COMPARATIVE STUDY OF WOMEN ENTREPRENEURSHIP IN TOURISM

DARSHANA KAILAS LAHOTI
BA Travel & Tourism (Hons.), Department of Travel & Tourism
Vishwakarma University, Pune, Maharashtra

Dr SANDEEP RANGNATH KAPSE
Assistant Professor, Department of Travel & Tourism
Vishwakarma University, Pune.

Abstract

Tourism has been recognized as a key driver of economic growth and development in both developing and developed countries. In recent years, there has been growing interest in promoting women's entrepreneurship in tourism, as a means of fostering gender equality and women's economic empowerment. This study examines tourism policies aimed at promoting women entrepreneurship in the tourism industry in developing and developed countries. It will compare the tourism policies regarding women entrepreneurship of developing countries like India, Zimbabwe, Brazil, Indonesia, and Turkey to developed countries like the U.S.A, Japan, Germany, Canada, and Australia. The study aims to identify and analyze the similarities and differences in policies between these two groups of countries. This proposes that there is no significant relevance in tourism policies of developing and developed countries. The paper reviews the literature on women's entrepreneurship in tourism, and analyzes the policies and strategies that have been implemented in different countries to support and promote women entrepreneurs. The study highlights the importance of women entrepreneurship in the tourism sector, the challenges faced by women entrepreneurs, and the role of tourism policies in supporting and promoting women's entrepreneurship. The study also provides recommendations for policymakers to enhance their policies and practices to support women entrepreneurship in the tourism industry. This study concludes, tourism policies that focus on women entrepreneurship can contribute to economic growth, social development, and sustainability in both developing and developed countries. These policies should be designed and implemented with the aim of promoting gender equality and inclusivity, and with the involvement of all relevant stakeholders.

Keywords: Women entrepreneurship, Tourism policies, Challenges, Government.

Introduction

Tourism is a significant industry for both developed and developing nations. Tourism's ability to boost women's entrepreneurship and economic independence has gained increased attention in recent years (Jones & Singh, 2020). Tourism has grown to be a substantial component of the worldwide economy, and female entrepreneurs have become a significant force in the sector (Hjalager & Madsen, 2016). Lawmakers in both developing and developed nations have recognised the necessity of encouraging women's entrepreneurship in tourism via the implementation of various policies in recent years (Ali & Gursoy, 2020). The purpose of this paper is to investigate tourist policies

pertaining to female entrepreneurship in both developing and developed nations.

Women entrepreneurs in underdeveloped nations encounter several hurdles that impede their progress in the tourist business. These difficulties include a lack of money, a lack of training and expertise, and socio-cultural impediments. In response, officials have established laws to assist female tourist businesses. In Egypt, for example, the government developed the National Women's Empowerment Plan, which seeks to encourage gender equality and economic development for women in all areas, including tourism (Abd El-Aziz, 2017). Moreover, Tanzania's Ministry of Tourism has developed the Tanzania Women in Tourism (TWITA) platform, which serves as a supporting network for female entrepreneurs in the tourism business (WTTC, 2020).

Paramasivan and Subathra (2016) Women entrepreneurship has been developed all over the state because the efforts taken by various institutions and schemes of state and central government. Ministry of MSME has provided subsidy to entrepreneurs for promotion of entrepreneurship. It has been granted special benefits to women entrepreneurs for their upliftment, it increases the women enterprises.

Similarly, officials in affluent nations have realized the necessity of assisting female tourist businesses. The Women's Business Ownership Act was passed in the United States in 1988, with the goal of improving access to financing and training for female entrepreneurs in all sectors, including tourism (Small Business Administration). Furthermore, the European Union has put in place several measures to encourage women's entrepreneurship, such as the European Code of Best Practices for Women Entrepreneurs in Tourism (European Commission, 2014).

Finally, tourism policies pertaining to women entrepreneurs have emerged as a major topic of emphasis for policymakers in both developing and developed nations. Countries may foster equal opportunity and economic empowerment by implementing policies that encourage women entrepreneurs in the tourist industry, thereby contributing to the tourism sector's long-term development.

Objectives of the Study

- To review the current tourism policies for women entrepreneurship of 5 developing and 5 developed countries.
- To compare these policies (developing and developed countries).
- To provide necessary recommendations for the growth of women entrepreneurs.

Scope of Study

Scope of the study covered overview of policies of 5 developed and 5 developing countries which lead to analyzing the secondary data.

Research Methodology

Sampling: The researcher has used purposive sampling method and selected policies of 5 developed and 5 developing countries as the sample.

Data Collection: This study is exploratory in nature. Hence, the majority of the data was collected through secondary sources such as journals, newspapers, government bulletins, websites, textbooks, WTTO reports, government websites, etc.

Data Analysis: Researcher has used secondary data analysis which is purely descriptive in nature.

Literature Review

Tourism involves a range of activities, including sightseeing, visiting cultural sites, participating in recreational activities, and experiencing new cultures. Tourism is an essential component of many economies worldwide and has significant social and economic impacts on both host communities and visitors. According to the World Tourism Organization (UNWTO), international tourist arrivals reached 1.5 billion in 2019, and tourism accounted for 10.4% of global GDP and 319 million jobs (UNWTO, 2021).

Entrepreneurship involves taking risks, innovating, and making decisions under uncertainty with the aim of generating profit and creating value for customers and society (Baron, 2008). Entrepreneurs are individuals who undertake entrepreneurial activities, including founding and managing new businesses, and they are characterized by their high levels of creativity, initiative, and resourcefulness (Barringer & Ireland, 2010). Entrepreneurship is the process of founding, launching, and operating a new business endeavour with the goal of profit or social benefit. It entails spotting opportunities, taking measured risks, and fosters the development in order to establish and manage a profitable business. An entrepreneur is someone who

goes through this process, generally with a novel concept or approach to solve a problem.

A women entrepreneur is defined as "a woman who has initiated a business venture, organizes, manages and assumes the risk of the business and is able to create value by identifying and exploiting opportunities in the market" (Kew & Stredwick, 2017, p. 2). Women entrepreneurs are distinguished by their ability to discover and capitalise on market possibilities, their openness to risk-taking, and their ability to manage and organize a commercial endeavor. Women entrepreneurs are making significant advances in the tourism industry, contributing to the sector's growth and development. Women make up a significant proportion of the tourism workforce, with an estimated 54% of employees being female (UNWTO, 2021).

