, the Covid pandemic.

In fact, the success and growth of UPI have unprecedented, not just in India but impact is seen globally. As per July 2022 report, in India alone there are around twenty-six crore of UPI users, and the transaction crossed to 628 crores, which values to 10.63 lakh crores Indian Rupee. Seeing a mass scale transaction, the question that hover into mind- Could there have been better option to UPI? The plastic money in the form of debit and credit cards or internet banking system wasn't feasible for every Indian neither it seemed to be replicate on such large scale, as in the present scenario UPI is able to bind a vast section of different social and class people together. In fact, India is far ahead of the other countries far behind in the payment transaction.

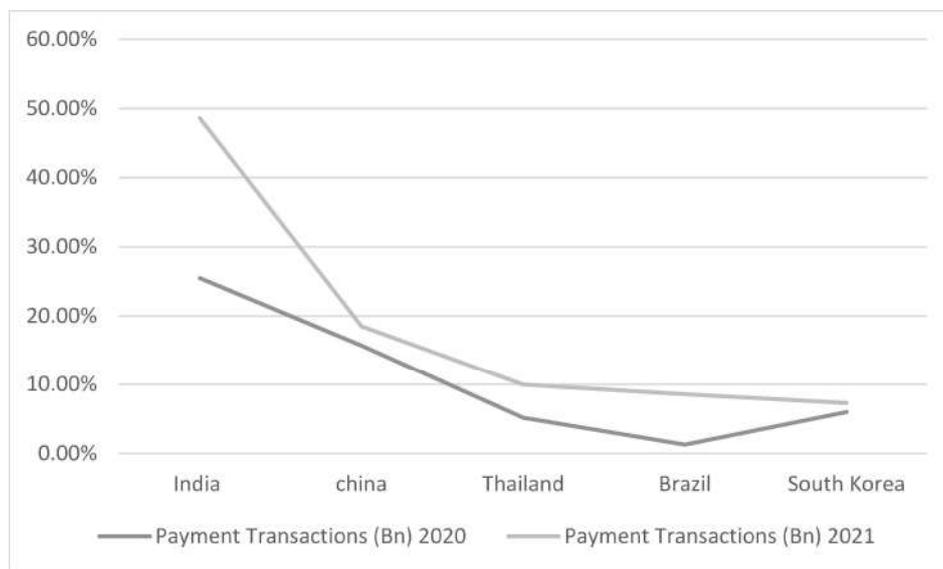


Fig. - 1: Countries with highest number of Real-Time Payment Transaction

Source: Can UPI take the next big leap forward after ushering in India's low-cash moment

Challenges for UPI – Contrary to the rising the demand of the UPI in the Indian society, there has been several challenges, and those challenges are not met appropriately in the coming future, then there will be grave problem for the UPI, as the risk will not make people to for it. The article will remain incomplete if those drawbacks aren't touched.

1. A very general problem that is faced by the UPI customers is the untimely confirmation about the said payments. This look to be very messy, as nobody, neither Google Pay, Paytm, nor the banks are ready to look into the natter. As a result, there is only blink chance left for getting back the transacted money.
2. Though, for now the UPI services aren't charging it customers, but banks and payment service providers like PhonePe and Google Pay are bent to cope with costs. In fact, the government of India had to pay 1300 crores Indian Rupee to banks only in 2021 for UPI, it means that almost 600 Indian Rupee was paid by each taxpayer. It means the UPI system has lot dependency on the government. this will definitely put unsustainable burden on the banking system of India in the near future.
3. Though, the RBI has already decided to fix the rate of two percent of the transaction size, for now small merchants has barred. But the real question that rise is after the lucrative policy of zero-MDR, will merchants want to pay MDR? That we have to observe in the future. As for now it looks to be double edge sword. As on one hand, the government is looking to increase the size of the people that routinely use UPI in transaction, and contrary to it, the government wants or one can say need to charge for the transaction. However, the things are confine in the womb of the future.
4. Despite the efforts put by the government of India, still the challenge of cash transaction hasn't completely died. In fact, March 2022, report is worry for the government, as the cash in circulation has increased by 9.2% which is an all-time high. How the government will keep this down, it is challenging task for the government. They need to come up with some kind of dynamic policy, so that the stability can continue in the UPI transaction.

Conclusion

Plastic money to Internet banking, and UPI groomed because of technological advancement in the IT sector and arrival of smart phone. Definitely the arrival of new modes of transactions have made the things easier and comfortable for its customers. Though, we experience some limitation as well as risk in operating these new features while transactions. Despite of the risk factors and others, the technological advancement in the field of banking system has lighten the burden on banks and their employees. Secondly, the arrival of internet banking and UPI system have brought the consumer easy reach to market. Now living away from the market or town or cities aren't a curse for the people, they simply with the help of these new process can link themselves to the market. Perhaps, the new modes of transactions have helped a lot in the grooming of the market.

Internet Banking and UPI system is revolutionary step that develops the m-payment technology by facilitating mobile phone to be used as a main payment device for both, giving and accepting. Indeed, it is the most advanced mode of payment system right now in the world. It is system by the virtue of which one make transfer of money between the two banks, allow customer to pay directly from a registered bank account to different merchants and traders, and that too without hassle of giving credit card detail, IFSC code, or net banking etc. if you have furnished it at the time of registering yourself as UPI holder. In nutshell, one can say, the main aim of UPI to simplify and provide single interface to money transfer with ease, quick and obviously hassle free. The other very important aspect is the initiative taken by the Union Government. By the virtue of technological advancement, net banking and UPI are getting acceptance, though still a slow manner, but going steady. This acceptance from my view point primarily due to the convenience and changing life style. Definitely, the flexibility and the cost effectiveness will enhance the penetration of UPI further among the rural and semi urban Indians. The supportive policy of the government may also give a passage to enhance the financial inclusion and adoption of net banking and UPI with government schemes will play pivotal role in the growth.

Finally, the advancement of IT sector and penetration mobile can be another, but significant aspect in flourishing the new system of transaction.

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Expenditures on Sport Apparel, Infrastructure and Mass Participation

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Abstract

The government is playing an important role in promoting and funding sports. so the government The activities financed by it require a budget. The purpose of the study is to critically analyse Government spending on sports with special focus on sports apparel, mass participation sports Infrastructure and college sports allocation. A qualitative research approach using document analysis is used for study. As a result, insufficient funds are available for sports apparel, mass participation and Sports infrastructure and college sports are developed at the grassroots level. Surprisingly low allocation for It's hard to understand college sports and participation etc. In a broader context, lack of investment College sports detract from MJPRU Bareilly's ability to produce high quality talented athletes. Maybe it Ultimately impact on performance of MJPRU in mega sporting events.

Keywords

Sports, performance, funds, government.

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Introduction

“We always see people who don’t have enough resources to survive, they die every day, but there are people who have enough resources but they don’t have people.” We don’t want goals, we want beans. Mexico Stadium during the 1986 Football World Cup. It covers fundamental issues people in developing countries face. of humanity, to grow and continue to exist, Only the cost of humanity is in line with the core values of sport. Success in any field is not easy until one is completely immersed in it, similarly in sports also no country or person can be successful by ignoring the basic values. A large section of the population comes from developing countries, so it is more important for developing countries to build sports and other infrastructure. Instead of being desperate for medals in international competitions, efforts should be made to provide infrastructural facilities.

Developing countries like India are struggling for strategic planning to win medals but there is a great need of improvement in basic sports facilities. For the past few years, the Government of India is also trying to provide basic facilities for sports, like the Government of India has launched the Olympic Podium campaign in 2014, in which financial help is given to national level players, so that they can fully participate in the Olympic World Championships and other global events. Can prepare for competitions smoothly. Today only the goal of winning a medal in the competition remains. Now in fact the goal is limited to victory only. Being on the medal list in international events has almost become a matter of prestige for every country. So, many of them don’t even hesitate to break the rules, Unethical means are used to show their superiority in the game. But sports in the broadest sense aren’t just about doing, Winning medals is also meant to teach life skills and support youth in their pursuit of excellence. Unfortunately Every country ignores these and focuses on competitive sports.

Sport is one of the most important aspects of daily life. It is invaluable for school / college going students helps them learn values like discipline, responsibility, confidence and accountability. College sports to build character and develop personal values of teamwork and discipline. Regardless of such evidence the fact that sports are neither given priority in the budget nor considered a part of the education system developing country. Certainly many countries have a health agenda that reflects the importance of being physically active but poor sports infrastructure and facilities that hinder people’s access participation in sports activities. Participation in physical and sports activities may not always be possible without appropriate facilities. Therefore, sports infrastructure and facilities are very important for sports participation and performance. China, for example, surprised the world not only with its performance at the Athens Olympics, but also with its incredible speed in catching up with the Western Games Powers. In the 1980s, China was nowhere in the Olympic medal table, then the Chinese President addressed the public in one of his speeches, that in the year when China will organize the Olympic Games in China, China will take the top position in the medal table in that Olympics. Since then the Chinese Govt. End scientists, coaches’ etc. people got involved in sports research and they did what the Chinese President had promised. The Athens Olympics were treated as “dress rehearsal” for China’s future triumphant performances Beijing 2008. Chinese young athletes used their Athens experience to outshine the rest of the world in 2008 by challenging the Americans and becoming a global athletic superpower. According to some Chinese Experts, Chinese government objectively identify the role of sports infrastructure in the Nation’s fitness Implemented a nationwide policy in 1995 to improve the level and spending on sports in China. Aristocrat class Sports were the main focus in China since the 1980s. The aim of his new policy was to increase the game Participation among the wider population. A large part of the money raised for China’s National. The fitness program was then spent on building sports facilities, especially in urban areas. As a result of In this program, Chinese mass sports participation has increased significantly during the last decade, which indicates .The relationship between participation and infrastructure. Hence, there is a need for adequate sports infrastructure. Successful in promoting sports participation.

Correlation between Infrastructures/Facilities and Performance

There is a significant link between the adequacy and performance of infrastructure/facilities. When the learning process is at the core of design priorities, facilitation makes a positive impact. The relationship between

facilitation and learning appears to be positive for performance. Poor learning facilities can foster negative attitudes, just as exceptional facilities can boost achievement. The human brain is a physical system and can be stimulated both positively and negatively by physical environment. Therefore, infrastructure has an important role to play in improving performance. As in China and Australia, the government is responsible for the development of sporting infrastructure. There the sports fields got a boost from the policies of the government. For example, China adopted sports, did that research and today China has emerged as a superpower in the world of sports. “Physical Health Law of the People’s Republic of China” In 1995, the main objective of the Chinese government was to create a sports policy for the country. In China, before 1990, sports were run by a government with financial support, but now sports have been corporatized by the Chinese government, due to which the results of sports are being seen well. And there has been a lot of improvement in the sports environment in China or it can be said that China has emerged as a global power in the field of sports.

Lack of basic amenities is one of the major hindrances in the process of development Sports in India. At the infrastructure level, it is suggested that there are several types of sports infrastructure. Important determinants of participation in various sports. For example, swimming pools, sports halls, playgrounds, tennis courts and parks in the suburbs of residents are relevant. With regard to sports facilities, the availability of space to play is also paramount. In addition, the location of facilities may also have a significant impact on individual participation. For example, the likelihood of spending additional time traveling to a facility decreases with an increase in the actual time a person needs. To access the facility. Therefore, the proximity of sports facilities is important. Therefore, it is believed that the presence of facilities in a residents’ suburb is positively associated with participation in related sports. Accordingly, the number of swimming pools in a suburb is positively correlated with swimming participation. The number of playgrounds is positively related to participation in football, volleyball, basketball etc. while the number of tennis courts is positively related to tennis participation, and park area in suburbia is positively associated with increased children’s participation in sports.

Indian context

Although India has witnessed phenomenal growth in sports over the years, sports infrastructure still remains a major area of concern. This hinders the development of sports in the country. According to the Constitution of India, sports is a state subject. State governments allocate funds for the development of sports. The priority of the state is to improve the sports infrastructure. It seems that there is no unique way to develop sports, unless the contribution of veterans to the politics of the game increases. Over the years there has been a lot of support from the central government such as Khelo India Youth Games, Khelo India Universities Games etc.

In the Tenth Five Year Plan, schemes related to sports infrastructure were withdrawn with the transfer to the states. This has created another hurdle. Non-availability of land for construction of sports infrastructure is another major hurdle. To promote sports-specific infrastructure by adopting Public Private Partnership (PPP) model and ensure sustainability of existing facilities.

The Indian hockey team was adopted by the Odisha state government on August 2021, which will remain the patronage of the state of Odisha till 2031, the announcement, was made by the state’s Chief Minister Naveen Patnaik on 18 August 2021. After this announcement, the hockey players thanked the Chief Minister of the state.

(Hockey India official press conference | 19 August 2021 Dainik Jagran / TOI]

Several schemes have been launched to promote sports at the grass root level. Panchayat Youth Krida Aur Khel Abhiyan (PYKKA) is one of them. The University Grants Commission (UGC) has also Schemes to improve sports participation and support colleges and universities to promote sports. Schemes (UGC) include providing financial assistance for development of sports infrastructure and equipment. During the Twelfth Plan (2012-2017) all universities and colleges (except Agriculture/Medical/Dental/Nursing/Private Universities) under Section 2(f) and 12(b) of the UGC Act.1956. But the financial support given for building infrastructure

as per international standard is very less, moreover, it is unfortunate that professional universities and colleges of physical education

Education and sports are also not equipped with modern infrastructure and facilities. Most of them still Improvisation method in teaching skills is used in case of traditional form of teaching method. From stadiums to sporting goods the supply is less and less than the demand.

Latest sports equipments are available in sports stadiums/schools/colleges, but most of the children do not get the opportunity to participate in sports due to lack of infrastructure or open spaces.

The Government of India spends 11% of the total budget in the sports budget, which are 3397.32 Crores for the year 2023-24. Earlier, up to 1% was being spent on the game. The sports budget of the year 2023-24 has been the highest sports budget ever. In the national budget of small countries in the world, a separate budget is given for sports, such as the budget of sports is 15-18% of the national budget of Cuba. Today in India also many state governments have given priority to sports like Haryana, Uttar Pradesh the government has focused on the following points in the sports budget for the year 2023-24:

1. A provision of Rs 30Crores is proposed for the **Khelo India University Games**.
2. Rs 50Crores are proposed for the construction of sports facilities in the state with private participation.
3. 15Crores is proposed for award of international players.
4. 25Crores for the establishment of sports development fund
5. District Meerut Table. 300Crores is proposed for the establishment of Dhyan Chandra Sports University
6. 20Crores, 50Lakhs proposed for construction of sports college in Saharanpur, Ballia and Fatehpur.

Even today, the grassroots structure of the game is not uniform across the country.

Lakes of people participate in sports competition. There are an estimated 15 to 18 lakes schools and colleges in India, out of which about 20 -25 lake students have facilities for sports and physical education.

The All India Educational Survey estimates that less than half of Indian schools have sports facilities. About

Every city lacks proper courts and stadiums. Commercial aspects to generate revenue from

The pre-existing infrastructure has also not been explored. These are some of the major barriers in building and maintaining sports infrastructure in India. Sports

Sector in India

Sports are one of the fastest growing sectors and export-oriented industries in the world. However, In India, a lot of attention is given to education and sports are included in the same curriculum, due to which the market of sports has been limited to one scope. No parent wants to divert attention from education. Due to which the level of participation in the game has decreased. If the previous years are assessed, then the level of sports in India has improved. After countries like China and Japan, India comes as the largest manufacturer of sporting goods in Asia, its share in the world trade only. 0. 56% is around the percentage. In 2019-20, India stood at number 24 in the export of sports goods. India ranks 5th in the world in the manufacture of sports goods. In 2022, the sports industry has grown by 49%, in which the revenue is more than 14000 Crores. The Indian market is unsaturated in terms of brands. Indian manufacturers of sports goods make good sports goods for foreign countries, but all those products are not available in the Indian market.

In addition, the use of sports equipment requires approval from international federations. In international and national level sporting events, foreign brands are used more than domestic ones.

The brand is approved by the international federation. Due to which sports manufacturing in India is mostly done from small and medium scale. Small and Medium Enterprises, they mostly work on contract manufacturing basis as around 25%-35%. Most manufacturers rate foreign brands better than Indian brands in terms of technology and quality.

An ICRIER study suggested that the private sector will have to participate in the Indian sports market, only then there will be progress in the sports market, due to which the market will take a wider form. 51% FDI

will be available in the multi-brand sector; it has also been found in the Indian sports market that some rules need to be changed as these rules apply equally to the retailer and the producer. Once these are resolved, the efficiency and productivity of the sector will increase. It was also observed that various export incentives.

Organizations in the sports sector do not operate in a uniform manner. The study suggests a course of action for sports organizations. Government policy and financial assistance is very important to promote the sports sector. National sports organizations have to work in a professional manner, transparency in all policies and regulations is essential, various export promotion councils have to work together to develop and market India's exclusive brands.

Disparities in Sport and Technology

There is a huge disparity in the harmony between technology and sports mainly due to the underdevelopment of sports in India. The reason for this is that no serious initiative is being taken by the government to add sports.

Along with modern technology, we are lagging behind in sports. while playing. It is very important for human development; leadership quality is developed through sports, which develops the ability to lead at the global level. With the development of sports, the possibilities of its economic development also arise. Resulting in the manufacture of sporting goods. The main factor of China's success is its investment in technology, health and sports education, which gave China a new economic power. Due to which China has made global economic growth very fast. India had less investment in these key sectors and hence its economic growth was not very good. At present, in the last years, India has improved its economic condition due to which India is the 5th economy of the world today.

When we talk about sports, we are completely dependent on imports for infrastructure and other facilities. This leads to increased prices of equipment/features and monopoly of suppliers. Infrastructure, consisting primarily of synthetic court/flooring and equipment, India imports extensively. When we procure imported material for improvement facilities, unfortunately we are neither capable of benchmarking the quality of the products, nor do the supplier agree on quality testing after installation to check that the products supplied are as per Yes or No. Also, it is unfortunate that sports professionals are not equipped with any. Technical knowledge of testing of products, which helps the suppliers to deceive the users on their supplies. Therefore, purchases are made on the basis of quantitative information provided by the suppliers. Which does not always ensure quality products? This constrains potential improvement areas and the achievement of desired quality levels for performance. As a result, most of the time we are left with.

“There is no option but to trust the suppliers. However, it is recommended here that sports professionals should refer to expert civil engineers or the relevant Indian Standard (ISI) code of practice for laying special flooring and its maintenance. The codes are readily available at Indian Standards Institute, Good Book stores and online at nominal prices.”

Synthetic flooring has currently become a standard asset in any type of sports facilities.

The first floor only had a wooden floor option. Wood floors are subject to dynamic loads in use, allowing players to avoid or minimize the effects of complex injuries. But in today's sports floors, mostly synthetic floors are used, because its cost is very less.

Deformation under load, impact absorbing ability and impact energy restoration, i.e. the amount of energy returned to a player in the form of reaction from the surface they are performing on.

Keeping in mind the safety of a player, sports flooring is one of the sports resources to play the game effectively. Synthetic flooring in India is just an eyesore. Most of the synthetic flooring installed in India can look either too hard or too soft and the desired level of elasticity is not maintained. User is not measured due to lack of knowledge of shock absorption and vertical deformation. Fundamentally, despite the government's work to improve procurement, there is still a lack of information and knowledge sharing on pricing and quality of products with users. What we really need is a mechanism to break the monopoly of suppliers that perpetuate

disparities in the quality of sporting goods. It has therefore become a challenge for universities and colleges to manufacture sportswear infrastructure due to disparities between the quality and the high cost of importing them. Therefore it is important that an initiative should be taken by the government to focus on manufacturing of sports goods and synthetic flooring indigenously, so that the cost of development of infrastructure and facilities is reduced.

Conclusion

It is well documented that sports infrastructure plays a vital role in achieving excellence at the global level. If the quality of the playground is good then only the training will be good and when the training is good then only the performance of the game in the competitions will be good. Due to which the production of national and international level renowned players increases, but also encourages new players. Young population of the country to participate in sports activities, do not participate in sports due to lack of sports infrastructure, serious hindrance in sports participation in India is lack of smooth sports facilities. Most countries of the world Dependent on imports of sporting goods and equipment. Forced to import sports goods and equipment which has not only increased its prices but also made sports training costlier. To improve sports facilities as well as access facilities that makes them inaccessible to most of the population. India can be one of the leading countries in the export of sports goods made in India. This can be possible only when there is synergy between governments machinery, sports training, sports science and engineering technology.

The following initiatives by Government may likely improve sports infrastructures and facilities in India :

1. It is necessary for the government to invite Technical Institutes to put forward innovative proposals to develop engineering skills and technology in sports sectors and facilitate building indigenous sports facilities in schools and colleges.
2. It is important to provide seed grants to the technical and medical institutes for conducting high potential research in sports and building sports performance centers to help athletes and coaches.
3. Government should ensure that technical, medical and sports institutes are significantly working together to form the net force in improving sports in India as a whole.
4. Government should develop plans to boost diversity of engineering apprentices for technology-intensive sports equipments, which are being now imported.
5. Government Fund to be provided to technical Institutes for research study on manufacturing of affordable play equipments and synthetic surfaces.
6. Develop play fields equipped with weatherproof outdoors exercise equipments for children in every residential areas and community by adopting public private partnership (PPP) model.
7. Government should declare a tax exemption for those who can significantly invest in sports development.

We need people with expertise in technical skills to manufacture equipment and facilities subject to the rules of the game for performance. Even though India has the third largest scientific system. It has no contribution in the field of technical manpower, sports, fitness and health in the world. There is quite a big difference between sports and science technology. As a result, sports in India are lagging behind.

This will continue until we make a joint venture of sports science and engineering technology. There is a need for continuous improvement of sports equipment and facilities to adopt a more proactive approach to the development and exploitation of new science and technology at our disposal. To initiate this proactive approach, we must be innovative in bringing together the best of research and technology in a planned integrated programmed. We must proceed on an urgent basis to set up a center for “Indian Sports Innovation, Science, and technology”, to boost sports infrastructure and facilities indigenously. This holistic approach can help improve sports in India. If we lose out on sports, not only do we lose opportunities but we would be missing one of the most hilarious aspects of life.

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A Comprehensive Study of Evaluation in Education

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Abstract

Evaluation is a broad term which includes testing and analysis and also a detail explanation of student's behavior. Evaluation is a continuous process, not a single time testing. It helps in creating of student's values of judgment, academic knowledge & accomplishment. Evaluation assists in the growth of an academic program, the estimation of its attainments, and the enhancement of its efficacy. It performs a number of tasks in educational system, including educational quality control and the selection of higher-quality institutions. The objective of the study to find out the educational evaluation is described in terms of interaction with three important components of the educational process. We discussed the need, characteristics, and role of evaluation. The term evaluation, assessment, and measurement, are also defined to help distinguish these concepts. Finally, we found that evaluation is a comprehensive term that is essential to a successful teaching-learning process.

Keywords

Continuous, Comprehensive, Development, Education, Evaluation.

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Introduction

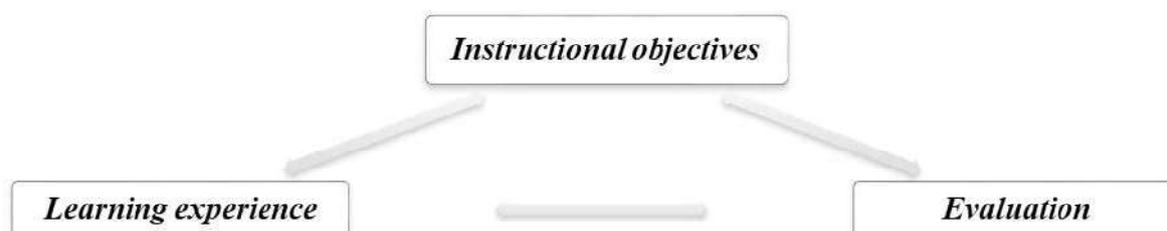
Evaluation is an essential part of the teaching-learning process. It assists teacher and pupils in developing their teaching and learning. Evaluation, specifically educational evaluation, is a set of actions aimed at assessing the overall performance of the teaching-learning system. We are well aware that the teaching learning process comprises the interplay of three major components: objectives, learning experiences, and student's appraisal. Evaluation is a purposeful, continuous process of collecting, exploring, and explaining necessary information in order to make academic decisions. Evaluating is necessary part of life. In academic, evaluation is very significant since only evaluation can an instructor assess students' widening and extension, improvements in their actions process in the classroom, and the efficacy of the instructor's own teaching in the classroom. In a nutshell, evaluation has become an essential part of any teaching and educational environment. In reality, development is critical in deciding what students learn and what teachers teach. It has a considerable effect on our educational system. *National Curriculum Framework for School Education, 2,000.*

“Teaching for successful learning cannot occur without high quality evaluation”.

Development is an important element of the academic process. Development is the process of making decision on student learning and accomplishment, performance, and continuing education. In education, assessment often takes the form of measuring student achievement of course outcomes and information obtained, as well as the quality of student performance. With this assessment, learning needs can be identified, and additional instruction can be given to help students learn develop competencies. Evaluation, especially, educational evaluation, is a set of actions aimed at determining the overall efficacy of a teaching-learning system. Evaluation is the collecting, investigating, and explaining the data relating to any component of an educational programme as part of a recognized procedure for determining its effectiveness and efficiency.

The words “assessment” & “evaluation” are commonly used as the same. For comparing the quality of an act or a deed's output to set a standard, evaluation is used. The crux of evaluation is that an instructor helps to assist a mentee or student and ready to do everything for providing the student necessary qualities that will be helpful the pupil to improve his/her performance. In terms of educational programmes, assessment entails gathering data prior to the development of the programme, throughout the development process to give a foundation for continuous modification, and after the programme has been implemented to assess its efficacy. First and foremost, the instructor must be aware of the educational goals and objectives. More precisely, the instructor must develop instructional objectives for distinct lessons within a subject's systematized and rearranged curriculum. Second, the instructor should be able to design effective communication channels. Finally, the instructor will assess the extent to which these goals have been fulfilled.

Evaluation is an important part of any teaching learning programme. In fact, there can be no teaching or learning with assessment. Instructional aims are the basis of both teaching and learning, which helps guide the students. The diagram below depicts the relationship of aims, instructional process or learning experience, and evaluation in a teaching programme:



The instructor evaluates the student's progress regarding teaching aims and the effective learning experience, methods, and teaching aids used to achieve those aims.

Definitions of Evaluation

Tyler (1950) defined evaluation as “a systematic process of determining the extent to which educational objectives are achieved by pupils”.

Stufflebeam (1973) “Evaluation is the process of delineating, obtaining, and providing useful information for judging decision alternatives”.

American Evaluation Association (2014) “Evaluation is a systematic process to determine merit, worth, value or significance.”

Evaluation does not always take place at the end of the curriculum. It is of great concern to know that a student is not only able to achieve the academic aims but also the progress of the student during the teaching and learning curriculum. As a result, it is an ongoing process.

Characteristics of Good Evaluation

Validity: The degree or extent to which a tool actually, accurately, efficiently, and infallibly measures what it is supposed to measure. The major categories of validity that must be met by a tool for evaluation are satisfied validity, apocalyptic validity, congruent validity, factorial validity, criterion-related validity, and others.

Reliability: The level of consistency and exactness with which an instrument measures what it is formed to measure is referred to as its reliability. The consistency or stability of scores received by the same person under different examination settings.

Impartiality: A tool is said to be impartial when it is free from personal bias in both understanding its extent and rating the replies. One of the primary prerequisites for sustaining all the other characteristics of a good life is impartiality.

Feasibility: In terms of cost, time, and simplicity of application, evaluation techniques must be acceptable, empirical, and systematic. It may be an appropriate process for evaluation, but it may not be implemented. This is not something to be promoted.

Fairness: All students should be evaluated fairly. This can be accomplished by appropriating reflecting on a variety of expected behaviors, as described in the course objectives. To ensure fairness in evaluation, students should be made aware of how they will be assessed. This understood that students must be given information concerning assessment, such as the nature of the items to be examined and the exam’s format and structure.

Usefulness: The evaluation feedback must be made available to the students in order for them to show their present strengths and weaknesses. Students can think of ways to develop themselves if they are aware of their strengths and weaknesses. All of the criteria for their improvement should be discovered during the evaluation.

Need and Importance of Evaluation

In the teaching process, evaluation is inevitable. It is inevitable in classroom education, as it is in other domains of pursuit, when decision must be taken, regardless of how basic or complicated the issues are involved. Evaluation is a necessary step in the decision-making process. The requirement for assessment is so inherent in the teaching-learning scenario that even a cursory examination appears to point to the benefits of organized use of organized evaluation. Instructors may make better assessment decisions with the support of assessment. We are all aware that we participate in different parts of the teaching-learning process, such as:

- i. Complete all the objectives in the classroom.
- ii. Determine if students have learning disabilities.
- iii. Determine your preparation for new teaching opportunities.
- iv. Form classroom groupings of pupils for particular activities.
- v. Aid pupils who are struggling to acclimatize.
- vi. Develop progress reports for students.

Role of Evaluation

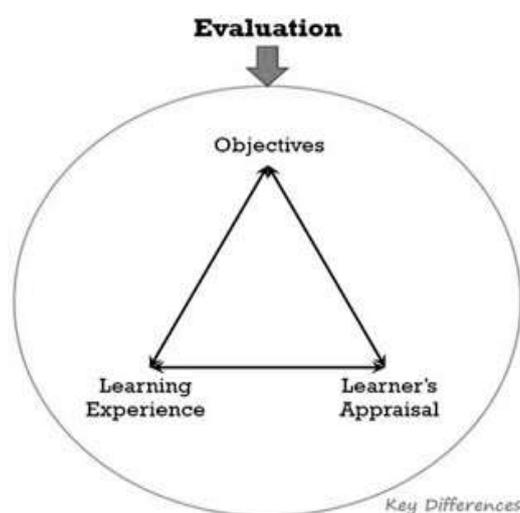
The evaluation approach is critical in the teaching-learning process because it helps with the development of learning objectives, the design of learning experiences, and the evaluation of learner performance. Apart from that, it is quite beneficial in terms of strengthening and the curriculum. It blames society, parents, and the educational system.

Teaching: The reason of evaluation is to examine the success of teaching, informative strategies, procedures, and techniques. It provides teachers with feedback on their teaching as well as learners with feedback on their learning.

Society: Evaluation holds society responsible for the needs and learning processes of the employment market.

Curriculum: Evaluation contributes to the enhancement of the curriculum, tests, and instructional materials.

Parents: The most visible form of evaluation is the perceived requirement for frequent reporting to parents.



A basic description of the functional assessment in the teaching-learning process contains four separate aspects: objective, learning experience, learner appraisal, and their interplay.

Types of Evaluation

According to Function	According to Nature of Credentials	According to Motive	According to Category
i. Placement ii. Formative iii. Diagnostic iv. Summative	i. Norm-referenced ii. Criterion-referenced	i. Diagnostic ii. Aptitude iii. Achievement tests iv. Proficiency tests	i. Direct ii. Indirect

Placement evaluation: The important term for placement evaluation is “entry behaviour”. Entry conduct is assessed shortly before teaching begins; an instructor must be aware of pupils’ prior knowledge. This assists instructors in organizing teaching-learning activities based on learners’ prior knowledge. The effectiveness of the placement evaluation determines the future success of the educational procedure.

Formative evaluation: The goal of this evaluation is to provide feedback on students’ progress by identifying learning gaps and weak points, so that the instructor can put together remedial programmes for students’. It is done continuously throughout the course period. It also provides feedback to teachers on the effectiveness of their teaching methods, allowing them to improve their instructions.