Scope of Women Entrepreneurship in Tourism

Women's engagement in entrepreneurship is increasing internationally, and their representation in the tourist business has grown dramatically. Women-owned companies in tourism account for 54% of all small and medium-sized enterprises (SMEs) in the industry, according to the World Tourism Organization (2019), and this trend is likely to continue in the future years. Women are making their impact in a variety of industries, including hospitality, travel agencies, tour operators, event planning, and sustainable tourism. Women entrepreneurs have a lot of options in the tourist business. Women entrepreneurs may develop tourism goods and services that are one-of-a-kind and appeal to a specialized niche market, giving them a competitive position in the industry (Kizgin, Gursoy, &Nunkoo, 2021). They may also help to the long-term development of tourism by supporting responsible tourism and implementing eco-friendly practices. To summarize, women's entrepreneurship in tourism has tremendous potential and is projected to develop in the next years. Women entrepreneurs are implementing creative and sustainable tourist practices, catering to varied audiences, and helping the tourism sector flourish.

In India, for example, female-led start-ups such as The Wander Girls and The Pink Escapes have launched female-centric travel packages aimed at single female travellers, which have proven successful (Kaur, 2021).

Issues and Challenges faced by Women Entrepreneurs in Tourism

In recent years, women's engagement in tourist entrepreneurship has expanded dramatically, and their contributions have been acknowledged as a crucial driver of economic growth and progress. Yet, in the tourist business, women entrepreneurs encounter several hurdles that impede their sustainable growth:

- Access to Funding: One of the biggest problems that women entrepreneurs confront in tourism is access to funding. According to World Bank data, women entrepreneurs internationally receive only 2% of venture funding. Women's potential to expand their businesses, invest in new prospects, and compete with established businesses is hampered by a lack of access to finance (United Nations, 2018).
- Restricted Market Access: Due to the industry's dominance of male-owned enterprises, women entrepreneurs in tourism encounter difficulties in reaching markets. Women-owned businesses struggle to obtain mainline tourism markets and often depend on niche markets or informal groups to make sales of their products and services (World Tourism Organization, 2018).
- Gender Biases and Stereotypes: Gender biases and stereotypes impede women entrepreneurs in tourism's availability of resources, networks, and opportunities. Women entrepreneurs are frequently seen as less capable than males and face difficulties gaining industry respect (Elo & Freytag, 2019).
- Work-Life Balance: Due to the nature of the sector, women entrepreneurs in tourism frequently experience difficulties balancing professional and home life. Women entrepreneurs must balance business and family commitments, which inhibits their capacity to grow and engage with established enterprises (United Nations, 2018).
- Restricted Networking Opportunities: Due to a shortage of networking possibilities, female entrepreneurs in tourism encounter difficulties in accessing networks and collaborations. The business is dominated by male networks, making it difficult for female entrepreneurs to interact and

cooperate with other entrepreneurs (Elo & Freytag, 2019).

Overcoming these issues needs a united effort from governments, legislators, and industry partners to establish an enabling climate for women entrepreneurs in tourism. This might involve giving financial support, generating networking opportunities, and encouraging gender equality in the sector.

Policy Analysis

Tourism Policies Regarding Women Entrepreneurship

Developed Countries

1) United States of America

- Women's Business Center (WBC) program: It is managed by the Small Business Administration in the United States (SBA). The programme provides counselling, training, and other services to assist women in establishing and growing their own enterprises, notably those in the tourist industry (SBA, n.d.). According to the SBA, women-owned companies are increasing at a higher pace than the national average, and the WBC programme has assisted in the creation and retention of employment while producing economic growth (SBA, n.d.).
- Small Business Administration's Office of Women's Business Ownership: It gives women entrepreneurs information and support to help them establish and expand their tourism enterprises (Pena, 2016). The OWBO provides women-owned companies with training, counselling, and financial help, as well as advocating for legislation that promote their growth.

2) Japan

- Tourism-Oriented Female Entrepreneurs: The Japan Tourism Agency (JTA) introduced it in 2016. The JTA supports female entrepreneurs in a variety of ways, including financial aid, education and training, and networking events. The initiative also seeks to raise the profile of female entrepreneurs in the tourist industry, with the objective of encouraging more women to establish their own enterprises (Hirai, 2017).
- One Village, One Product (OVOP): The OVOP movement, which began in the early 2000s, seeks to boost regional tourism and economic growth by promoting the creation and sale of one-of-a-kind, locally manufactured items (Yokoyama, 2020).

The movement has been especially effective in encouraging women's entrepreneurship in rural regions, where many women have launched their own enterprises selling locally-made items to visitors (Yokoyama, 2020).

3) Germany

- Tourismus Digital: This initiative began in 2016 with the goal of providing financial assistance and training to small and medium-sized tourist enterprises, especially those run by women. The initiative is designed to assist these firms in improving their digital capabilities and competitiveness in the rapidly evolving tourist sector (German National Tourist Board, 2021).
- Entrepreneurial Letter: The Federal Ministry of Economic Affairs and Energy (BMWi) offers it in partnership with the Federal Ministry of Family Affairs, Senior Citizens, Women, and Youth (BMFSFJ) (BMWi, n.d.). This programme offers focused assistance and counselling to female entrepreneurs in a variety of industries, including tourism (BMWi, n.d.).

4) Canada

- Women Entrepreneurship Strategy (WES): The Canadian government introduced it in 2018. The plan intends to empower women entrepreneurs in various industries, including tourism, by providing money, coaching, and tools to help them establish and build their firms (Government of Canada, 2021).
- Women in Tourism and Hospitality (WITH): This programme, which was established in 2020, intends to boost the participation of women in executive roles in the tourism and hospitality industries by offering mentorship and networking opportunities to women in the business (Destination Canada, 2021).

5) Australia

- Boosting Female Founders Initiative (BFF): It was introduced by the Australian government in 2020 (Australian Government, 2020). The project offers funding and assistance to female-led companies, particularly those in the tourist industry, with the goal of assisting them in growing and expanding their enterprises.
- Australian Women in Tourism (AWT): The "Australian Women in Tourism (AWT)" project is another strategy that encourages

female entrepreneurship in Australia's tourism industry (Australian Government, 2019). AWT is a networking and mentorship initiative for women in the tourist industry, with the goal of fostering gender equality and professional growth.

Developing Countries

1) India

- Stand Up India: The Indian government has taken the "Stand Up India" programme, which grants loans ranging from INR 10 lakh to INR 1 crore to women and underprivileged populations in order for them to launch their own enterprises, including tourism-related activities (Government of India, n.d.).
- Hunar Se Rozgar Tak (HSRT):In 2009-10, the Ministry of Tourism established a unique project called Hunar Se Rozgar Tak (HSRT) to develop employable skills among 8th pass teenagers especially women from economically disadvantaged backgrounds. The Ministry of Tourism is totally funding the initiative (Ministry of Tourism, 2016).

2) Zimbabwe

- Zimbabwe National Tourism Policy (2019-2023): One of the top focuses is to encourage female entrepreneurs in the tourist business (Ministry of Environment, Climate, Tourism and Hospitality Industry, 2019). This policy acknowledges the tremendous accomplishments that women can offer to the tourist industry and intends to foster an atmosphere that encourages women to engage and prosper in the business. The policy offers different ways to encourage women's entrepreneurship in tourism, such as providing women with training and capacity-building programmes, expanding access to finance and credit, and supporting gender-sensitive policies and practises in the tourist sector (Ministry of Environment, Climate, Tourism and Hospitality Industry, 2019).
- Women's Tourism Initiative in Zimbabwe (WTIZ): In the wake of the national strategy, there are various programmes at the municipal level targeted at assisting female tourist businesses. The Women's Tourism Initiative in Zimbabwe (WTIZ), for example, is a non-profit organisation dedicated to strengthening women in the tourist industry via training, mentoring, and networking opportunities (WTIZ, n.d.).

3) Brazil

- Women's Tourism Entrepreneurship Program: The Brazilian Ministry of Tourism introduced it in 2020. This initiative intends to give technical and financial assistance to women who work in tourism or want to start a business in the industry through training courses, credit, and mentorship possibilities (Ministério do Turismo, 2020). This project was designed to overcome the gender gap in the tourist business, where women are generally underrepresented and face hurdles such as restricted utilization of assets and networks (Ministério do Turismo, 2020).
- Women's Entrepreneurship in Tourism (WET): Another initiative that encourages women's enterprise in Brazil is the Women's Entrepreneurship in Tourism (WET) programme, which was created in 2018 by the UNWTO in collaboration with the Brazilian Ministry of Tourism. The program's goal is to empower women entrepreneurs in the tourist sector by providing training, networking events, and access to funding.

4) Indonesia

- Women's Empowerment Program: The Indonesian Ministry of Tourism introduced it in 2021. This initiative intends to give training, mentorship, and financial assistance to female tourist entrepreneurs, particularly in rural regions. The Women's Empowerment Initiative, as stated by the Indonesian Ministry of Tourism, seeks to assist at least 500 female businesses by 2024. (Ministry of Tourism, 2021). The initiative also aims to boost the competitiveness of female-led tourist firms, as well as their marketplace access and funding.
- Women's Entrepreneurship and Empowerment Program (WEE): It was launched in conjunction with the Indonesian government by the United States Agency for International Development (USAID). This initiative intends to give corporate development services as well as monetary assistance to female tourist entrepreneurs, particularly those from underserved regions (USAID).

5) Turkey

- Supporting Women's Entrepreneurship in Tourism: In 2018, the Ministry of Culture and Tourism started the programme in

conjunction with the United Nations Development Programme (UNDP) (UNDP Turkey, 2021). The initiative seeks to boost female tourist sector engagement by offering financial and technical assistance to female entrepreneurs, as well as easing their chances of finding markets and networking events. It also aims to create a better understanding of gender equality in the tourist industry and to encourage women's participation in decision-making procedures (Ministry of Culture and Tourism, 2019).

- Gender Equality Strategy and Action Plan: This strategy aims to encourage gender equality in all aspects of society, including tourism. The action plan includes steps to encourage women's entrepreneurship, such as giving assistance to female entrepreneurs, expanding access to capital, and encouraging women's involvement in decision-making procedures (Republic of Turkey Ministry of Foreign Affairs, 2021).

Findings and Suggestions

Developed countries, including the United States, Japan, Germany, Canada, and Australia, are actively encouraging female entrepreneurship in the tourist industry through financial assistance, education and training, networking opportunities, and digital tools, according to the statistics. These measures have a positive impact on the growth and success of women-owned enterprises, as well as on economic growth and area tourism. To maintain their efficacy, it is critical to continually monitoring their development and collecting data.

Findings showed that, developing countries, like India, Zimbabwe, Brazil, Indonesia, and Turkey, pursued efforts in the tourist industry to develop entrepreneurship and employable skills among poor populations, particularly women. They offered training, access to money and credit, and assistance for gender-sensitive practises. These efforts attempted to make it possible for women to engage and thrive in business. Frequent assessment and monitoring assisted in identifying obstacles and areas for development and ensured that these initiatives continue to meet the requirements of female tourist entrepreneurs. Overall, these initiatives showed a commitment to advanced gender equality in the tourist sector, which had the potential to promote significant economic and social change.

The developed and developing countries both highlight the significance of encouraging women's entrepreneurship in the tourism sector through a variety of initiatives and measures such as financial aid, gender equality, education and training, networking opportunities, and digital technologies. Moreover, both emphasise the need of monitoring and reviewing the progress of these efforts in order to identify impediments and areas for improvement, ensuring that these programmes continue to satisfy the needs of women entrepreneurs in the tourism sector.

Conclusion

In conclusion, tourism regulations have a substantial influence on women entrepreneurs' engagement in the tourism business in both developed and developing nations. Gender-responsive policies and initiatives can help to empower women entrepreneurs, boost their opportunities and resources, and raise their commitment to the tourist industry. Developing countries can learn from developed countries' best practises and implement related policy to encourage gender equality in the tourism industry.

Furthermore, it is critical to address the issues that women entrepreneurs confront, such as access to money, training, and technology. Governments, private sector organisations, and civil society should collaborate to aid and create an environment conducive to the success of female entrepreneurs in the tourism industry. In this way, the tourism industry can become more inclusive and sustainable, profiting not only women entrepreneurs but also the larger community and the economy as a whole.

References

1. Abd El-Aziz, N. (2017). Women entrepreneurs in tourism: A case study of Egypt. Journal of Tourism, Heritage & Services Marketing, 3(1).
2. Ali, F., &Gursoy, D. (2020). Women entrepreneurship in tourism: A systematic literature review. Journal of Hospitality and Tourism Management, 44, 64-77.
3. Australian Government. (2019). Australian Women in Tourism.
4. Australian Government. (2020). Boosting Female Founders Initiative.
5. Baron, R. A. (2008). The role of affect in the entrepreneurial process. Academy of Management Review, 33(2), 328-340.
6. Barringer, B. R., & Ireland, R. D. (2010).

Entrepreneurship: Successfully launching new ventures. Upper Saddle River, NJ: Pearson Prentice Hall.

7. Destination Canada. (2021). Women in Tourism and Hospitality Champions Initiative.

8. Elo, M., & Freytag, T. (2019). Women entrepreneurs in the tourism industry: Challenges and opportunities. Tourism Management Perspectives, 30, 1-10.

9. European Commission. (2014). European Code of Best Practices for Women Entrepreneurs in Tourism.

10. Federal Ministry for Economic Affairs and Energy (BMWi). (n.d.). Unternehmerinnenbrief. Retrieved from *https://www.existenzgruenderinnen.de/DE/Service/Unternehmerinnenbrief/inhalt.html*

11. German National Tourist Board. (2021). Tourism policy.

12. Government of Canada. (2021). Women Entrepreneurship Strategy. *https://www.ic.gc.ca/eic/site/107.nsf/eng/home*

13. Government of India. (n.d.). Stand Up India. *https://www.standupmitra.in/*

14. Hirai, Y. (2017). Gender and tourism entrepreneurship: A case study of the Tourism-Oriented Female Entrepreneurs program in Japan. Asia Pacific Journal of Tourism Research, 22(8), 835-847.