Diagnostic evaluation: The main reason of diagnostic evaluation is to find out the underlying cause of weakness in a students’ learning, but it is also needed even prior to instruction in order to place

the student properly by looking at her standard of achievement. This helps the instructor correct the issues immediately, thereby upgrading the course. The distinct assessment goes a step further and tries to provide a description for the possible causes of the problems in learning.

Summative evaluation: It is conducted at the end of a course of instructions to the extent to which the previously decided objectives have been achieved. In other words, it is the evaluation of students' achievements at the end of a course. Distinct Assessment includes oral reports, projects, term papers, and instructor made achievement tests, and it presents how well or how easily the students are in achieving the aims of instruction.

Norm-referenced evaluation: A norm-referenced Assessment exam is used to determine an individual's standing in relation to the presentation of other people on the same test. It is commonly used in competitive tests. It is an effort to interpret the test results in terms of the presentation of a certain group. This group is a "norm group" since it acts as a reference point for making decisions.

Criterion-referenced evaluation: This assessment is used to determine a person's status with reference to a specific achievement domain. Thus, criteria assessment establishes a person's status with reference to explicit behavior. A criterion-referenced assessment or exam is used to assess objectives, which is why it is referred to as an "objective-based test". The aims are measures with regard to student retraining.

Diagnostic Test: Diagnostic test assists us to know "area of learning" in which a student may require more focus, instructions, and give us a profile of what the student is aware of and is unaware of. A Diagnostic Test may include a battery of sub-tests covering several themes.

Aptitude Test: These tests primarily have a prior purpose in that they assist a person in knowing futuristic skills and desired attributes that are required for a person to be suitable to accomplish a given activity. Aptitude Assessments are commonly used to choose candidates for particular courses.

Achievement Test: As reflects from its name, these types of tests attempt to assess the degree to which a course's objectives were met. The normal end of course may be used as an example of an accomplishment test.

Proficiency Tests: Proficiency tests are used to determine a person's overall ability at a certain particular time. A justified exception to the ability standards for learners of a certain status (matriculated or graduates) should regulate their reach.

Direct Grading: In direct grading, an individual's performance is evaluated in qualitative terms, and the examiner's assessment of that performance is immediately reflected in letter grades. Direct grading has the advantage of reducing inter-examiner variability. Transparency is lacking in direct grading.

Indirect Grading: An examinee's performance is first evaluated on the basis of marks then converted to the grades by various approaches. There are two types of indirect grading:

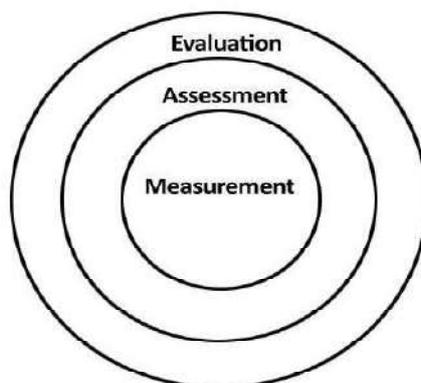
- **Absolute Grading:** This method is a classic method of assessment that is based on a predetermined level that serves as a benchmark for evaluating student achievement. It entails converting marks into grades, regardless of the distribution of mark in a topic.
- **Relative Grading:** This type of grading is commonly used in general public exams. In this method, a pupil's grade is determined by the group's performance not by a one man show. "Grading on the curve" is a popular term for this kind of grading.

Measurement: As the description says, the measuring process entails performing real measurements in order to establish a quantitative meaning for a grade. Measurement is therefore the act of assigning numerals to objects, quantities, or events in order to quantify such features. To compute a child's success in the classroom, you must collect quantitative measures of the child's individual scores. The process of quantification is involved in measurement. Quantification specifies the degree to which a specific property

is present in a given object. It has been observed that measurement in any field always involves three essentials:

- i. Identifying and defining the quantity attribute or variable is going to be measured.
- ii. Identifying the set of operations that can be used to make the attribute or variable visible.
- iii. Creating a system for converting observations into quantitative expressions of degree, extent, or amount.

Thus, we may conclude that evaluation entails both assessment as well as measurement. It is a broader and more encompassing concept than evaluation and measurement. It can be represented as:



As a result, the assessment process is fairly extensive, which is highly wanted for successful teaching and learning.

Assessment: The word assess comes from the Latin word assessor, which means, “to sit by or help the judge.” Therefore, it becomes reasonable in assessment studies to extend the word evaluation to the act of acquiring data and transforming it into an accountable form. A judgment may then be formed on the basis of this evaluation. Evaluation in the classroom refers to different methods and outputs used to reflect the nature and extent of students’ learning. This also takes into account the degree of relationship between such learning and the instructional objectives. According to some experts, while evaluation is frequently employed when the subject is not a person or group of people but the efficacy or technique or instruction, assessment is typically used for assessing or deciding on human traits. To get measurement data from different sources, a variety of equipment are typically utilized. These include examinations, aptitude tests, surveys, and observation programmes, among other things.

Brookhart and Nitko (2019) figured out five guidelines for effective evaluation:

- Identify the learning objectives (outcomes or competencies) to be assessed.
- Use multiple assessment strategies and indicators of performance for each outcome.
- Keep in mind the limitations of assessment when interpreting the results.
- Match the evaluation strategy to the learning goal.
- Meet the pupils’ needs.

Conclusion

Evaluation is an important element of every academic system. It is a systematic procedure used in the class of students or school to improve skills with the data they need to make critical decision. A good, goal-oriented teaching-learning sequence comprises well-defined objectives, classroom activities, and adequate feedback to help students recognize their own strengths and deficiencies. Teachers must acquaint in the concept of assessment and the methods for assessing in order to make their teaching more purposeful and successful. Assessment and evaluation are important elements of the learning process because they linked to instructional and learning outcomes both. They should understand the goals that will be utilized to test them most effectively and how to use evaluation to make judgments. An assessment is used to compare the performance quality or work fitness against a level. Hence, we came to the conclusion that assessment is a broad term that is crucial to an effective teaching-learning process.

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Customer Service in Co-operative Banks

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Abstract

Customer satisfaction is a key indicator of the operational and financial performance of a bank. As the number of customers grows, traditional one-to-one customer interaction is unsustainable. This sets the goal for financial services sector to use customer insight to understand how to create an effective multi-channel customer experience that is personalized and relevant, differentiated by value and respectful of privacy concerns. As global competition increases and products become harder to differentiate, banks have begun moving from their product-centric attitude to a customer-centric one. The bridge of disconnect, over the years, has been shortened after many banks started methodically identifying and filling in the gaps through customer relationship management which, now is seen as the way forward to thrive in the 'e-future' until recently, banks with their antiquated approach to customer relations, thought that all customers are created equal, and made a lot of decisions based on instinct, not data. Now with analytical CRM tools, they are able to see for the first time which customers they are making money from and which customers are costing them money.

Keywords

Customer satisfaction, traditional, Global.

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Introduction

Customer satisfaction largely depends on the extent to which their needs and expectations are being fulfilled. Customers have various expectations for banks to consider. Some of expectations relate to the quality of the bank personnel. Some may relate to the place where the bank is rendering the services and some to the process the sequence and the flow of services involved in their rendering.

From the study of bankers' perception, it can be concluded that CRM is a strategy that is being implemented by the banks in India for effective service delivery to their customers to achieve higher levels of customer satisfaction and strive for customer delight. (Jasveer Kaur 2012)

The study suggested that if the government-owned companies want to increase service quality level as compared to the private sector, it should enhance the level of service on items, namely, modern equipment and technology of tangibility, company shows sincere interest in solving customer problems' of reliability, Employees constantly communicate with customers and give prompt services to customers of responsiveness, and operating hours convenient to all their customers, Understand the specific needs of their customers and Commit to ethics and promote ethical behavior of empathy dimension, where the perception of service quality of the private sector is significantly higher than the government owned. (Rohit Kumar and Manjit Singh 2013)

The proposed studies identify service quality attributes to improve with the aim of offering bank services characterized by higher levels of quality. The services provided by public banks and private banks have great significance. Last but not least, the employees are maintaining a good relationship with their customers. (Yahoda. R. & M.C. Duggappa 2011)

CRM is the seamless co-ordination between sales, customer service, marketing field support and other customer-touching functions. It integrates people, process and technology to maximize relationship with all customer and partners, e-customers, distributional channel numbers, internal customers and suppliers. CRM results in a number of benefits to an organization like increased sales revenues, increased margins, improved customer satisfaction ratings and decreased administrative costs. (Muthppan P.K. 2006)

Objective of the Study

To analyze the customer satisfaction of Public Sector Bank, Private Sector Bank, Regional Rural Bank and Cooperative bank.

Research Methodology

The Study is based on primary and secondary data. Primary data were collected with the help of well structured questionnaire. It was based on Random sampling method. The questionnaire had two parts. The first part consists of demographic profile of the customers and the second part of various dimension of customer satisfaction. The dimensions were: Account opening, Deposit, Withdraw and Pass book updating Services of banks. In the field surveyed, there were only three private banks HDFC, AXIS and ICICI bank. The secondary data also collected from various books, reports, journals and website. For analyzed percentage method is used.

Hypotheses Testing

- There is no significance difference of Account opening, Deposit, Withdrawal and Pass book updating facilities between PSBs and Cooperatives bank.
- There is no significance difference of Account opening, Deposit, Withdrawal and Pass book updating facilities between Private and Cooperatives bank.
- There is no significance difference of Account opening, Deposit, Withdrawal and Pass book updating facilities between RRBs and Cooperatives bank.

Limitations of the Study

The field survey was carried out in Tehri Garhwal and Dehradun District of Uttarakhand. The results therefrom will not be relevant for metros and like wise cities and localities. The features of Uttarakhand state and particularly of selected are will restrict the utility or applicability of the finding to other parts of the country that are not comparable to the surveyed locations.

Sample Profile**Responders' Demographic Information****Table - 1****(A) Occupational Structure of the customers**

Agriculture	112
Salaried	360
Trade	259
Industry	14
Retired	15
Others (Students, House wives)	168
Total	1000

(B) Age Group-Wise Breakup of the customers (age year)

Up to 25	88
26 - 45	570
46 - 60	264
61 - above	78
Total	1000

(C) Objective of maintaining the bank account

Salary	229
Trade Needs	190
Saving Purpose	507
Govt. Scheme	24
Others	50
Total	1000

(D) Reason for Choosing the Particular bank

Reputed Bank	130
Near to work place/home	520
Salary account	222
Issue of draft & other facilities	128
Total	1000

The age group wise classification of the respondents reveals that fifty seven percent of customers are aged 26-45 years old and about twenty six percent are aged 46-60 years. The occupational structure of the sample depicts that about thirty six percent customers belong to salaried class and twenty six percent to business class. Among the reasons for choosing a particular bank, half of the respondents stated the nearness of the hands to their work place or home. The salary accounts seem to be a large part of individual banking. The purpose of opening of account in twenty three percent cases was getting the salary disbursed by their employers.

Table - 2: Account Opening Services

Customer response	Public Banks	Pvt. Banks	Cop. Banks	RRBs
Good	50(20.0)	30(12.0)	28(11.2)	20(8.0)
Very Good	5 (2.0)	19(7.6)	36(14.4)	5(2.0)
Satisfied	185(74.0)	196(78.4)	174(68.8)	210(84.0)
unsatisfied	10(4.0)	5(2.0)	14(5.6)	15(6.0)
Total	250	250	250	250

Bracket are indicate to percentage value

Out of 1000 customer surveyed, 210 have responded that they satisfied the account opening service in Gramin Bank. The percentage share among in public sector bank is 22% and cooperative bank customer 68.8% respectively. There are 36 customers selected that Cooperative banks account opening service are very good. So, the customers of Cooperative banks are more highly satisfied compare to the customers of Public sector bank, Private bank and RRBs.

Model citizen charter proposed in IDBA code for banking explains standard time for different banking transactions. Banks can modify them as per their situations. Nationalized banks have published their citizen charter on their website. As per it, 20 minutes are assigned for opening of account. They have to follow KYC Norms for account opening. Applicant has to search for introducer for this purpose. Sometimes applicant face difficulties while arranging Address proof and photo identity. One of the customers shared his experience while opening account in a branch of State Bank of India where he had to face several difficulties while verifying his address. His ration card was not of the same place nor did he have landline phone at home. Neither was he an income tax payer. When the young manager of the branch got to know about this he suggested to submit an envelop of a registered post which can be considered as an address proof. His account was successfully opened the next day. This suggests that as per the needs banks need to adopt the changes in products and services otherwise survival in the market will be difficult. During survey a customer told that when he went to bank and asked for account opening form, he was denied saying that the concerned employee will come and give. There were hardly 3-4 customers at the branch that time. After strolling for some time they returned. Such type of ignorance towards customers is a serious marketing failure.

Finding references of the applicant during account opening phase is a difficult task.

Table - 3: Deposit Services

Customer Response	Public Banks	Pvt. Banks	Cop. Banks	RRBs
Good	45(18.0)	25(11.2)	35(14.2)	21(8.4)
Very Good	5(2.0)	19(7.6)	33(13.2)	3(1.2)
Satisfied	190(7.6)	198(79.2)	157(62.8)	206(82.4)
unsatisfied	10(4.0)	5(2.0)	25(10.0)	20(8.0)
Total	250	250	250	250

Bracket are indicate to percentage value

In the category of very good the percentage of RRBs customers is 82.4% while it is only 62.8% in case of Cooperatives banks. There are 10 percentages of customers is unsatisfied and 35 percent customer select the option of Good deposit services of cooperatives banks.

The basic function of banks is to accept deposits. Opinions of customers regarding the transactions of deposits were collected. Compiled data suggests that private banks are doing much better in this category compared to other bank groups. The frequency of unsatisfied customers is much less in these banks. In the study area there are new branches of private banks where customer crowd is low. Customers do not like standing in long queues anymore. Cooperative banks come second in Deposit related mechanisms. It's noteworthy that ratio of both highly satisfied and dissatisfied customers is high. Customers are personally connected to staff of cooperative banks and that is the reason behind excellent customer services. There are fewer crowds in these banks. The main reason behind the negative feedback of customers is their overall view of the bank and not limited to services provided by them. Limited product services, no CBS banking and ordinary branch environment are some of the reasons behind criticism of cooperative banks. In case of government banks, majority of responses have been under 'good' category and very few responses have been under 'very good' and very few responses under 'bad'. As per the survey there are two types of branches of Government Banks, less busy and busier. In both the types' probability of difference in services is there. In comparison, regional rural banks are the most backward because of delays in adopting new technologies, limited product categories and no CBS.

Table - 4: Withdraw Services

Customer Response	Public Banks	Pvt. Banks	Cop. Banks	RRBs
Good	42(16.8)	25(10.0)	32(12.8)	21(8.4)
Very Good	3(1.2)	20(8.0)	6(2.4)	3(1.2)
Satisfied	155(62.0)	198(79.2)	189(75.6)	181(72.4)
unsatisfied	50(20.0)	7(2.8)	23(9.2)	45(18.0)
Total	250	250	250	250

Bracket are indicate to percentage value

Data suggests that Private Banks are the best performers in withdraw related services as majority of banks under very good category come under private sector. Similarly the frequency of unsatisfied customers is much less in private banks as compared to others. There is a perception in banking that young staff is more efficient. A senior officer of State Bank commented that in situations decision making is totally different among young and senior staff. As per him the decision itself suggests that it was taken by the officer belonging to which age group. This naturally gives benefit to private banks as all staff members are young. It was seen that Axis branch Cashier was always accompanied by an assistant for organizing the wad of notes and counting them twice. After a personal interaction with customers it was found that they prefer to use private bank ATM's as they always have cash and are in working condition. Government banks have an image that their ATM'S are less trustworthy in comparison to private banks; this is a matter of great concern.

Cooperative banks rank second in the services of money withdrawal. Less crowd and personal relationships of staff with customers are the main reasons behind it. Rate of unsatisfied customers are very high in Government banks. As these banks are mostly occupied with salary and pension distribution dates, this further adds to the inconvenience to customers. Banking specialists suggest that banks should develop special arrangements on crowded days but this is not followed. Regional rural banks are incompetent in application of technology and their functioning is as slow as government banks.