15. Hjalager, A. M., & Madsen, T. K. (2016). Tourism and gender: Equality and equity in tourism. Current Issues in Tourism, 19(4), 336-342.

16. Jones, S., & Singh, N. (2020). Women entrepreneurs in tourism: Global perspectives. Journal of Hospitality and Tourism Management, 44, 78-86.

17. Kaur, H. (2021). Women entrepreneurship in tourism sector: Prospects and challenges. Journal of Entrepreneurship Education, 24(2), 1-11.

18. Kizgin, H., Gursoy, D., &Nunkoo, R. (2021). Women entrepreneurship in tourism: A systematic review and future research directions. Tourism Management, 82, 104177.

19. Ministry of Culture and Tourism. (2019). Supporting women's entrepreneurship in tourism.

20. Ministry of Environment, Climate, Tourism and Hospitality Industry. (2019). National Tourism Policy 2019-2023. Retrieved from *https://www.zimtis.com/images/documents/National%20Tourism%20Policy%202019-2023.pdf*

21. Ministry of Tourism. (2016). Study On Evaluating Effectiveness Of Hunar Se Rozgar Tak (HSRT) Scheme"

22. Ministry of Tourism. (2021). Kemenpar Launches Women's Empowerment Program for Tourism. Retrieved from *https://kemenpar.go.id/asp/detil.asp?c=292&id=3329*

23. Pena, E. V. (2016). Women's Entrepreneurship in Tourism: Policy Recommendations for the United States. Journal of Travel Research, 55(6), 797-809.

24. Paramasivan C and Subathra S (*2016*), Institutional Assistance For Women Entrepreneurship In Tamilnadu,Research Explorer*, Vol. IV : Issue.13 ; July - December 2016*

25. Republic of Turkey Ministry of Foreign Affairs. (2021). Turkey's Gender Equality Strategy and Action Plan (2021-2025).

26. SBA. (n.d.). Women's Business Centers (WBCs). Retrieved from *https://www.sba.gov/business-guide/grow-your-business/womens-business-centers*

27. Small Business Administration. (n.d.). Women's Business Ownership Act. Retrieved from *https://www.sba.gov/node/13803*

28. UNDP Turkey. (2021). Supporting women's entrepreneurship in tourism in Turkey.

29. United Nations World Tourism Organization (UNWTO). (2018, August 29). UNWTO launches women's entrepreneurship in tourism initiative in Brazil.

30. United Nations. (2018). Empowering women entrepreneurs through access to finance.

31. UNWTO. (2021). UNWTO Tourism Highlights, 2021 Edition. Madrid, Spain: World Tourism Organization.

32. UNWTO. (2021). Women's Empowerment in Tourism - Global Report on Women in Tourism 2019. Madrid: World Tourism Organization.

33. USAID. (n.d.). Women's Entrepreneurship and Empowerment Program (WEE). Retrieved from *https://www.usaid.gov/indonesia/womens-entrepreneurship-and-empowerment-program*

34. Women's Tourism Initiative in Zimbabwe (WTIZ). (n.d.). About Us.

35. World Tourism Organization. (2018). Tourism and the SDGs: Goal 5 - Gender Equality.

36. World Tourism Organization. (2019). Global report on women in tourism 2019. Madrid: World Tourism Organization.

37. World Travel & Tourism Council (WTTC). (2020). Empowering Women in the Travel & Tourism Industry.

38. Yokoyama, K. (2020). Women's entrepreneurship and the One Village One Product movement in Japan. Asia Pacific Journal of Tourism Research, 25(1), 34-48.

A STUDY ON CONSUMER SATISFACTION OF MOBILE PAYMENT SYSTEMS AT SATHYAMANGALAM

Dr. KAVITA. S

Assistant Professor, Department of Business Administration
Kaamadhenu Arts and Science College, Sathyamangalam, Tamil Nadu

Abstract

In this world, as technology grows most of the consumers started to transfer funds through electronic or digital mediums using mobile payment systems. It is quick and efficient, and the fund transfer typically takes place instantly. It is a secure mode of making payments. Electronic payment has revolutionized the business processing by reducing the paperwork, transaction costs, and labour cost. Being user friendly and less time-consuming than manual processing, it helps business organization to expand its market reach/expansion. Mobile payments such as Google Pay, PhonePe, Paytm apps are used by the consumers. This study deals with the consumer satisfaction of mobile payment systems at Sathyamangalam during January 2023. The descriptive research method was used in this study. To collect the responses from the respondents' questionnaire method was used. For analysis simple random sampling technique is used. The responses were collected randomly. From the analysis I was able to find that most of the consumers had a positive view on various parameters of consumer satisfaction by using mobile payment systems. Majority of the study participants (82%) were using the Google Pay mobile payment system for their transaction purpose. The reason given for satisfaction with the mobile payment system, are attributes like positive view on technology, security, able to carry the device, ease of use, problem solving and efficiency were reasons for satisfaction. They think that speed of the process and speed of money transfer should be improved. So in order to give a better experience to consumer through mobile payment systems all payment providers should develop and adopt a better technology for speed of process and speed of money transfer.

Keywords: Mobile payment system, Cash transaction, Consumer satisfaction.

Introduction

Mobile payments are a mode of payment using mobile phones. Instead of using methods like cash, cheque, and credit card, a customer can use a mobile phone to transfer money or to pay for goods and services. For easy transactions and payments digital payment apps through mobile phone are used. A mobile payment or m-payment may be defined, for our purposes, as any payment where a mobile device is used to initiate, authorize and confirm an exchange of financial value in return for goods and services (Kauffman, 2007). Mobile devices may include mobile phones, PDAs, wireless tablets and any other device that connect to mobile telecommunication network and make it possible for payments to be made (Fokus, 2004).

Background of the Study

Customers are adopting the mobile payment devices in order to spend less time on banking. This digital payment is very useful to transact funds without taking any risk and also easy to handle and make use of it. With the evolution of e-payment portals like Google

Pay, PhonePe, Paytm, cash transactions could be done with smart phones, by the click of a button and thus the transactions are simple, cashless and are available for local vendors at the point of sale (POS) and also to customers.

Statement of Problem

Online payment using Mobile phone is used in recent years for various reasons. Some of them are convenience, speedy transaction, time saving, and attractive sales promotional offers. To study usage of different e-payment systems for business transactions in the sample population and to examine the customer satisfaction towards mobile payment systems.

Objectives of the Study

- To identify the demographic profile of the consumers using mobile payment system.
- To study the comparative usage of mobile payment systems among the sample population.
- To study usage of different e-payment systems for business transactions in the sample population.
- To examine the satisfaction level of customers using e-payment systems.