Table - 5: Pass Book Updating Services

Customer Response	Public Banks	Pvt. Banks	Cop. Banks	RRBs
Good	40(16.0)	35(14)	31(12.4)	28(11.2)
Very Good	3(1.2)	30(12)	8(3.2)	2(0.8)
Satisfied	152(60.8)	140(56)	198(79.2)	178(71.2)
unsatisfied	55(22.0)	45(18.0)	13(5.2)	42(16.9)
Total	250	250	250	250

Bracket are indicate to percentage value

In the case of passbook updating, compiled data of majority of customers show that those having accounts in Cooperative banks are mostly satisfied. Their modus operandi involves mandatory updating of passbook after every transaction which does not leaves any inconvenience for customers. Private Banks come second in this service. In fact the usage of passbook is optional in private banks. Some banks have fixed excess minimum balance limit for issuing of passbook. These banks send quarterly account statement to customers which results in dissatisfaction as they do not receive account statements regularly and have to visit branch and request for the same. In HDFC bank, written application is required for account statements. This fact has also come to light that banks send the account statement to the email id of customers. Such customers are also there who have submitted their email id to the banks but do not check their mails regularly. This makes sharing of statements through useless. In such cases customers and banks should reach out to some other alternative after interactions.

Passbook is the most important document of the contract and is confidential in nature. But banks do not take necessary precautions regarding this. Post office issue a receipt on deposition of passbook for any purpose. Banks can also follow the same. This will solve the purpose of meeting the customer interests and minimizing complaints.

Table - 6: Chi Square Analysis: Recond value of X2

Indicator	PSB & Coop.	Pvt. & Coop	RRB & Coop
Opening of Account	30.78	6.88	28.59
Deposit of Trnsaction	31.45	22.62	10.57
Withdrawal Transaction	15.70	17.14	.35
Pass book Updating	35.40	40.59	20.11
Refrences Vaule	7.82 at 5% d.f. 3	7.82 at 5% d.f. 3	7.82 at 5% d.f. 3

Source: Based on field survey classified into table 1 to 4

(A) Comparison between PSBs and Cooperative banks: The hypothesis that there is no significant difference between the quality of service of PSBs and Cooperative banks is rejected because calculated value of chi square in case of each and every parameter is more than the quoted reference value of the chi square.

(B) Comparison between private banks and Cooperatives: The hypothesis that the standard of customer service is the standard of customer service is the same in private banks and cooperative banks is accepted in respected of opening of account the reason is very open that the cooperative use very simple and precise form for the purpose with least formalities. The private banks use detailed form along with all other formalities but executives manage in a manner that customer find themselves but the executives manage in a manner that customer find themselves hassle free and equilly satisfied. Among other indicators difference is registered in quality of service but they are incomparable in their nture, for example cooperative bank do not have more ATM but private bank customer are much ATM friendly; Pass book updating is not relevant for private banks as often they sent montly statement instead of maintaining pass book;

(C) Comparison between cooperatives and RRBs: The comparision between the RRBs and Coeoperatives indicate for withdrawal transaction also the value of chi square is near to he refrences value as compared to other facilities. The RRBs have got computerized there working and branches are transformed into customer friendly ones. They enjoy same advantage of being locally customers perhaps these factors put them in better place.

Observation

- Present time the co-operatives banks have to improvement themselves up in term of professionalization and modern technology.
- Co-oeprative bank maximium branches established in hilly areas. So banks should incrase the quantity of ATM's in hilly areas.
- Co-oeprative bank should establish Amount Deposit Machine and Pass book Updation machine.
- In the attitude of ciber crime co-operative bank is the best option for safety of money.
- Customer deposit insurance should provide in co-operative banks.
- In hilly areas lack of network problem pass book updation machine is not updating pass book after this the SBI bank did not update pass book from branch.
- SBI branch did not update the pass book of other sbi branch account.
- In hilly areas bank did not open ATM. if atm will open than cash not be available in machine. SBI Branch employes said to customer swipe debit card iside of branch.
- During the working hour between 1PM to 2 PM and 3PM to 4PM are not more crowed at SBI branch in hilly areas. Because customer is belong to interior areas and they want to return to home. So morning 10 AM to 1 PM are more crowed in SBI branch.
- The cooperative banks are facing many serious concerns at their operational and governance level but they are observed better in respect of quality of service. One of important factor could be that often their customer are their neighbors only and the nature of relationship there is formal type.

- Cooperative and Private Banks are equal in opening of account as per customers survey results but they are not comparable in case of ATM and pass book updating like facilities. Cooperative carry personal relations with customers for local staff and small clientele circle but they cannot be compared with air conditioned and furnished branches of private banks.
- The customers of Cooperative banks are more highly satisfied compare to the customers of Public sector bank, Private bank and RRBs to account opening services of banks.

Conclusion

Dissatisfy service are more negative word and satisfaction are positive word for banking sectors. The banks always have to aim higher satisfaction because customers who are just satisfied still find it easy to switch when a better offer comes along. Those who are highly satisfied are much less ready to switch. High satisfaction or delight creates an emotional affinity with the bank, not just a rational preference; the result is high customer loyalty.

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Financial Literacy in India

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Abstract

Any country's ability to thrive economically and flourish depends on its financial system. Financial stability among individuals contributes to a strong financial system in any nation. The foundational element for the growth of any person's financial stability is financial literacy. The Indian government has made a efforts for financial learning and awareness in country. To make better comprehend the value of finance related learning among individuals in the nation, this report sheds focus and efforts implemented by the finance authorities of the country. These measures include improving financial inclusion and financial literacy among individuals. The report analyses several data , information , news items, published reports from different agencies, novels, etc.

Keywords

Economically, Financial stability and Regulatory agencies.

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Introduction

Any nation's ability to develop economically hinges on its financial system. The financial system is made up of a number of interconnected subsystems, including financial markets, financial instruments, and services that aid in capital generation. It offers a system via which savings can be converted into investments.

India has a long history of "saving" money and making conventional or unorthodox investments in kind or money. But this saving might not be done formally. It might have been in the "Hundis" home (piggy bank). Gold and land have been the most popular investment avenues for the people of our nation for millennia. Financial exclusion and a lack of financial resources may be one of the factors influencing people to invest in gold and land rather than other financial items. The numbers are depressing. Financial literacy is a crucial tool for both the household and the nation. Individual financial planning improves as a result of financial literacy, which in turn aids in the nation's economic growth. To enhance financial inclusion and financial literacy, the Indian government has made a number of steps. The collaboration of the regulatory authorities RBI, SEBI, IRDA, and PFRDA is improving financial inclusion and literacy in the nation.

Objectives

1. To provide light on the notion of financial literacy and its significance.
2. To list the different steps taken by SEBI and the RBI to increase financial literacy.

Research Methodology

The entire foundation of this work is secondary data. The official websites of regulatory authorities' as well as prior research articles, newspapers, reports, journals, and books are thoroughly examined.

Concept of Financial Literacy

Financial Learning and literacy facets of nation's financial stability, according to Meera Santoshi (2016). People inclined to investigate the products and services provided by financial institution to their advantage when they are financially literate. This quickens the process of financial inclusion so that everyone has access to fundamental banking services rather than having to rely on the traditional money market model, which involves borrowing money from money lenders. Lack of awareness about money concerns and poor personal financial management hurt people but also effect the economy in negative way. Financial inclusion can be accelerated via financial literacy. Financial literacy is "A combination of awareness, knowledge, skill, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing," according to the OECD INFE.

According to Swetha Kumari, financial literacy has the dual advantages of preventing fraud and assisting with future financial planning. Financial inclusion, financial knowledge, and consumer protection are the three pillars of financial stability.

Financial literacy and inclusion in the financial system are related. Financial inclusion declines as financial knowledge rises.

It's critical to comprehend the distinction between financial literacy and financial inclusion. Financial literacy is more about quality whereas financial inclusion is more about volume or quantity.

Financial literacy emphasizes increasing one's knowledge of financial matters and products so that one can:

- Understand how to use and manage money and minimize financial risk;
- Manage personal finances quite efficiently. Financial inclusion places emphasis on opening more accounts to make common banking facilities easily accessible to all.
- Recognize the advantages and services provided by banks, and avoid using moneylenders;
- Calculate the long-term advantages of saving.

Financial inclusion acts from the supply side by supplying the financial market/service, which in turn stimulates the demand side by educating individuals about what they can demand.

Contents of Financial Learning

Financial learning consists of following parts:

- Self finance administration.
- Details among different financial services, products, and their sources.
- Practical expertise

Need for Financial Literacy

An average person finds it quite challenging to make an informed selection due to the wide variety and complexity of financial products. Financial literacy gives the average individual the information, skills, and confidence to govern financial services and goods, providing them more authority over their present and future financial security.

- a) Awareness about exploitation: Financial literacy aids in defending people from predatory lending practices and exorbitant interest rates.
- b) Avoiding excessive debt: Financial education will improve service quality, prevent excessive debt, and encourage prudent financial decisions.
- c) Supporting entrepreneurship: Knowledge of financial products can enable educated small business owners with a background in business comprehend the dynamics of the
- d) Beneficial spillover effects: Economic growth can be boosted by financial literacy. A household with strong financial knowledge would regularly save, which would then result in investments in the proper areas and higher revenue creation. Individuals' financial stability will consequently improve the welfare of society.
- e) Lessening the burden on social programmers': A person who understands finances would be better able to gauge their own needs and put money aside in the right plans. It promotes a more robust economy and eases the burden on social programmers' and pension schemes.
- f) Behavioral change: Due to the financial products' widespread availability, consumers are using them carelessly and without understanding the potential financial consequences. The recent global financial crisis, in fact
- g) Greater involvement in financial markets: India must encourage savers to become investors. The domestic retail securities market will become more diversified as domestic retail investors participate more in it. Domestic savings will also profit from business expansion.³

RBI Efforts on Financial Learning

Financial literacy is a priority for the (RBI), India's supreme organization to supervise finance . order to increase financial literacy among the populace, commercial banks, a number of nongovernmental organizations and self-help groups have teamed together with the RBI and the government (Kamboj, 2014).

- "Project Financial Literacy" is a project started by the Reserve Bank of India. This project's goal is to enlighten a variety of target audiences, including as school and college students, women, the rural and urban poor, members of the armed forces, and older citizens, about the central bank and basic banking ideas. The proposal envisions a multifaceted strategy. The project is intended to be implemented in two modules, one of which focuses on the economy, the Reserve Bank of India, and another general banking module. The content is written in both English and various regional languages. Through presentations, pamphlets, brochures, films, and the RBI website, it is communicated to the target population with the assistance of its own offices, banks, local government apparatus, schools and colleges, NGOs, and other volunteer groups.
- The RBI hosts several meetings and big events participated by the experts and share knowledge about the all financial inclusion . Additionally, it organizes for college and high school students to visit RBI.
- To increase students' interest in the economy, banking, and RBI, RBI launched an annual quiz programmers for students in grades VII through XI.

Two significant components of RBI's growth function are financial literacy and learning. It improved provided important literature in this regard and made it available for all financial institutions on its website in 13 different languages. This effort aims to increase public understanding of financial services and products, ethical financial behavior, going digital, and consumer protection.

FAME (Financial Awareness Messages) is a booklet that RBI has created to help the general public become more financially literate. FAME includes financial literacy messages about things like the paperwork needed to open a bank account (KYC), the value of setting aside money for savings and borrowing responsibly, how to keep a good assessment and repay money timely, how to use DSB and localized banking, how to file a complaint with the, Complaint financial institution how to use digital money , how to invest in authentic markets, etc.

- To raise awareness about issues like "Basic Financial Literacy," "Unified Payments Interface," and "Going Digital," audiovisuals have also been made. The Reserve Bank's "Raju" and "Money Kumar" series of picture books were equally successful. The books "Raju" used to teach
- Guide to financial literacy The Reserve Bank published a thorough Financial Literacy Guide on its website on January 31, 2013, and banks have been urged to adopt it as a model curriculum to teach students the fundamental concepts behind financial goods and services. The financial literacy manual includes operational rules for running financial literacy camps, guidance notes for trainers, and

The Reserve Bank organizes the Conference on Financial Education in collaboration with the World Bank and the OECD.

SEBI Inactivities Financial Skill

- SEBI has launched a statewide campaign to promote financial literacy. to teach financial literacy to a variety of target populations, including Scholars, executives, , housewives, retiree, NGO etc.
- India-wide Experts have been appointed by SEBI. The Resource Persons have received training in a variety of financial topics and are knowledgeable about Money markets. These Certified Experts Persons provide Seminars, Lectures for the audiences on a variety of topics, including retirement planning, financial planning, banking, insurance, and investments.

Through investor associations around the nation, SEBI also runs investor education programmes. Through a number of stakeholders, who are interested in financial learning it also holds regional seminars.

- SEBI offers a website specifically devoted to investor education, where you may get study materials on all financial concepts, a range of topics. Additionally, SEBI releases study guides in both English and regional tongues.
- The "Visit SEBI" campaign encourages Scholar and Apprentice learn about how it operates. Investors all around the country can contact the SEBI Helpline through a toll-free hotline to receive information for resolving their complaints and counseling on a variety of topics.
- The SEBI has launched a statewide drive to promote financial literacy. To improve financial literacy among people from all walks of life, SEBI founded the (NISM), which launched the "School for Investor Education and Financial Literacy." Since 2014, NISM has also run an Investor Education Program. Every year, the NISM offers financial literacy tests and Pocket Money programmes in schools. (2017) (Verma, Nema, & Padagre)

Conclusion

A crucial element of any nation's economy is financial literacy. The country's finances will be more stable as a result of increased financial inclusion and better financial awareness. All of India's major regulatory organizations have implemented a number of noteworthy initiatives to promote this concept throughout in nation. Along with above attempts, the degree of awareness in nation's population is very low. Addition of fundamental financial literacy concepts to the school curriculum could help increase the level of financial literacy by letting kids learn the at a early age and, if their parents are not aware, teaching them.

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Role of Mathematics in Artificial Intelligence

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Abstract

Mathematics plays a crucial role in the development and application of artificial intelligence (AI). AI involves the creation of intelligent machines that can perform tasks that typically require human intelligence, such as learning, problem-solving, and decision-making. Mathematics provides the theoretical foundation for AI. Key mathematical concepts that underpin AI include linear algebra, calculus, probability theory, statistics, and optimization. These concepts are used to develop machine learning algorithms, which are the core of many AI applications, such as image recognition, natural language processing, and speech recognition. Additionally, mathematics is essential for the development of advanced AI techniques, such as deep learning and reinforcement learning, which have enabled significant breakthroughs in AI in recent years. Overall, mathematics is a fundamental tool for the development and advancement of AI, and its importance in the field is likely to continue to grow as AI continues to revolutionize many aspects of modern life.

Keywords

Artificial Intelligence, Human intelligence, decision making, optimization, underpin.

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Introduction

Mathematics plays a crucial role in artificial intelligence (AI) as it provides the foundational framework for developing algorithms and models that enable machines to learn, reason, and make decisions. AI heavily relies on mathematical concepts such as linear algebra, calculus, probability theory, statistics, and optimization.

Linear algebra is used to represent data as matrices and perform operations on them, such as matrix multiplication, which is essential for various machine learning algorithms. Calculus is used to optimize models and algorithms by minimizing errors and maximizing accuracy. Probability theory and statistics are used for modeling uncertainty and making predictions, and optimization techniques are used to find the optimal values of model parameters.

In addition, deep learning, a popular subset of machine learning, relies heavily on mathematical concepts such as neural networks and graph theory. Neural networks are based on mathematical functions that are used to model the behaviour of the human brain, and graph theory is used to represent and analyze complex networks of relationships between data points.