Review of Literature

Paramasivan. C (2011) Financial inclusion is the provision of affordable financial services to various poor/low-income groups who are often excluded from the financial system. Despite the growth of the banking sector in the last three years, a significant portion of households, especially in rural areas, remain out of the reach of financial institutions. An important step in bringing the financially excluded into the financial sector is the promotion of microfinance in India.

Tr.Kalai Lakshmi and V. Sanjai (2021) in the paper titled "A study on usage of online payment apps by customers" focused on the usage of payment apps by customers and also their satisfaction towards payment apps. Both primary and secondary data was used. The type of research used was Descriptive. Information was collected from 120 respondents through the questionnaire in Chennai with the help of Google forms and survey method was used for this study. They found out that 84% of respondents always use google pay and 42% of respondents always use phone pe and 31% of respondents always use paytm. The resultant of this study revealed that online payment apps should be upgraded

and creates more innovative ideas with the payment system. Majority (48%) use online payment app for mobile phone bill payment.

Saviour F (2019), in his paper titled "A Study on Customer Satisfaction of Mobile Wallet Services Provided by Paytm" tells that most of the people are aware about the various services of Paytm and they use it in maximum extend. Paytm is drastically used among the youths and increasingly used by students for their transactions. Customers are highly satisfied with the overall services of paytm. The survey method is used as the main research tool for data collection from 100 respondents. The resultant of this study revealed that after the demonetization Paytm has taken steps to increases its market share within a short span of time.

Research Methodology

The primary data is collected from the respondents, which includes students, employee, businessmen, professionals and others using questionnaire.

Type of Research: Descriptive research is used for the study. Simple random sampling method is used for the study. Simple Random sampling offers equal chances of being selected for each participant of the target population.

Sample Size: The sample of 90 respondents was considered for the study.

Tools of Analysis: Methods that are used for research consist of the techniques of data gathering through questionnaire, statistical tools for evaluating the data. Percentage and Charts: Bar diagram and pie charts are used.

Limitations of the Study:

1. The research is being done by the collection of primary data through questionnaire and limited to Sathyamangalam. Hence the outcome cannot be exported to other areas.

2. Since the survey is being designed for finding the analysis of users of mobile payment, the samples are restricted to them.

Data Analysis and Interpretation

Data was collected from90 respondents from Sathyamangalam and all of them were using mobile payment systems. Overall, sample comprised mostly of middle class population aged 18 years and above and all were familiar with mobile payment solutions.

Socio-demographic profile of the respondents

The data was collected on the basis of gender, age, locality, occupation and

education. From the study it was found that there are 60 male respondents which is 67% of the total respondents and 30 female respondents which is 33% of the total respondents. In the age category, in the range below 20 years of age are totally 40 in numbers and 44% out of total respondents and in the range of 21-40 there are 36 respondents which is 40%. In the range from 41-60 there are 16 respondents which is 17% from total respondents. In case of locality, in urban there are totally 20 in numbers and 22% out of total respondents and in rural there are totally 20 in numbers and 22% out of total respondents but majority are from semi-urban 40 (44%) respondents. Regarding the occupations of the respondents, from the 90 respondents there are 30 students, 26 employees, 22 business and 6 from other occupations. Then regarding education 26 (28%) respondents are 10th pass, 10 (11%) are 12th pass, 4 of them are diploma holders, 22 (24%) respondents are post graduate holders and 28 (31%) respondents are currently studying under graduation.

Usage of different Payment Systems by the respondents

Among the study participants highest number were using Google Pay (n=74, 82%). followed by PhonePe (n=10, 11%) and Paytm (n= 6, 7%).Other interesting observation was 10 of the respondents were using 2 portals for money transaction whereas 18 were using all the 3 payment systems. All of the study participants were of the opinion that they will use the mobile payment system in the future.

Duration of usage of Mobile payment systems

Majority of the study participants (n=32 ,36%) were using the mobile solution for more than 2 years .22 of the participants were using the payment system for 13 months to 2 years which is depicted in the Pie – Diagram and Table
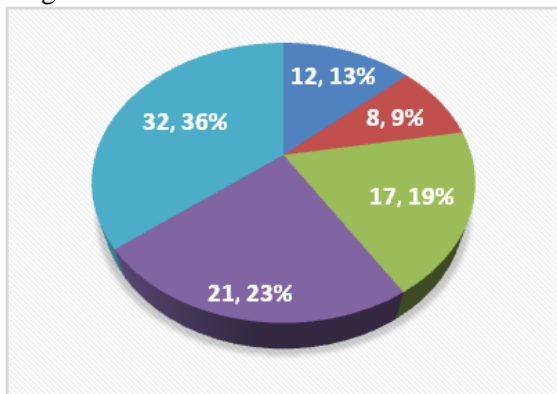
Duration of usage	Number	Percentage
Less than 3 months	12	13%
3 to 6 months	08	08%
7 to 12 months	17	18%
13 months to 2 years	21	24%
More than 2 years	32	36%

Reasons for satisfaction with mobile payment systems

From the Table and Bar-Chart given below we can infer that among the respondents, reasons for satisfaction with the mobile payment system, those with ease of use (76%), 68% Problem Solving and Efficiency (78%) were as 99 % with Security, able to carry the device (96 %) and positive view on technology (97%) were reasons for satisfaction.

Parameters	Strongly Agree	Somewhat agree
Positive view on Technology	87(97%)	03(03%)
Ease of Use	68(76%)	22(24%)
Speed of Process	25(28%)	65(72%)
Speed of Money Transfer	33(37%)	57(63%)
Can carry the Device	86(96%)	04(4%)
Efficiency	70(78%)	20(22%)
Security	89(99%)	01(01%)
Problem Solving	61(68%)	29(32%)

Main reasons for dissatisfaction among the respondents were Speed of the process (28%), Speed of money transfer (37%), complexity of the system (26%), inefficiency (1%) and not liking technology in money transfer (3%) In general, those who were dissatisfied with mobile payment system were far less compared with those who had positive view on use of mobile payment portals.

Suggestions

a) Mobile payment system platform studies exclusively for different categories like money transfer, online payments, paying in stores and also paying bills should be conducted to find out the satisfaction/dissatisfaction among the users of these payment portals

b) Local mobile payment systems must be encouraged at all levels so that consumers can approach for inconvenience and inefficiency or any other issues immediately.

c) Effective feedback system should be maintained so that consumers can share their views about the service and to

improve the industry. Cashless payments can be encouraged rather than direct money payments to ensure the safety.

Conclusion

Mobile payment systems occupy a predominant role in generating an attractive income for the substantial portion of income which helps in development of Indian economy. This study observed that respondents were mostly in the late teens, 20's or 30's they are mostly technology driven. Around 90% of the study population had a positive view on various parameters of customer satisfaction .Sources of dissatisfaction are mostly because feeling of complexity. As customers demand sophisticated technology in mobile payment apps, higher quality mobile payment apps will be purchased and utilised if available online. From the study we could say that the main reason the customers use mobile payment systems are to save time, easy to use, can carry the device, efficiency and security features but speed of the process and speed of money transfer should be improved by developing and adopt a better technology. With the development of internet and mobile phones day by day the mobile payment systems can be taken to next level. Lot of new ideas can be implemented.

References

1. Ghosh, Gourab (2021) Adoption of digital payment system by consumer Volume 9, Issue 2 February 2021
2. Paramasivan, C. (2011). Financial Inclusion through commercial Banks in India, Proceedings of Financial Inclusion for Inclusive Development, 1(2), 39-42.
3. Sangeetha, D., & Mayilswamy, K. (2020). Customers Satisfaction Towards E-Banking Services With Special Reference To Coimbatore City. International Journal of Scientific and Technology Research, 9(01), 2742-2753.
4. Saviour F, (2019), "A Study on Customer Satisfaction of Mobile Wallet Services Provided by Paytm", International Journal of Engineering and Management Research, Volume- 9, Issue-1,e-ISSN: 2250-0758, February 2019.
5. Tr.Kalailakshmi and V. Sanjai, (2021), "A Study on Usage of Online Payment apps by Customers", International Journal of Creative Research Thoughts, Volume 9, Issue 5 May 2021, ISSN: 2320-2882.

MICE TOURISM AS AN EMERGING INDUSTRY IN INDIA - A SPECIAL REFERENCE TO HYDERABAD CITY

Dr. GUJJETI THIRUPATHI

Assistant Professor, Department of Tourism Studies, School of Business Studies
Central University of Kerala,Tejaswini Hills, Periye, Kasargod District

Abstract

Travel and tourism have a significant role in Indian heritage and culture. Because of the many holy places that dot the countryside and entice people to certain activities like fairs and festivals, pilgrimage used to be the main reason people travelled. In such a setting, a cultural practise known as "VasudhaikaKutumbakam" and "Athithi Devo Bhava" (The guest is god) was developed (the world is one family). Travel and tourism are currently the second-largest sources of net foreign exchange generation, by easily countable amounts. Today's tourism is a multifaceted, multidimensional industry that has an impact on the lives of many people as well as numerous economic activities. Tourism has developed into a significant sector as a result of its widespread appeal. It is also acknowledged as a source of opportunities for work. The employment of tour guides, escorts, travel agents, tour operators, drivers, hoteliers, and other service providers was one of tourism's by products. The development of the local economy is aided by tourism. Indeed, the purpose of tourism was to encourage spiritual upliftment, cultural enrichment, and physical rebirth. The advancement of socio-political understanding and cultural exchanges is greatly aided by tourism.

Keywords: Mice tourism, Emerging industry, Tourism in India.

Introduction

Telangana state is a land of numerous cultures, historical sites, mountains, river belts, pilgrimage sites, top-notch film studios, verdant valleys, zoo parks, friendly people, and a wide range of dietary customs. Telangana consequently has tremendous tourist potential, which a government must leverage and sustain. The tourism sector is a non-smoking, money-making, and job-creating sector of the economy. Telangana tourism does more than just market its goods; it also studies how best to meet the requirements, tastes, and expectations of visitors. As a result, the purpose of the study is to use questionnaires to examine the responses of the tourists.

The study reveals that Telangana Tourism has distinctive tourism offerings, even though it is unable to fully capitalize on them because of a number of issues, such as ineffective amenities, such as inadequate transportation and connectivity in some instances. These issues also include inadequate accommodations, food, and cleaning standards in hotels and restaurants. The majority of visitors said they would return time and time again and that using their services demonstrated the significance of the chosen tourist destinations over all other alternatives. For instance, due of the holiness of the location and the lack of alternatives available to visitors outside of TSTDC facilities, tourists from Andhra Pradesh, Tamil Nadu, and Karnataka choose to purchase tourism packages for Hyderabad and Yadadri.

Tourists think Telangana state has a greater chance of becoming one of India's top

tourist attractions, but that depends on fixing any weaknesses in either all of the spears or all of the wings. Powerful IT, multinational corporations, the healthcare ecosystem, the granite industry, Singareni Collaries, and NTPC are among of Telangana's main benefits as a MICE major tourism hub. Each of Telangana's 31 districts has a unique significance for MICE tourism.

The Hyderabad International Convention Center offers cutting-edge amenities to accommodate MICE in Hyderabad, a heritage city that is now known as an IT hub. The HITEC City has built convention facilities across 15 acres, including a 6500 square metre hall with room for 5000 visitors. The HICC's success led to the completion by 2010–2011 of building of equivalent facilities in six additional centres across the country. Hyderabad has emerged as an important MICE travel hub in India in recent years. Due to its state-of-the-art convention centre, which is of the highest caliber available anywhere in the world, it recently hosted the annual meeting of the Travel Agents Association of India in early September 2012. Together with the IT sector, the growing healthcare and medical industries also contribute to increased business demand. Convention and conference facilities are now required because companies like Satyam, Dr. Reddy's, Visual Soft, and many others have been established. Hyderabad has developed into India's business hub thanks to occasions like the annual Confederation of Indian Industries (CII) conference, GITEX, the Indian Association of Tour Operators (IATO) annual convention, and the recently finished and highly lauded Afro Asian Games.

In Hyderabad, there are now eight hotels with five stars, fourteen with three to four stars, and numerous others are being built. Hotels and resorts may be found in Hyderabad, making it an excellent place for both business and leisure. Due to its good air connections from numerous gulf and Asian nations, Hyderabad is currently anticipated to hold more Gulf and South East Asian business conferences. These conference hotels provide very nice lodging options, including private lounges, restaurants with specialised menus, and distinctive rooms with contemporary conveniences for business travellers. Business travellers can choose from a variety of fun options thanks to these perks. Hotels and resorts may be found in Hyderabad, making it an excellent place for both business and leisure.

The abbreviation MICE have become more well-known as a result of the vast expansion of industries and their expanding needs. A significant industry that is rapidly growing and closely related to business travel is meetings, incentives, conferences, and exhibitions (MICE). Events connected to MICE include meetings, conferences, conventions, displays, and incentive travel. The industry is frequently referred to by the well-known abbreviation MICE, despite the fact that each of these several MICE subsections has quite a few distinguishing characteristics. Convention bureaus are being employed more frequently to meet the demands of meeting and exposition planners, to whom the service providers bring all the requirements for each sector. Due to the opening up of the Indian economy and the easing of governmental limitations, Hyderabad, Bangalore, Chennai, Mumbai, Delhi, and Kolkata are now assuming significance as important centres of business activity in the nation. Tier two and tier three cities are beginning to pose a significant threat to them as a result of improvements in associated facilities and infrastructure brought about by the country's expansion. MICE tourism has exploded in India since the economy was liberalised. There has been an increase in business travellers to India, and their vacation plans increasingly include leisure time.