Overall, mathematics is a fundamental component of AI, and it is essential for anyone interested in pursuing a career in AI to have a solid understanding of mathematical concepts and techniques

Mathematics also plays a critical role in natural language processing (NLP), a subfield of AI that deals with the interactions between computers and human language. NLP algorithms use various mathematical techniques, such as probability models, Markov chains, and graph theory, to analyze and understand human language and generate natural-sounding responses. Mathematics is also used in computer vision, another important subfield of AI, which involves teaching machines to recognize and interpret visual data. Computer vision algorithms use mathematical techniques such as linear algebra, calculus, and optimization to identify patterns and features in images and video.

Mathematics is essential for developing the algorithms and models that power autonomous systems, such as self-driving cars and drones. These systems rely heavily on mathematical concepts such as calculus, linear algebra, and optimization to interpret and respond to their environments in real-time.

In summary, mathematics is a foundational component of artificial intelligence, providing the framework for developing algorithms and models that enable machines to learn, reason, and make decisions. Without mathematics, the development of AI would not be possible.

One of the critical roles of mathematics in artificial intelligence is to help develop and refine machine learning algorithms. Machine learning is a branch of AI that focuses on the development of algorithms that enable machines to learn from data without being explicitly programmed. To achieve this goal, machine learning algorithms use mathematical models to identify patterns and relationships within data, allowing machines to learn from experience and make decisions based on that learning.

In addition, Mathematics is essential for developing artificial neural networks (ANNs), which are computer systems inspired by the structure and function of the human brain. ANNs use mathematical models to simulate the behaviour of neurons and synapses, allowing machines to learn and adapt to new information over time.

Mathematics is also crucial for developing natural language generation (NLG) systems, which are designed to generate human-like language in response to specific prompts. NLG algorithms use mathematical models to analyze text and generate responses that are grammatically correct and contextually appropriate.

Finally, mathematics is essential for developing computer vision systems that can recognize and interpret visual data, such as images and video. Computer vision algorithms use mathematical models to identify patterns and features within visual data, enabling machines to classify and interpret images and video with a high degree of accuracy.

The role of mathematics in artificial intelligence is critical, as it provides the foundational framework for developing algorithms and models that enable machines to learn, reason, and make decisions. From machine

learning to natural language processing and computer vision, Mathematics is essential for building intelligent systems that can adapt and learn from experience.

AI has a significant role in numerical techniques, including optimization, numerical analysis, and linear algebra. AI-powered algorithms and models can solve complex mathematical problems more efficiently and accurately than traditional numerical techniques. For example, optimization algorithms that use AI techniques such as genetic algorithms, simulated annealing, and particle swarm optimization can solve complex optimization problems with multiple constraints and objectives.

AI is also used extensively in game theory, which is a branch of mathematics that deals with the study of strategic decision-making in situations where the outcome depends on the decisions of multiple participants. AI-powered algorithms have proven to be highly effective in solving complex game theory problems, including Nash equilibria and finding optimal strategies in multi-player games.

In particular, reinforcement learning, a subset of machine learning, has been used to develop AI-powered agents that can learn to play complex games, such as chess, Go, and poker, at a level that surpasses human experts. Reinforcement learning agents learn by receiving feedback in the form of rewards or penalties based on their actions, enabling them to develop optimal strategies over time. In addition to game theory, AI has also been applied to numerical analysis and linear algebra. For example, AI-powered algorithms can solve large-scale systems of linear equations more efficiently than traditional numerical techniques, such as Gaussian elimination. AI techniques, such as deep learning, have also been used to solve partial differential equations, which are essential in many areas of engineering and science. AI has a significant role to play in numerical techniques and game theory. By leveraging AI-powered algorithms and models, we can solve complex mathematical problems more efficiently and accurately, enabling us to make better decisions and develop optimal strategies in various fields, including finance, engineering, and economics.

Calculus plays a crucial role in AI, particularly in machine learning, which is a subset of AI that involves teaching machines to learn from data. Calculus is used to optimize machine learning models and algorithms by minimizing errors and maximizing accuracy. One of the key applications of calculus in machine learning is in the development of neural networks. Neural networks are computer systems that are inspired by the structure and function of the human brain. They are made up of interconnected nodes that process and transmit information, allowing machines to learn and make decisions. Calculus is used to optimize the weights and biases of the neural network nodes, which determine how the network processes information. Specifically, calculus is used to calculate the partial derivatives of the error function with respect to the weights and biases, allowing the network to update these values and improve its performance over time.

In addition to neural networks, calculus is also used in other machine learning algorithms, such as decision trees, support vector machines, and logistic regression. In these algorithms, calculus is used to optimize the model parameters, allowing the algorithm to make accurate predictions and classifications. Calculus is also used in natural language processing, a subfield of AI that deals with the interactions between computers and human language. Calculus is used to develop models that can analyze and understand the syntax and semantics of human language, allowing machines to generate natural-sounding responses. Overall, calculus plays a critical role in AI, particularly in machine learning, where it is used to optimize models and algorithms, enabling machines to learn and make accurate predictions and decisions. Without calculus, the development of AI would not be possible.

Matrices play a vital role in AI, particularly in machine learning, computer vision, and natural language processing. Matrices are used to represent and manipulate large amounts of data, allowing machines to analyze and make sense of complex information. In machine learning, matrices are used to represent datasets, where each row represents a sample, and each column represents a feature. For example,

in image classification, a dataset may consist of thousands of images, where each image is represented as a matrix of pixels. Machine learning algorithms use these matrices to learn patterns and relationships within the data, enabling machines to make accurate predictions and classifications. Matrices are also used in computer vision, where they are used to represent images and perform operations such as filtering, convolution, and pooling. Convolutional neural networks, a type of machine learning algorithm commonly used in computer vision, use matrices to represent image filters and apply them to the input image to extract features. In natural language processing, matrices are used to represent words and documents. Each row in the matrix represents a document, and each column represents a word. The values in the matrix represent the frequency of each word in each document, allowing machines to analyze and compare large amounts of text data. Matrices are also used in linear algebra, a branch of mathematics that deals with the study of linear equations and matrices. Linear algebra is used extensively in machine learning, where it is used to solve systems of equations and optimize machine learning models. For example, gradient descent, a popular optimization algorithm used in machine learning, uses matrices to calculate the derivatives of the cost function with respect to the model parameters, allowing the algorithm to update the model weights and improve its performance.

In conclusion, matrices play a critical role in AI, particularly in machine learning, computer vision, and natural language processing. By representing and manipulating large amounts of data, matrices enable machines to learn, reason, and make decisions, enabling them to perform complex tasks with a high degree of accuracy.

Statistics plays a crucial role in the development and application of artificial intelligence (AI).

Statistical techniques such as normalization, feature scaling, and data imputation are used to pre-process data before it is used to train machine learning models. Data pre-process in Data Pre-processing. Descriptive statistics are used to summarize and visualize data, which helps in identifying patterns and trends in data. This information can be used to develop insights and make predictions. Inferential statistics are used to draw conclusions about a population based on a sample of data. This is useful in machine learning when working with large datasets and when making predictions based on statistical models. Machine learning algorithms use statistical models to learn from data and make predictions. Techniques such as linear regression, decision trees, and neural networks all rely on statistical principles to work effectively. Evaluation of AI models: Statistical metrics such as accuracy, precision, recall, F1 score, and ROC curve are used to evaluate the performance of AI models. Overall, statistics is an essential component of AI, providing the tools and techniques required to make sense of data, build models, and make accurate predictions.

Discrete mathematics plays an essential role in artificial intelligence, particularly in the development of algorithms and computational models. Here are some specific ways that discrete mathematics is used in AI: Graph theory is a branch of discrete mathematics that deals with the study of graphs, networks, and their properties. Graph theory is used extensively in AI, particularly in the development of algorithms for pathfinding, network analysis, and clustering.

Combinatorics is a branch of discrete mathematics that deals with the study of counting and combinations. Combinatorial techniques are used in AI to optimize decision-making processes, such as resource allocation, scheduling, and route planning. Boolean algebra is a branch of discrete mathematics that deals with the study of logic and logic circuits. Boolean algebra is used in AI to develop algorithms for logical reasoning, such as decision trees and rule-based systems. Set theory is a branch of discrete mathematics that deals with the study of sets and their properties. Set theory is used in AI to develop algorithms for data classification and clustering. Probability theory is a branch of mathematics that deals with the study of random events and their probabilities. Probability theory is used in AI to develop algorithms for machine learning, such as Bayesian networks and hidden Markov models.

Overall, the Mathematics provides a powerful set of tools and techniques for the development of AI algorithms and models. It is a fundamental component of modern AI research and development.

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Transforming an Organization via Powerful Leadership and Constructive Communication

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Abstract

Being able to adjust to shifting circumstances is crucial for managing both one's life and business. Nothing lasts forever, and this is a basic fact. Organizations must adapt to changing times. One needs to develop abilities to adapt, if one wants to succeed as an entrepreneur. Constructive communication and powerful leadership are crucial components for any organization that wants to transform. Conflict, low employee morale, and a lack of clear direction can all hinder growth and success in organizations that lack well-built leadership and efficient communication techniques. However, with the right leadership and communication strategies, an organization can undergo significant transformation and achieve its goals. A leader's ability to lead effectively is aided by effective communication.

This paper seeks to highlight the leadership quality and communication skills required in any organization for reforming itself. And the most essential aspects managers should remember to address while interacting with their teams, as well as recommendations for how to make communication better to increase leadership effectiveness.

Keywords

Change Management, Leadership, Communication.

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Introduction

Change is the only thing that never ceases. And it is one of the aspects that prove to be constant in today's corporate world. Nowadays businesses need to adapt to a variety of changes, including those brought on by emerging technologies, altering consumer tastes, alterations to regulatory frameworks, and the world economy. This organizational transformation helps businesses adapt to changing environments, gain a competitive edge, and achieve strategic goals. It can involve changes to an organization's structure, processes, culture, and technology. Without change, businesses run the risk of stagnating and failing to meet stakeholder needs. Organizations that can successfully handle changes will have a higher chance of long-term success. These changes can present an organization with both opportunities and problems. In other words, organizations can benefit from transformation by becoming more adaptable, creative, and customer-focused. Also, it may result in greater effectiveness, productivity, and profitability. In general, organizational transformation is required to make sure that organizations are prolonged relevant, and sustainable. And adding more over it, successful transformation depends on two major factors viz., powerful leadership and good communication.

Organizations need to be proactive in spotting and adapting to changes if they want to succeed in a changing business environment. Here firm leadership quality of the manager plays a very crucial role as they perform the role of change agent here. The powerful leadership quality of a manager here involves setting a clear direction for the organization, encouraging and motivating staff, and empowering subordinates to take ownership of their roles. Managers in the role of a powerful leader should also make sure that team members have a feeling of unity and that the organization's goals and objectives are in line with its overall organization's mission.

On the other side, constructive communication is equally important for transformational success. The term communication means the transmission of ideas and information between individuals or groups. Effective communication involves clear expression and active listening. In interpersonal interactions, commercial negotiations, and other facets of daily life, effective communication is crucial. From point of view of any organization, constructive communicators can convey the organization's vision and goals persuasively and understandably. They listen actively to feedback and concerns from employees and use this information to make informed decisions that benefit the organization as a whole. Providing staff with regular updates and feedback, as well as developing a workplace where open communication is encouraged, are further components of successful communication. Overall, managers may help guarantee that a change is successful and long-lasting by facilitating it with constructive communication.

Transforming an organization requires a powerful commitment to change, and both leadership and communication are essential for achieving this. But one need to also understand change is not as easy as it looks, there are certain challenges associated with it like resistance to change, lack of buy-in from stakeholders, and the need for new skills and processes. But the company that overcomes these barriers benefits from enhanced customer satisfaction and employee morale as well as increased efficiency, creativity, and competitiveness. And the key to successfully transforming and achieving its goals is by setting a clear vision, inspiring and motivating employees, and fostering a culture of open communication, an organization can

Change Management

The process of getting individuals, groups, and companies ready to move from the present scenario to the desired future one is known as change management. It entails developing and putting into practice strategies, procedures, and instruments to manage changes efficiently and with a minimal amount of disruption. Change management can be applied to a range of areas, including organizational structure, regulations, operations, and technology. Making sure that changes are successfully implemented and that

individuals and organizations are equipped and motivated to adjust to the new environment are the two main objectives of change management.

Change does not occur spontaneously. It requires a stimulus to initiate the process, similar to any chemical reaction. The nature of these stimuli can be either internal or external. The internal drives occur within the organization and incorporate altering business practices, technological advancements, internal rules and regulations, a pressing need for modernity, etc. These changes are in direct control of an organization. Further external variables, such as the increasing need for industrialization, technological, corporate competition, economic status, governmental, and sociological situations, pertain outside the organization but affect the organization directly as well as indirectly. Organizations that can't change, risk losing their competitive advantage or going out of business.

Depending upon the various stimuli discussed above, there are multiple forms of change management observed in an organization such as:

- **Structural change management:** This refers to changes in the organizational structure, such as the reporting lines, job roles, and responsibilities of employees, to improve communication, decision-making, and accountability.
- **Strategic change management:** This includes significant adjustments to an organization's direction or goals, such as restructuring, mergers, and acquisitions, or exploring new markets.
- **Technological change management:** To enhance organizational performance and competitiveness, new technologies must be implemented or outdated systems must be upgraded.
- **Operational change management:** This focuses on enhancing the regular routines and procedures of an organization to boost effectiveness, output, and quality.
- **Cultural change management:** The goal of this is to improve an organization's entire culture and capacity for change by altering the principles, opinions, and habits of its personnel.
- **People change management:** This concentrates on handling the human components of change, such as communication, training, and support, to reduce resistance and promote a seamless transition.
- **Process change management:** This entails changing processes, practices, and regulations to improve efficiency and effectiveness in the way work is done in the organization.

Although the organization as well as the employee both benefit from the change. Still, changes are not that readily accepted in this business world, in other words, there is certain resistance that prevails both to the employee as well as the organization. Employees may be opposed to transformation because they are nervous about what lies ahead, insecure about their future, worried about their employment security, or worried that the change would interfere with their daily routines. Organizations, on the other hand, may be resistant to change because of obstacles such as cultural or structural hurdles, worries over the expense, time, and effort needed to execute changes, fear of failure or unfavorable effects, etc.

Figure 1 depicts the phases of changes that occur in the organization during the transformation of an employee, viz., the ending stage, the exploration stage, and the new starting stage. The transition process involves several stages, and by being able to identify each step personally, one can figure out what personal needs are and what coping methods one will employ for each of them. The grieving process begins with the Ending Phase, which is also its first stage. Anger, grief, bargaining, denial, and acceptance are among the five stages of the grieving process that must be passed through before you can proceed to the next stage of exploration. In the exploration phase, one starts to consider new opportunities, regardless of whether they exist in one current line of work or something entirely different. Once an employee has accepted their loss, looked into their opportunities, and can go on productively, they enter the New Beginnings Phase. This phase can be energizing since it provides a new vision, attitude, direction, and clarity.

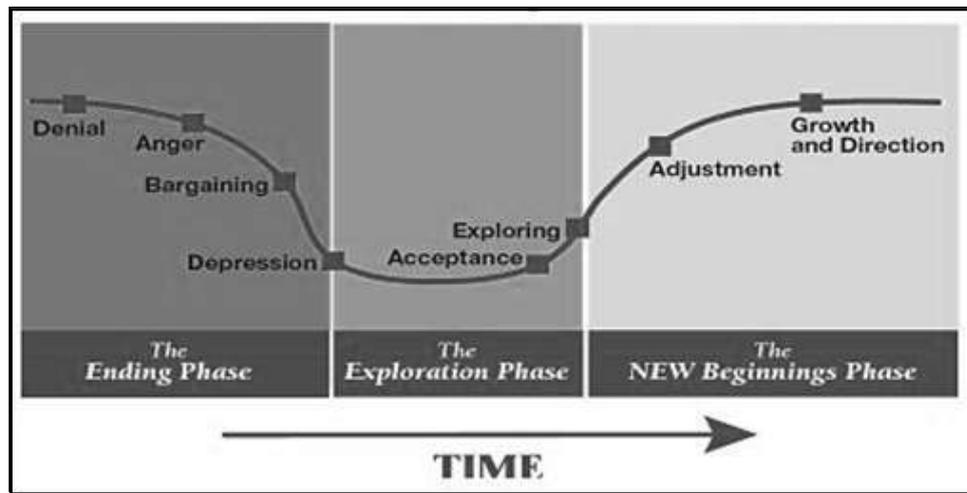


Fig. 1: The Phases of Change

Source: <https://www.hrcareertransition.com/2014/05/11/losing-your-job-understanding-phases-of-change/>

Stakeholder management, powerful leadership, and constructive communication are vital for conquering resistance to change. This entails including employees in the change process, attending to their concerns, offering assistance, and making sure they have the knowledge and tools they need to adjust to new working practices. Also, it entails dealing with organizational issues like recognizing possible risks and reducing them, creating a clear change management strategy, and cultivating a culture that encourages innovation and continual development. Generally, a collaborative and iterative strategy that strikes a balance between the demands and interests of both individuals and the company is necessary for effective change management.