Meetings, Incentives, Conference/ Conventions, and Exhibitions/Events, or MICE tourism, is a term used to refer to business travel. Specialized tourism such as MICE is booming in India, especially in Hyderabad. MICE tourism is gaining popularity in the corporate world since it motivates staff to boost organisational efficiency. To comprehend the current MICE tourist landscape and highlight its potential in Hyderabad, a study on MICE tourism in Hyderabad was undertaken. The survey has revealed that Hyderabad has had a 21–40% overall growth in MICE tourism. It should be highlighted that many businesses, including those in the banking, retail, pharmaceutical, hospitality, and food production sectors, are involved in the MICE market. Modern business hubs in India can be found in

cosmopolitan cities like New Delhi, Mumbai, Goa, Visakapatnam, Uttarkhand (Char Dham), Simla, Chennai, Bangalore, Jaipur, Agra, Cochin, and Kolkata. These cities host convention tours, and interesting MICE business is also available in Puskar, Bhuvaneswar, Kovalam, and Goa.

HITEX

HITEX (Hyderabad International Trade Expositions Limited) City, which is 20–25 kilometres from the city, may host exhibitions. In the first of two stages that HITEX is creating a trade fair centre, which includes three exhibition rooms, a trade fair building, and a usable entry plaza, everything is up and running. A convention center/hotel with a 4,500-person capacity and five additional show halls are planned for the second phase. Modern amenities that exceed global standards are displayed in the existing exhibition halls. Moreover, the Center has a 1000-car parking lot. A few of the notable events held at HITEX include GITEX Hyderabad 2002 and CIDEX Trade Fairs, among others. Over its entire length and breadth, Hyderabad is home to numerous gardens. For instance, the grounds of Ramoji Film City alone have around 100 distinct gardens. Hyderabad offers a lot of resorts, clubhouses, etc. besides gardens.

HICC

The Hyderabad International Convention Centre (HICC), which is jointly owned by Telangana State Industrial Infrastructure Corporation Ltd. and Emaar Properties PJSC Dubai, is managed by Accor, one of the greatest hotel management companies in the world. The top freestanding conference venue in South Asia is the HICC, a recently built, cutting-edge convention centre. Six more smaller halls can be created by dividing the 6,480 square metrecentrehall. The HICC can accommodate more than 6000 delegates for events. The building has advanced significantly. It recently received a regional award from the Ministry of Tourism, the Government of India, and the state of Andhra Pradesh. By winning the "Best Standalone Conference Center" excellence award four times, it has set a new national record. At the 2015 South India Tourism Awards, HICC was recognised as the "Best Meeting & Conference Venue." Also certified to use ISO 14001:2014 is HICC. In every category, including infrastructure, services, and technology, it is on par with the best in the world

ITC Kakatiya

The Kakatiya Dynasty's era is honoured by ITC Kakatiya. The hotel, which is located in the heart of Hyderabad's business district, welcomes guests to a time when art, design, and way of life are flourishing. With its 188 exquisite rooms and suites, four distinct restaurants, spectacular meeting spaces, and great wellness amenities, the hotel has carved out a special position for itself in the life of the city.

Aalankrita:

There is an ethnic business retreat on Shameerpet Road. What most distinguishes it is the abundance of flora and fauna. Aalankrita has traditional gathering spaces and is located in a peaceful environment. In addition to multi cuisine restaurants and a conference centre, the venue also has an open-air theatre named Taraana that can accommodate 20 to 2,000 people.

Marriot

The Hyderabad Marriott Hotel & Conference Centre offers the perfect balance of elegance, usefulness, and five-star service. Our hotel provides a stunning view of Hussain Sagar Lake and is centrally located in Hyderabad, India. Enjoy one of our spacious suites with high-speed Wi-Fi, lake or city views, and plush bedding to unwind in. You can select from excellent Indian cuisine to cocktails with a view of the lake at our hotel's restaurants or bar. Our hotel offers a variety of 5-star amenities for your enjoyment, including a full-service, lavish spa, a 24-hour fitness centre, a sparkling outdoor pool, and unique activities for families. For anyone arranging a corporate or social event, our modern indoor and outdoor locations, in addition to professional planning services and tailored catering, are a fantastic option.

Ramoji Film City

Ramoji is a beautiful location in and of itself, but its theme-based customs really set it apart. Ten to twelve convention centres with 2,000–6,000 seats apiece are available. Evening activities can include visiting a theme park, taking a stroll through one of the many gardens, or just stopping by to see a movie being made.

Tourist Attraction of Hyderabad

Hyderabad has a lot to offer visiting tourists in terms of tradition and culture, in

addition to its developing business potential. From the intriguing Charminar, a famous building, to the magnificent, venerable Golconda Fort. The Fort's light and sound show is a must-see. For business travellers, the Salarjung Museum, Birla Temple, Shilparamam, Hussain Sagar Lake, and Qutub Shahi Tombs are well-liked tourist destinations. Due to the rise in corporate travel, the MICE sector, a specialised area of the tourist industry, has enormous potential. Its target market consists of corporate clients who travel for various kinds of meetings. This phrase was referred to as Events in MICE (all types of professional meetings arrangements) I. Honors (planning incentive tours and business trips) convention or conference (organizing of wide level type of meetings as conferences and all arrangements) Exhibitions and Events (organizing of national, global level of exhibitions on various exhibitions grounds) The "Meetings or Events Industry," sometimes known as MICE, is another term for this industry. Details about commercial events, lodging, cruise lines, other forms of transportation, travel associations, expert conference planners, the entertainment industry, tourism boards, and specialists are included in this area. Due to the substantial preparation and organisation required for MICE, MICE-focused travel agents frequently have connections to leading corporate agencies. The task of promoting MICE in India falls under the purview of organisations like the Conventions and Visitor Bureau (CVB), India Convention Promotion Bureau (ICPB), Destination Marketing Organization (DMO), Network of Indian MICE Agents (NIMA), MICE India and Luxury Travel Congress (MILT), etc.

Need of the Study

The purpose of the study was to comprehend the extent of MICE tourism as a developing sector of the hospitality industry in Hyderabad. The purpose of the study was to evaluate Hyderabad's prospective MICE tourist industry. Since the city is a centre for information technology, the word "MICE" is frequently used to describe attractive business tourism destinations.

Objectives of the Study

- To research the MICE market's current state in India.
- To assess Hyderabad's potential for MICE tourism

- To learn more about the business practices of different MICE firms in Hyderabad.

Review of Literature

The average MICE traveller spends twice as much as other visitors, making this area of the tourism industry quite lucrative. Since the beginning of time, people have gathered to attend meetings, conferences, and expositions (displays), usually for social, sporting, political, or religious reasons. Cities developed became regional hubs, and several groups and organisations started holding recurring expositions, expanding the scope and frequency of these events.