But overcoming the barriers to change, both an organization and its employees' benefits. From an organizational perspective, it can help ensure that changes are implemented smoothly and effectively, minimizing disruption to operations and reducing the risk of failure. It can also help align changes with strategic objectives, improve communication and collaboration, and promote a culture of continuous improvement. For employees, effective change management can help reduce uncertainty and anxiety, increase engagement and motivation, and improve job satisfaction and retention. By involving employees in the change process and providing support and resources, organizations can also enhance employee buy-in and ownership of the changes, ultimately contributing to the overall success of the organization.

Leadership

In an organization, a leader is often someone who is in charge of directing a group of individuals toward a single aim or goal. A leader is frequently viewed as the key factor in the success or failure of an organization since they are in charge of establishing the direction, making crucial choices, and ensuring that the business runs smoothly.

Leadership requires inspiring and motivating others, articulating the organization's vision, formulating targets and goals, coming up with plans for achieving those goals, making choices, allocating resources, and assessing and tracking performance. A wide range of abilities is necessary for effective leadership, including the capacity for inspiring and motivating others, as well as communication, problem-solving, decision-making, and strategic thinking. Additionally, they must be able to adjust to shifting conditions and, when necessary, make difficult choices.

A leader's role in transforming an organization is significant since they are in charge of implementing change and developing an atmosphere that encourages prosperity and innovation. The following are some significant methods a leader can use to transform an organization:

- Establishing a clear perspective and goals of the organization is essential for a leader. Leaders must also effectively convey this vision to their staff. This makes sure that everyone is working towards the same goals.

- A leader must develop a strong team and allow them the autonomy to undertake accountability for what they do. This requires selecting the best candidates, offering training and development opportunities, and properly assigning duties.
- Establishing an innovative culture requires a leader to stimulate creativity and innovation among their team members and to support them in taking chances. This promotes growth and keeps an organization competitive.
- He is responsible for driving performance inside the company by establishing objectives, tracking results, and holding staff members liable for their actions. This makes it possible to monitor the organization's progress toward its goals and the achievement of its objectives.
- A leader must be capable of effectively handling transformation, guiding staff members through changes, and assisting them in adjusting to new working practices. To do this, it is necessary to communicate, offer encouragement and guidance, and make sure that everyone is on board with the modifications being undertaken.

In general, a leader's responsibility in transforming an organization is to establish a forward-looking strategy, create an effective workforce, encourage an innovative culture, motivate performance, and handle change skilfully. They may contribute to making sure the company is successful and that it endures and expands over time through its efforts.

Communication

Transmitting information is often how communication is characterized. While business communication can be understood as any communication that aims to share information with both internal and external stakeholders to help achieve a company's core objectives. Management is all about communication. Several factors need to be considered in communication:

- a clear, brief presentation of the information that may be clearly and effectively comprehended
 - efficient and fast message delivery
 - using a language that both the sender and receiver understand
 - streamlining the communication pathways
 - ensuring that the system of communication is flexible and adaptable to be used in any circumstance
- Communication also plays three crucial roles in an organization viz

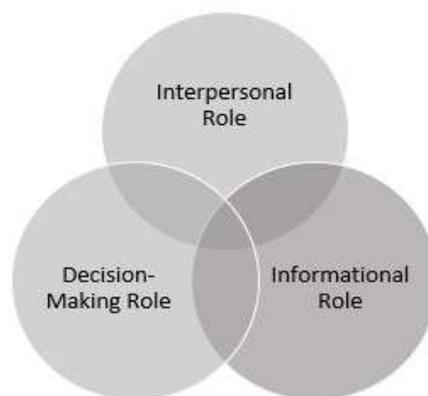


Fig.2: Communication Roles

In interpersonal roles, managers lead the organization by connecting with peers, subordinates, and consumers inside and beyond the company. Also, managers perform an informational role, gathering data from peers, subordinates, and other contacts to stay updated about everything that might have an impact on their work and responsibilities. Also, they circulate and convey crucial information. Moreover, the decision-making process involves managers placing new projects into action, allocating resources to certain people, and managing areas within the company.

Without constructive communication, it is impossible to carry out the fundamental tasks of management, including planning, organizing, staffing, directing, controlling, and coordination. Avoiding or at least attempting to minimize resistance to change might be one goal of communication in change management. Communication may help the workforce achieve a unified aim and objective, which is crucial to implementing transformation. Building trust between managers and staff members, as well as between various teams and departments, can be facilitated by clear and open communication. Employees are more inclined to support the changes and strive towards their effective implementation when they perceive that their views are being addressed and that they have a voice in the transformation process.

Similar to powerful leadership, constructive communication plays a vital role in an organization's transformation. Moreover, both leadership and communication go hand in hand to bring about change in the organization. By combining powerful leadership and constructive communication, leaders can create a culture of trust, collaboration, and accountability, and build a strong and successful team.

Conclusion

In conclusion, an organization's success in today's cutthroat business environment depends on its ability to evolve through effective leadership and constructive communication. Driving meaningful change requires a great leader who can encourage and inspire their team, provide a clear vision, and set an excellent example. Furthermore essential to fostering teamwork, developing trust, and guaranteeing everyone are on the same page is effective communication. A culture of open communication where everyone feels heard and respected can be developed by leaders who can speak clearly and listen attentively. Also, it's critical to give regular feedback, acknowledge and reward excellent work, and support a culture of ongoing learning and development. Organizations may boost employee engagement, boost productivity, and accomplish their objectives by concentrating on leadership and communication. In the end, this strategy may result in a more favorable and long-lasting future for the company and its stakeholders.

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Covid-19 and Its Implication in Food

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Abstract

Food has been well recognized as a potential therapeutic nutritional aid for the overall management of health and disease conditions. Even in the 20th century, the perspective toward food has changed from being merely a source of energy and nutrition towards its therapeutic importance. The changes scenario continuously forces the food community to think of better alternative with potential significance and keeping in view the historical evidence some people have tried to search the possible management tools in the traditional medicinal literature for the time being if the solution is not possible at least management of the diseased condition can be practiced by adopting healthy food practice with an overall aim to strengthen the immune system and increase the disease resistance accordingly.

Keywords

Covid-19, Food security, Consumer behavior, Food consumption pattern.

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Introduction

The Covid-19/corona virus disease was firstly found in November from the Wuhan city of China and being infectious it has spread to almost every country and has been declared as a pandemic in March 2020 by World Health Organization (WHO). The pandemic has affected the lives of billions of people and till now (2021-07-04), 182 million cases have been reported worldwide among which 3.9 million people have lost their lives due to the novel corona virus and the pandemic is still spreading. In India alone, there are 30 million cases reported so far and 4,01,000 people have lost their lives.

The Covid-19 has caused economic loss to every country. The International Monetary Fund (IMF) has estimated a decrease of 3% in the world economy in the year 2020. For the mitigation of the spread of the pandemic, the governments have applied the lockdown/restricted the human. There is no single sector from primary to tertiary sector which Covid-19 hasn't affected. It caused a reduction in trades between the countries. Millions of people have lost their jobs because of Covid-19. It has brought situations like poverty all over the world. It led to mental health problems among humans and also caused an increase in inflation.

Food is one of the essential components (3rd most important after air and water) for living beings to gain energy and perform different life processes. It is very important to be healthy by providing nutritional support and for disease prevention. Mainly the food comes from agriculture and its allied sciences like poultry, dairy, etc. The agriculture and food sectors are one of the most affected sectors by the Covid-19 pandemic. However, the effect of Covid-19 may vary from place to place and from sector to sector but it has caused a loss in yield, loss in export, lack of customers, etc., to the farmers.

The scientist of this era is more focused on the therapeutic application of food in curing/controlling different diseases. The researches have been carried out on the functional importance of food. Functional foods are the foods which naturally possess a particular active ingredient which has a particular mechanism of action in the treatment/controlling of specific disease at specific dose/concentrations and the functional foods have proved themselves if not as the solution for treatment/curing of disease then at least management of disease conditions.

Covid-19: A threat to Food Security

From the pre-corona time, food security has been a major concern of the developing and developed countries and particularly for the lower class and poor people of the country. Food security is a condition or a state where we are not only able to provide the food for every individual but where we can provide nutritional food in an adequate amount to every individual. It was not feasible for everyone to afford the three-time meal every day and a lot of people were not able to afford nutritious food and the covid-19 has even added to the situation and made the situation worse. After the few confirmed cases of covid-19, the government has applied the lockdown to stop the dissemination of Covid-19 which led to the immediate stopping of every activity in the country and when the situation was still under control it got extended. The school, colleges, factories, transportation facilities, etc were closed and this lockdown led to the migration of the workers/laborers from their working places to their own states/countries/homes and caused the unemployment to people particularly the people working in primary and secondary sectors. Hence the incomes of the people got affected due to lockdown which led to a poverty-like situation among the lower class people. According to an estimate of the International Labour Organisation (ILO), 25 to 40 million jobs likely to be lost worldwide because of the Covid-19 pandemic¹. It was estimated that the number of people living in poverty might rise to 420-580 million and in some regions, the poverty levels might rise to the level of 30 years ago². In another study among families in rural Bangladesh, the average monthly income fell to US\$59 from \$212 during the lockdown with a serious increase in the number of people earning less than \$1.90 per day and the number of families who faced any food insecurity during lockdown got increased to 51.7%³. In another survey, it has been found that covid-19 has led to financial instability among middle to high families of Canada as well⁴. In another survey, 80% of households experienced a decrease in food intake and they don't even have enough money to pay for their next month's rent⁵. In another survey, 62% of the people have reported disruption in the diet⁶.

The food prices of the commodities also get affected due to covid-19. In a report of china, the change in food price was minor⁷ but in some countries the change in food price swere much higher for instance in a study in 31 European countries, the overall food prices increased to 1% in March as compared to January and February and continued to rise till April (stabilizes in May). The inflation in prices of meat, fish, seafood, and vegetables was more as compared to cereal, fruits, egg, and oil& fats⁸. The increase in prices in the first quarter of 2020 was also seen in Brazil and inflation was higher in March⁹.

The supply chains are believed to be the backbone of any country and particularly in such pandemic situations like Covid-19 but during the lockdown, there were severe effects on logistic systems and food supply chains due to the unavailability of labor and transportation facilities. The extent of effect may vary from country to country (developed countries were less affected as compared to developing countries).However ,all the governments had continuously worked on improving the supply chain, bringing resilience, and providing better distribution facilities to every individual.

All these factors (unemployment, increase in food prices, and food supply chains)have brought conditions like food in security world wide. India is one of the developing countries where the Covid-19 has affected the lives of more people than any other country. In a report of the Global Hunger Index (GHI) of 2019, India ranked 102 out of 117 countries and around 14.6% (about 190 million) of Indians are undernourished. The condition is far worse as compared to neighboring countries like Nepal, Pakistan, etc. The majority of the population was dependent on the primary and secondary sectors. The lockdown had made the conditions even worse and it was not an easy task to fulfill the need of every individual.However, the government of India had tried to provide the food supply in an adequate amount to every individual through the Public Distribution Systems (PDS). They provided the food (particularly staple food) which was procured by Food Corporation of India (FCI) and Central Warehousing Corporation (CWC) through the certified retail shopsata minimum possible price where the guidelines (social distancing, wearing of a mask, etc) of lockdown were also followed. But, in a survey, it was found that even under Public Distribution System (PDS) 16% of people in anurban area couldn't have access to government rations¹⁰. In another report, the procurement of grains was way higher than distribution. Only 132.7 lakh tonnes of grain were distributed under Pradhan Mantri Garib Kalyan Anna Yojna (PMGKY) and the National food security act while 283 lakh tones more wheat has been procured until May 15, 2020[10].

The people suffering from diseases like diabetes except being susceptible to COVID-19 also suffered during the Covid-19 because of the improper management of diet. In a study on people with diabetes in Brazil, it was found that Covid-19 impacted glycemia due to alteration of habits and hence increased the risk of poor outcomes if they get infected with the disease¹¹.

Impact of Covid-19 on Food Market & Food Processing Sector

Before the Covid-19 pandemic, almost every country was relying on other countries for the import and export of food commodities from one corner of the world to others. But with the Covid-19 outbreak, the countries restrict the export of food commodities from their country to other countries to meet the domestic need of their own countries. This restriction in trade led to an increase in world food prices particularly in the countries which were importing a lot of produce from other countries. One of the surveys showed that food export supply due to covid-19 and uncooperative trade might decrease to 11 percent¹². However, when there will be an increase in demand for food commodities from the countries having in adequate food the world food prices will rise.

The Covid-19 made the governments apply lockdown in the countries to stop the dissemination of deadly virus which led to the shutdown of the food companies, produce growers, food restaurants, online food services, and hotels, etc. The impact of the lack of labor in food sectors could be seen even in the local retail food store where there was a lack of labor. There have been rumors about the spreading of the virus through the meat industry and hence the meat, poultry, fish, and beef industry was shut during the initial time of lockdown. There has been a reduction in the sales of fruits and vegetables and the farmers growing fruits and vegetables had faced a decrease in income. In a report of the Canadian fruits and vegetable market, the greatest

impact was seen at the beginning of the pandemic and after that, the shortage of labor was also seen. This report also suggested that the food price of the Canadian food industry might increase because Canada mostly imports its fresh produces from the neighboring countries¹³. Another study from the Iowa (2nd largest agricultural state of United State) has estimated huge damage to their agriculture sector and agricultural producers with the estimated annual damage of around \$658 million for fed cattle, \$788 for the corn industry, 34 million dollars for calves and feeder cattle, and \$213 million for soybean industry¹⁴.

The Covid-19 has also affected the food processors. With the Covid-19 there has been an increase in the retail demand for processed food as compared to the foodservice demand for processed food. There has been a decrease in food processing activities because of a lack of labor and a shortage of raw materials from primary sectors. The supply chain of the processing industry also faced the same problem due to lockdown. However, the effect of Covid-19 may depend upon some factors like the type of product, type of processing industry (small or large) and raw material, etc., for instance, there will be more economic loss in the small industries who make chutney, jam, etc. at small levels as compared to the big industries who produce the product at large levels (like export purposes, etc).

Impact of Covid-19 on Agriculture & Farmers

Agriculture in every country plays a major role in the development of the country. On one side the agriculture feeds the people of the nation and side by side it can also play a crucial role in the GDP of a nation by import and export and also provide the raw material for the secondary sectors. Because of the restriction in lockdown, the decrease in agricultural production has been reported throughout the world. The decrease in the production in the developed countries where the labor is less needed and work is done mechanically is less in comparison to the countries where the farms are not well mechanized and the labor is required to carry out the agricultural operations. The Covid-19 has also decreased the demand for some commodities which also led to a decrease in the income of farmers. There has been a hindrance in the food supply chains as well due to which a lot of produce of the farmers had wasted particularly the perishable commodities. In some cases, the Covid-19 had caused the hindrance in the production input, production cycles because of lockdown restrictions which will ultimately result in a decrease in the production of agriculture. As discussed earlier that because of the lockdown the different trades between the countries have been decreased/stopped. So the farmers who grow fruits like mangoes, apples, etc, and particularly whose products were mainly exported to other countries have gone through the devastating loss during the lockdown where either they got very low prices for their commodities or the majority of the commodity got wasted in the field only. However, the Government did try to reduce the loss by buying or sending the product to other states or districts. But for the farmers who grow flowers or other commodities which are not consumed, this year has been a nightmare as there was no demand during the lockdown or even after the lockdown there is no such demand for the flowers in the market. The other massive losses have been seen by the poultry farmers and there has been very less sale in the poultry industries due to the early rumors that Covid-19 spreads through the poultry industry and fear of the Covid-19.

India is an agrarian country and around half of the population of the country relies on the agriculture sector for their income. During the lockdown conditions, the farmer has gone through a great loss particularly the farmer who grows fruits and vegetables. In a survey on vegetable producers of India, the majority of the farmers reported the decline in the vegetable production sales and prices which ultimately decreases the income of those farmers. Among the surveyed farmers, around 80% faced a decline in the sales of vegetables and 20% of farmers reported traumatic sales where nothing was sold. The price reduction was also seen by 80% of the farmers where 50% of farmers faced the reduction of price to half. The income of 90% of farmers got affected and the income of around 50% of farmers got reduced to more than half¹⁵.

However, the Government of India provided relaxation to farmers in terms of the prices of some food grains like wheat, rice, etc. The government of India had decided their minimum support prices to the farmers of the country with the facility to procure the material of farmers with the minimum support price through the agencies like Food Corporation of India (FCI) and Central Warehousing Corporation (CWC). But there had

been a reduction in the yield of farmers during the rabi season. Because of lockdown thing the harvesting of wheat couldn't be done at the proper time in some cases because of restrictions to go from one place to another and in some cases, there was the unavailability of labor and machinery for the harvesting of the wheat. There had been a delay in the post-harvest operations like threshing, storage, etc. because of the unavailability of labor in that area. Hence all these affected the yield of wheat. In a report, 96% of the wheat in India has been procured from just only four states which lead to the selling of farmer produce to the private retailer at low prices, and in some case, the farmers were selling their produce to private retailer at very low prices while the Minimum Support Price (MSP) of that commodity was higher for instance in mandis the Minimum Support Price (MSP) of chickpea and mustard was decided to be Rs. 4875 /quintal and Rs. 4425/quintal respectively but the real price of a varied between Rs. 3500-4000/ quintal and 3700-4000/ quintal respectively which ultimately decreased the farmer's income¹⁶.

During the sowing of Kharif crops, the problems like lack of labor were also seen by the farmers which lead to improper management of stubbles left during the rabi season (stubble of wheat, etc) and the problem of transplanting rice in the field. However, the Lucky seed drill was developed by the Punjab Agricultural University (PAU) for direct sowing of rice but it couldn't be affordable by every farmer of the country. The lack of seeds, fertilizers, insecticides, pesticides, etc., was also seen by the farmers due to improper supply chains.

Impact of Covid-19 on Food Consumption Patterns

At the beginning of covid-19, the people were hoarding the food items in their houses for the storage of food for a longer time. Lockdown changes the food patterns (healthy pattern) of people in already at-risk populations like people with diabetes etc. (Ashby. 2020). Only in America, more than 50% of people used to take food places outside the home (restaurants, etc.). But the restaurants were closed during the lockdown. In the beginning, people were scared to order food online from the various online food services and the hotels as well. In the cities, people wanted to buy from trusty sellers or retail shops. During the lockdown, the people were purchasing food but there was a decrease in the frequency of buying. People preferred to buy from certified/ trusty sellers. It was also found that people were more afraid to go outside and they were buying from the sellers who can deliver the items/food to their home. For instance, a study from the United States reveals that when the Covid-19 was spreading the consumers were unwilling to buy from inside the grocery stores¹⁷. In some cities, it was also found that people decided to buy the food online directly from the producers with home delivery facilities and they were adopting the system of short food supply chains (SFSC) [18].

After the lockdown or with the liberty in lockdown the people became more concerned about their health as well as the food they are about to buy or eat as of the fear that infected food might spread the disease among the people. Covid-19 has caused a behavioral change in the people. It has changed the way they look at food and now they are more conscious about their health and food. In a survey, it was found that 90% of people preferred direct involvement in the process of selection and purchase of food items/ products and were emotionally connected to the selection of food items/ products (Butu et al. 2020). In another online survey with Spanish consumers, there was a decrease in the buying frequency but no change was seen in locations. Now, people were buying more pasta and vegetables (health motivators) with higher frequencies and food like nuts, cheese, and chocolates which can improve their mood. It was also seen that there was a significant reduction in the purchasing of products like fish, meat, seafood, etc. which are having short shelf-life, and foods like sugary bakery goods, desserts which are unhealthy or which contribute to gain body weight [19]. It was also found that the people were searching for online videos related to fitness and health (like how to be fit/ how to stay healthy/ best fitness tips etc.) and regarding the healthy foods as well (which is the best food for being fit and healthy/ the best food against Covid-19 etc). People were searching for food with nutraceutical values, food with more antimicrobial properties, food with immunity enhancing properties, functional foods, and energy booster foods, etc. which increased the demand for such types of foods which are having more functional properties.

Conclusion

Covid-19 has been a nightmare and we have lost a lot from the pandemic. A lot of people have lost their lives. The jobs of billions of people are lost. There is a loss to the world economy. A situation like food insecurity has arrived. If talking about agriculture and food industry, then the farmer has lost their yields and there has been a decrease in the income of farmers. In the upcoming future problems like food in security, poverty, etc. might get increased from low to severe level if not taken care of correctly. However, the food patterns of people have changed. The people who were eating more of the fast-food / junk food, now eating healthy than before.

But as said, "What's done is done" we have to learn the lessons from our past and have to work on things that can bring less damage to our upcoming future and will help to make it better. Till now there is no medicine confirmed for Covid-19 which is still spreading among us. For this first, we need to ensure that the farmers get less affected and they continue to grow food for the whole world. So special amendments to the farmers should be provided in terms of help as well as support because if our farmer gets most affected then ultimately it will affect us only. The other thing we need to do is to improve the supply chains and distribution system so that the goods from one part of the country to another part or from one part of the world to another part can be supplied. To increase the nutritional qualities different bio-fortified varieties of different crops can be grown in the fields which can improve the income of farmers and can provide good nutrition to the consumers as well. Particularly talking about the food processing sector good manufacturing practices and good hygienic practices must be followed more than ever. The hygienic practices need to be improved with as little human interference as possible because with the human interference the chances of food contamination are more particularly in diseases like Covid-19. To ensure food security, foods which are having good nutraceutical importance, which are bio-fortified foods or foods which are enriched in particular important vitamins or minerals necessary for the growth and development of human beings can be consumed and the food processing sector should focus on the developing of such more and more products with adequate supply to ensure proper food security. The foods with immune booster capacity and foods which are having disease resistance, for instance, antiviral foods, antibacterial foods, etc. need to be consumed more and the mood enhancer foods can also be useful for dealing with mental health issues during Covid-19.

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Role of Leptin and Insulin in Obesity

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Abstract

Leptin is a hormone which is secreted by adipose tissues and most of the animals. Its function is to maintain body mass, food intake and reproductive function. Leptin is the product of a gene (ob), here ob stands for obese. Leptin works in many different ways in controlling the various functions of the body. There is the presence of feedback loop in the body by which leptin plays its significant role in controlling body's food intake process. Leptin shows its effect by binding to its receptor (LepR). These receptors are located in various body cells which respond to leptin. Leptin first binds to its receptor then it mediates various genetic changes in the cell leading to the potential effect of letin. This review paper is for the study of leptin in obesity. Insulin which is a very important hormone of the body when it comes to managing the levels of sugar in body, it has been found that leptin and insulin work together in obesity. Further leptin based therapies are also discussed in treating obesity.

Keywords

Leptin, Leptin Receptors, Obesity, Insulin, Leptin based therapies.

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Introduction

Leptin was identified by Zhang et al. and is the product of obese (*ob*) gene (Zhang et al., 1994). Leptin is derived from a greek word, *leptos* which stands for thin (Abate et al., 1995). The role of leptin is to regulate intake of food, functioning of reproductive system, maintaining body mass and it also plays a very important role in growth of fetus, immune response after an inflammation, lipolysis and angiogenesis (Obradovic et al., 2021). There is proportional relationship between increase in fat cells and level of leptin, this then sends a signal to the brain to decrease or inhibit the intake of food and increase in the level of energy expenditure (Obradovic et al., 2021).

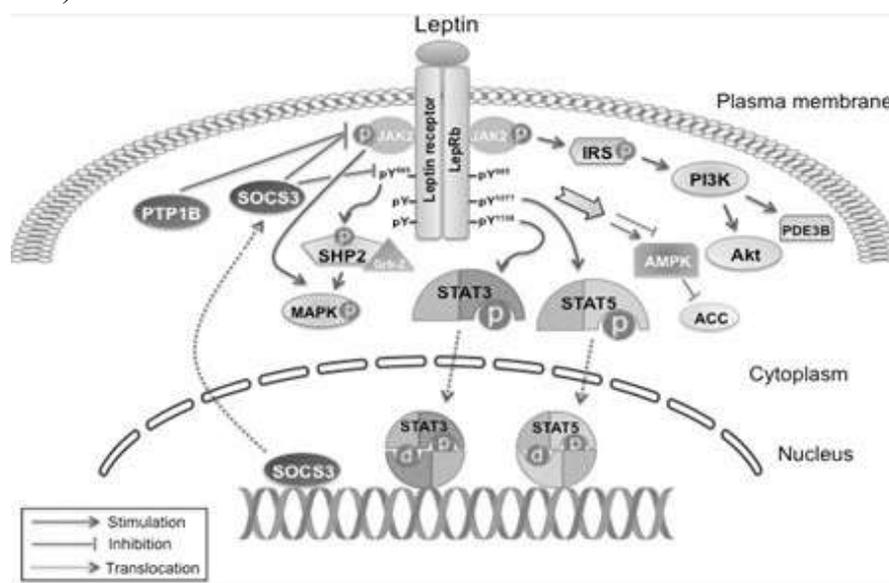


Fig. - 1: The mode of leptin signaling (Park and Ahima, 2014).

Binding of leptin to its receptor leads to dimerization of the leptin receptor which further leads to the formation of LepRb/ Janus Kinase 2 (JAK 2) complex (Park and Ahima, 2014). STAT 3 and STAT 5 which are signal transducer and transcription activator get phosphorylated, the dimer formed of STAT 3 and STAT 5 show their translocation to the nucleus and switch on the transcription of target genes which finally leads to activation of leptin gene function which is satiety effect (Park and Ahima, 2014). In the above diagram as it is clear that blue bold line shows stimulation, red line shows inhibition and dotted blue line shows the process of translocation. After the translocation of STAT 3 and STAT 5 inside the nucleus, SOCS 3 (Suppressor of Cytokine Signaling Proteins) get translocated to the cytoplasm from the nucleus which then leads to inhibition of JAK 2 which then further leads to activation of SHP 2 (SH2 containing protein tyrosine phosphatase 2) by which MAPK (Mitogen activated Protein Kinase) is activated (Park and Ahima, 2014).

Leptin Secretion

Primary secretion of leptin is by white adipose tissues, but it has been observed that some amount of secretion is by other sources like brain, teeth, bone marrow, placenta, stomach and fetal tissue (Chan et al., 2002; Obradovic et al., 2021). Endocrine, neuroendocrine and paracrine signals, all three of them regulate the synthesis and secretion of leptin (Fried et al., 2000). There is a relationship of direct proportionality between leptin levels and body mass index (Obradovic et al., 2021). Leptin secretion is affected by various hormones, food intake and amount of total body fat (Fried et al., 2000). Among all the hormones insulin is the main hormone regulating the secretion of leptin in our body (Nogueiras et al., 2008). In various *in-vitro* studies it has been found that insulin plays a significant role in stimulating the production of leptin (Casabiell et al., 2000). After giving a high fat diet for 24 hours lead to the changes in metabolism of glucose metabolism, this clearly indicated and explains the low amount of leptin in human circulation and which finally leads to weight gain and obesity due to consumption of high fat diet (Havel P.J., 2000). High energy consumption due to reduced circulating leptin is related to hunger in human (Fried et al., 2000).

Leptin and Insulin Functioning together

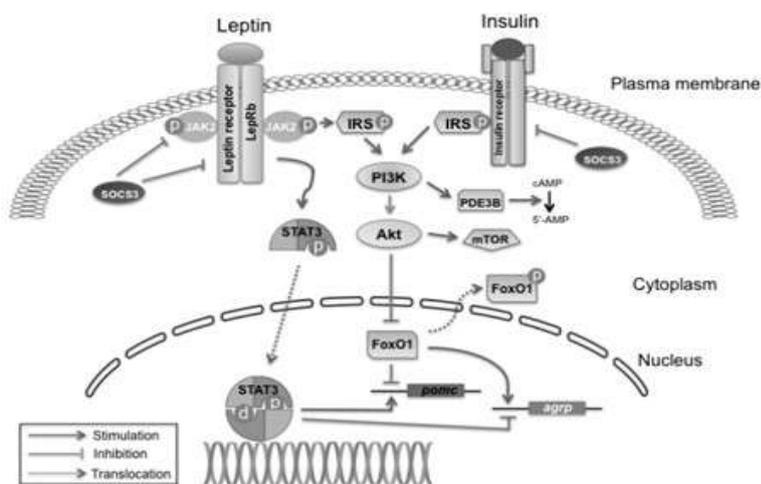


Figure 2. Leptin and Insulin signaling (Park and Ahima, 2014).

Leptin and insulin by binding to their respective receptors cause receptor dimerization, this dimerization of receptors causes the activation of IRS (Insulin Receptor Substrate), after this both the pathways converge in common activation of PI3K (phosphoinositide 3 kinase) further leading to activation of Akt (protein kinase B) (Park and Ahima, 2014). Akt inhibits the expression of FoxO1 (forkhead box O1), inside the nucleus STAT 3 increases the expression of SOCS3 (suppressor of cytokine signaling 3), leading to inhibition of leptin and insulin through negative feedback mechanism (Park and Ahima, 2014).

Role of Leptin in Obesity

Leptin role in obesity has been very extensively studied in the past.

Leptin Expression

It has been observed that obesity has two typical defining characteristics which are hyperleptinemia and tendency to resist reduction in body mass (Farr et al., 2015; Izquierdo and Crujeiras, 2019, Liu et al., 2020). It has been observed that people suffering from obesity have overexpression of leptin at gene level (Lonnqvist et al., 1995). Also it has been observed that there is a very strong correlation between levels of leptin in plasma and percentage of body fat (Hamilton et al., 1995) (Considine et al., 1996). Polymorphism in leptin gene also has been observed to cause obesity in mice (Hirasawa et al., 1997; Igel et al., 1997).

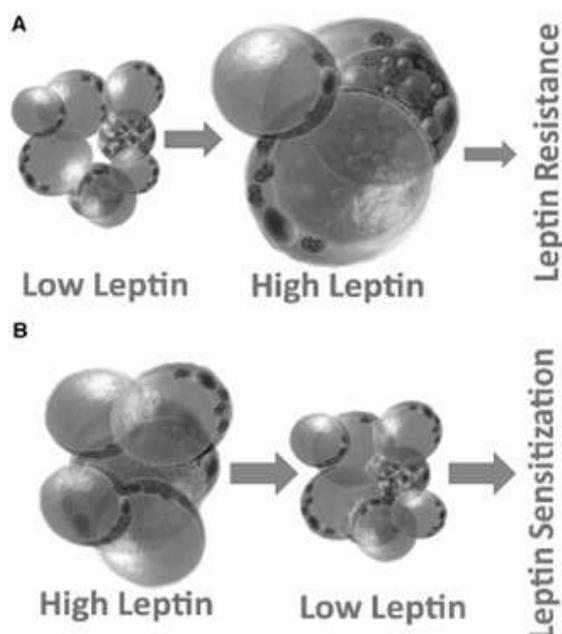


Fig. - 3: Co-relation between leptin concentration, its sensitization and resistance (Zhao et al., 2019).

Leptin Resistance

Leptin resistance is the process in which obesity disrupts the functioning and efficacy of leptin which further contributes to more obesity and also no response to the therapy which involves giving the leptin from outside sources (Izquierdo and Crujeiras, 2019). This resistance in leptin is due to three reasons which are inability leptin in reaching their target cell, reduction in expression of receptor of leptin and obstruction of therapy involving use of exogenous leptin (Izquierdo and Crujeiras, 2019). Both molecular and genetic mechanisms are responsible for this process of leptin resistance, but the most common reason is the disruption in the pathway of leptin synthesis (Obradovik et al., 2021). It has been observed that various external stimuli like pattern of eating behavior and body's circadian rhythm can alter the leptin expression (Mainardi et al., 2013). Furthermore it has also been observed that both leptin and insulin also cause sexual dimorphism (Obradovik et al., 2021).

Effect of Leptin based Therapies on Obesity

It has been observed in previous studies that combined administration of leptin with leptin sensitizer has a very strong effect on obesity control (Roujeau et al., 2014; Crujeiras et al., 2015). Since leptin has less stability and short half life, therefore analogue of leptin is used which binds to the leptin receptor and induces the same effect as that of leptin (Crujeiras et al., 2015). Also if we can modulate the leptin receptor, it can be a successful treatment for obesity (Crujeiras et al., 2015). Since very high levels of leptin in the body later on leads to leptin resistance, by using leptin therapy we can increase its capacity to cross the blood brain barrier leading to its improved and fast uptake by the receptor which can finally lead to treatment of obesity (Crujeiras et al., 2015; Zhu et al., 2010).

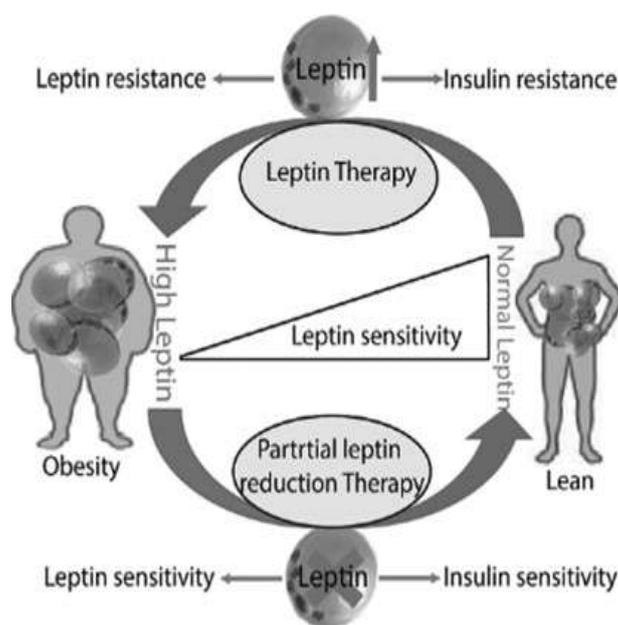


Fig. - 4: Role of leptin therapy in treating obesity (Zhao et al., 2019).

Above diagram shows the inter-relationship between leptin levels and obesity. It shows that higher the sensitivity towards leptin, leaner the body is but as the sensitivity towards leptin decreases the tendency of body towards obesity increases, further it is observed that even after treatment with leptin therapy this sensitivity does not increase but after partial leptin reduction therapy the sensitivity towards leptin increases leading to treatment of obesity (Zhao et al., 2019).

Another approach used besides the above mentioned one is using compounds which sensitize the leptin. These compounds are divided into two groups (Obradovik et al., 2021). First category is of those compounds which although have shown to increase the anorectic effect of leptin but very show very less effect on obesity or weight loss, these include meta-chlorophenylpiperazine, metformin and betulinic acid (Obradovik et al.,

2021). Second group include those compounds which show their effect on weight loss in individuals suffering from hyperleptinemia, these include glucagon like peptide I and heat shock protein 90 inhibitor (Obradovik et al., 2021). When antibodies which neutralize the leptin were used in different mouse models, it was observed that metabolic disease was caused by hyperleptinemia (Zhao et al., 2019). It was further observed that a partial reduction of leptin lead to returning of sensitivity towards leptin in the hypothalamus which improved sensitivity towards insulin and reduction in weight gain (Zhao et al., 2019). It was also stated that increase in leptin sensitivity which resulted from partial reduction in leptin concentration can prove to be a new way to treat obesity in coming future therapeutics world (Zhao et al., 2019).

In another study both lean and obese mice were treated with antagonist of leptin receptor, here in case of DIO mice (diet induced obese mice) antagonist caused improvement in body weight and the process of feeding in lean mice (Ottaway et al., 2015). This improvement in body weight and feeding was observed to be related with decline in Socs3 expression in the hypothalamus (Ottaway et al., 2015).

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Green Banking in India-A New Approach

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Abstract

The term 'Green Banking' is very popular in recent time. In today's recent era banking is necessary for development of every country's economy. Banks are a vital part of every human being's life. The traditional banking sector can be defined those banks whose primary function is to accept, keep and lend money to customers. Green banking is very different from traditional banking system. Simply Green banking means providing banking services to the people without effecting the environment. Green Banking is also known as ethical banking, which is also environment friendly banking. This paper has been made to know the overall green banking concept and the problems as well as the future prospects of green banking practices in India. The study is basically descriptive in nature and methodology used is based on secondary data which is collected from various journals, research paper, books and websites.

Keywords

Green banking, Traditional banking, Future prospects, Ethical banking.

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Introduction

“Earth provides enough to satisfy every man’s needs, but not every man’s greed.”

— Mahatma Gandhi

Today, we are consuming our natural resources on earth in that way, the question is arisen that what should we leave for our future generation. Are moving towards that part where the natural resources are at the end. During past decades, the environment awareness related matters are rapidly growing and now it is very important topic for all the human beings because the main challenge faced by today’s globalized world is climate change. Human activities are the main reason for climate change so we all humans are responsible for this problem. Somehow the banking industry is also indirectly related to environment pollution. Green banking is the remedy to decrease the environment pollution and also helpful for save the nature and natural resources. Green banking is the concept which provides its top priority to the environment and society. It always promotes the environmentally friendly activities, less use of natural resources and also reducing the carbon footprint from the banking sector. In common language, green banking is the banking which always supports those activities which are not harmful for the environment.

Objectives of the study

The objectives of the present study are –

1. To study the concept of Green banking.
2. To know the opportunities and problems for adaptation of green banking in India.

Research Methodology

The present study is carried out with the help of secondary data which were collected from various articles, research paper, books, websites and newspapers. The study is mainly based on descriptive in nature and conducted to know the green banking trends in India. Descriptive survey method is the most suitable method for such type of study.

Concept of Green Banking

Now a day, the word green banking is very popular. Green bank is also like a traditional bank, the only aspect it considers that it is providing banking services to the people without effecting the environment. It is also known as ethical banking or environmentally friendly banking or sustainable banking. The main purpose behind the green banking is to protect environment and it is done by the same bank authority of the traditional bank.

Defined by Reserve Bank of India “Green Banking is to make internal bank processes, physical infrastructure and Information Technology effective towards environment by reducing its negative impact on the environment to minimum level”.

1) An Overview of Green Banking in India

From the last few decades, Industrial sector of India is playing a vital role in the growth story of India. However, many challenges also faced by this sector – to protect environment and reduced the environment pollution.

Some important initiatives to reduce the environment pollution and adopt go green approach by some of the major banks (Table 1.1)–

Table - 1: List of banks and their important green initiatives and achievements

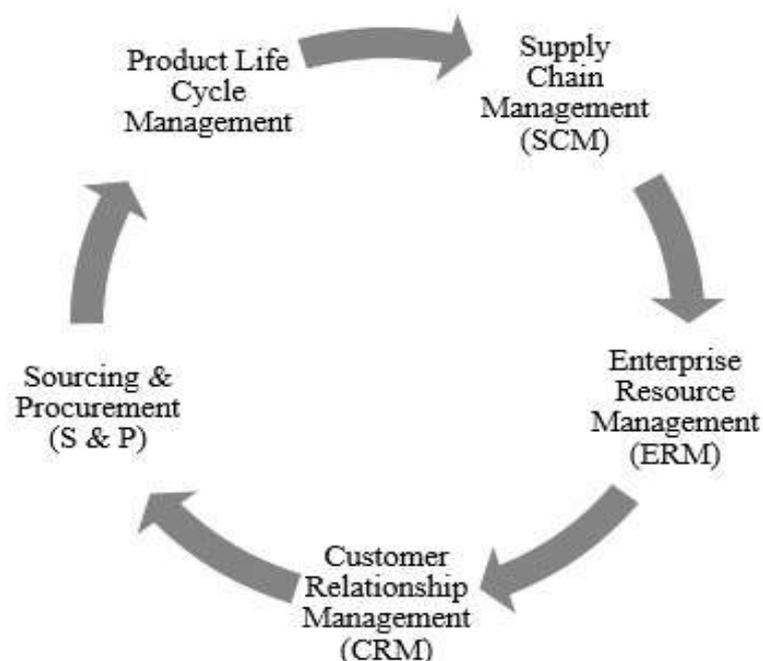
Name of the Bank	Green Initiatives
State Bank of India (SBI)	<ul style="list-style-type: none"> ● Saving trees of 7,900 and paper saved by SBI through YONODigital application in F.Y. 2019-20. ● SBI introduced Green Car Loan at a lower interest rate and longer long term by choosing of electric vehicles instead of fuel car to reduced carbon footprint. ● SBI support environmentally friendly residential projects under Green Home Loan Scheme which are rated by the Indian Green Building Council (IGBC). ● SBI continuing issuance of Green Bonds.

<p>State Bank of India (SBI)</p>	<ul style="list-style-type: none"> • SBI continuing with some significant investment in renewable energy. • SBI invites its customers to join on its sustainability journey through Green Fund and this fund will be utilized for undertaking various activities like construction of bio toilets, plantation of trees, creating awareness programme about the negative effect of the single use plastic, efforts of water conservation and the proper use of solar energy.
<p>Punjab National Bank(PNB)</p>	<ul style="list-style-type: none"> • PNB implement quick efforts for rain water harvesting in existing building and provide importance to the environment friendly new construction. • PNB promotes usages of wind energy and solar energy for the development of rural areas. • PNB organized 23 tree plantation camps during the financial year 2019-20 and where they planted 229 no's of trees.
<p>HDFC Bank</p>	<ul style="list-style-type: none"> • HDFC bank has been measuring, verifying and disclosing its carbon footprint to the public. • HDFC bank also discloses its environment related information in its Annual Sustainability Report.

2) Opportunities of Green Banking

Each and every green bank requires making all departmental units and various activities to go green approach and also environmentally friendly which do not harm the environment at all and always try to improve the environment sustainability. Banks can find many opportunities to go green. Some of them are as follows –

- **Supply Chain Management (SCM):** Basically, the flow and supply of goods and services management is called supply chain management (SCM). Usually, it includes the storage and movement of raw materials and goods, work in process stock and finished goods from the point of origin to the point of consumption. It is also providing the techniques to minimize the wastage of inventory.
- **Enterprise Resource Management (ERM):** Basically, Enterprise Resource Management (ERM) is a software about business management typically included collection of integrated applications through which an organization/firm can use to do many works like collection, storage, management and interpretation of various data from many business activities like product planning, purchasing, servicing, manufacturing, sales and marketing, managing stock, shipment and for payment. The Enterprise Resource Management basically helpful as it reduces the paper which can lead to paper less transaction.



- **Customer Relationship Management (CRM):** Customer Relationship Management (CRM) is an approach which can manage the overall interaction of companies with the potential and existing customers. Through this Customer Relationship Management approach, the relationship of the customers and companies can be effectively managed. It always tries to improve the business and its customer's relationships specially focusing on the customer's perspective and which helps growth in business.
- **Sourcing and Procurement (S & P):** In general sense, the term sourcing refers in business basically included to many activities for obtaining goods and services from the suppliers. In business outsourcing means a process of contract under which a business selects vendors for making their products, providing services and doing operations for a consideration
- **Product Life Cycle Management:** In Industry, Product Life Cycle (PLC) is the entire process related to the product starting from the manufacturing or engineering design to the end consumption, providing service and final disposal of manufactured products. In Product Life Cycle Management (PLCM), the whole process should be carried through in such a way that there is always less consumption of resources and energy to reduce the carbon footprint. It is always be an effective system which tries to reduce the negative impact on the environment.

3) Products and Services of Green Banking

At present time green banking should added various products and services to its customers which always try to reduce the wastage of resources and less negative impact on the environment. The various green banking products and services which are adopted by the customers are highlighted below –

- **Green Loan:** Green loan simply implies that the bank should give loans to that kind of projects or business which is considered to be environmentally friendly.
- **Green Mortgage:** Green Mortgage provides to its retail customers as lower interest rates as compared to the market interest rates who try to purchase new environmentally friendly houses or investing in various energy efficient products and appliances or green power. In general, green mortgage also called as Energy Efficient Mortgages (EEMs).
- **Green Credit cards:** Green Credit cards allows its users to earn some extra rewards and paper fewer banking transactions which promote environmentally friendly banking payment system.
- **Green Savings Accounts:** Green saving accounts is an environmentally friendly initiative taken by most of the banks where they make donations on the basis of the savings done by customers in their account. It simply implies that the more the customers save in their account, the more donations done by the banks.
- **Mobile Banking and Online Banking:** Mobile banking or online banking is also called as Internet banking/e-banking. It is a system of banking which provides to its customers to access its bank accounts and done various financial transactions at any time through their official websites without visiting the bank personally. It provides less paper work system and also quick access of the account at any time.
- **Remote Deposit Capture (RDC):** Remote Deposit Capture is a system where customers of the bank can scan their cheques remotely and through an encrypted internet connection the cheques transmitted to bank. After the getting of the scan copy of cheque from the customer, bank can deposit it or pay it to others as per the instructions provided by the customers.

4) Problems associated with Green Banking

While adopting green banking concept by different banks, they have also faced some of the following problems –

- **Divergence problem:** Green banks will restrict those business organisations transactions, who will qualify their process of screening done by them. Due to this reason, they have small number of customers to support and it also leads their profitability low.

- **Embryonic stage:** Mostly, all banks in this business are very new and still are in embryonic stage. Generally, it takes minimum time for a bank to earn profit thus it can't help many banks during period of recession.
- **Higher operating cost:** Efficient, excellent, professional, well qualified and proper trained staffs are necessary to provide better services to the customer by green banks. For dealing with customers and handling the business they also need well experienced loan officers. Again, for operating green banks, it required technology which makes it high costly.
- **Status risk:** There will always be chances to loss reputation in the market when the banks are involved in huge projects and which are viewed as damaging environment. There are few instances where environmental management has resulted in cost saving, increase bond value etc. (Heim,G et al, 2005)
- **Low literacy rate:** The literacy rate in India is very low. So, it is very difficult for illiterate persons to operate their bank account through online mode. Now a day this is the biggest challenged face by green banks in India.
- **Credit Risk:** If banks are lending money to customers whose businesses are affected by the changes in environmental regulations, cost of pollution and new requirements on emissions levels, and then there should be arise of credit risk. It is higher because of likelihood of customer default as a result of uncertain and uncalculated expenses for capital they investment in production, also lead to market share loss and claims by third-party.

Conclusions

At present time, environment is very much essential for every human being. Green banking is a small footprint towards the save of environment. It is also a good initiative step taking by the most of the banks which promote environmentally friendly banking system in India. In this green banking process several major banks taking several steps towards the environment and also introduced various green banking products and services like green loan, green mortgage, green credit card, green saving accounts, mobile banking or online banking and remote deposit capture etc. which are quite useful for saving the environment but besides these the green banking system also faced several problems or challenges to implement this in today's society. At last, in recent time the green banking in India grows tremendously and it is helpful for all the human beings to save the environment if they utilize this system properly.

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