As conference organisers and travel agents set up incentive travel programmes for businesses to compensate employees for hitting milestones, the incentive meeting sector of MICE is expanding quickly. Trips given as rewards often last three to six days and might range from a cheap day trip to a luxurious getaway for the employee and their significant other. Europe, Singapore, Malaysia, Thailand, Dubai, and Sri Lanka are some of the most well-liked locations for incentive travel. Many other areas are currently experiencing expansion as well. The Andaman & Nicobar Islands, Rajasthan, Mumbai, Kerala, Goa, and Agra are among the most well-liked incentive travel locations in India.

MICE Tourism to India:

Meetings, incentive, conference, and exhibition (MICE) tourism in India is steadily expanding. The inbound MICE market has experienced annual growth of 15 to 20 percent, with estimated revenue of Rs. 9500 crores. According to ICCA's ranking of the world conference market, India is ranked 31st (International Congress and Convention).

The high objective set by the Union Government for MICE INDIA is to boost its small 0.5% market share to 2% by 2025 in the global MICE sector. Numerous of the major cities, including Delhi, Chennai, Bangalore, and Hyderabad, have hosted significant events. During a four-day visit, a conference traveller typically spends $1,511 per day, as opposed to an entering leisure traveller who spends $600 per day. Industry estimates place the value of the worldwide MICE market, which supports 4,000 000 conferences and exhibitions yearly, between $280 and $300 billion.

India has a wide variety of amenities, such as hotels, meeting spaces, and tourist attractions. Some cities, such as Bombay

Exhibition Centre, New Delhi-Vigyan Bhawan, Bangalore International Exhibition Centre, Kochi International Exhibition Centre, and numerous business hotels and resorts with all the required business facilities, have a strong support infrastructure for holding successful conferences and exhibitions. For incentive travel, the Indian trains and airlines offer a convenient way to go to India's wealthy locations. India is one of the newest incentive travel destinations due to its diversified landscape and rich cultural history. India is a target for other countries as well because of the size of its market. India is anticipated to generate 8.5 million outbound luxury and MICE travellers annually by 2025, increasing the importance of the country as an important source market for MICE and luxury travel, according to forecasts made before the 5th Annual MICE India and Luxury Travel (MILT) Congress.

MICE Tourism in Hyderabad:

The most famous and historically significant city in India for business travel is Hyderabad. The MICE industry has a tonne of potential in this location because of its standing as a technology hub and pleasant climate. Mantra 360, Incarnations, ITC Convention, GMR Convention, Om Convention, Kapricorn Promos and Events, Event House, Premier Events and Conferences, HITEX Convention, CIM Global, Dream Craft Events, etc. are a few of the PCOs (Professional Conference Organizers) in Hyderabad. Some of Hyderabad's business hotels are The Park Hayat Hyderabad, Trident Hyderabad, Novatel, and Vivanta. Other examples are The Capitol, Gateway Hotel, Taj Banjara and Residence, International, Hotel Mayflower, and Hotel Marriot. Some of Bangalore's five-star luxury hotels, including The Oberoi, Taj West End and Residency, Windsor-Sheraton, Ista, The Park, and Le Meridian, host MICE events or activities. Together with the HICC Convention, ITC Kakatiya, IDF India, and International Exhibition Center, the MLR Conference Center is one of the exposition and convention centres.

Research Methodology

The following is a description of the study's research methodology

Research design	Descriptive
Domain of work	Hyderabad city
Unit sampling	Travel Agencies, Tour

|	operators, Hotels, Event Organizers
Samples taken	52
Sample procedure	Adaptive Sampling
Data Collection Method	Surveys and Interviews
Sources of Data	Primary and Secondary
Research Instrument	Structured Questionnaire

Examining and Interpreting

The statistical data were organized into categories and tabulated to make them clear and easy to understand. Descriptive questions were directly investigated in the study's findings, whereas closed-ended questions were submitted to simple tabulation and calculation.

MICE tourism is expanding in Hyderabad

Variables	Respondents	Percentage
1-20%	04	08
21-40%	18	34
41-60%	14	27
Above 60%	16	31
Total	52	100

Table 1 and Figure show that the majority of respondents-34% estimated a 21-40% annual growth rate for MICE tourism in Bangalore. Nonetheless, 31% of them said that Bangalore's MICE tourism increase is greater than 60%. Almost 27% of those who responded indicated the rise is 41-60%, while 8% said it is only 1-20%.

Mice Tourism is Expanding in Hyderabad
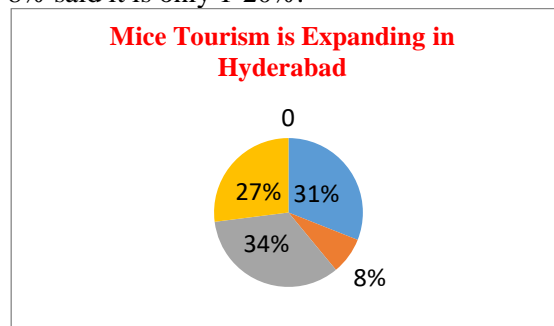
1-20%   21-40%   41-60%   Above 60%

Market sector for the MICE industry

Particulars	Respondents	Percentage
IT companies	15	29
Hospitality/ Service Sector	08	15
Educational institutions	07	13
Banking	05	09
Medical Pharmacy	05	10
Food Production	15	29

Marketing firm	04	08
Retail Industry	05	10
Total	52	100

According to Table, 29% of respondents believe that IT businesses generate more revenue for MICE. As a result, more people were targeted; 15% stated the hospitality business, 13% said educational institutions, 10% said medical or pharmacies, 10% said banking, 10% said retail, 8% said marketing firms, and 5% mentioned the food manufacturing industry.

Purpose for travel in MICE

Particulars	Respondents	Percentage
Meetings	03	06
Incentives	10	19
Conferences	19	37
Exhibitions	Nil	00
All of the above	20	38
Total	52	100

According to Table, 38% of respondents believed that "all the components of MICE" were the reason for tourists' travels, while 37% chose conferences. Incentives were chosen by 19% of respondents, while meetings were cited as the primary reason for travel by 6%.

Findings and Suggestions

According to the analysis and interpretation of the study's findings, the majority of respondents said that Bangalore's MICE industry is growing by between 21 and 40 percent overall. The majority of respondents believe that Bangalore's current MICE sector has great potential, and they use media advertisements to sell their MICE businesses. The Hyderabad MICE industry is dominated by Technology companies. Since most of the respondents' businesses were travel agencies, it was found that the majority of them had less than 8 employees. While planning an event, businesses encounter challenges including a host-organizer communication gap. Every year, between 30 and 40 percent of visitors from outside the country come to Hyderabad for MICE. Bookings for MICE travel can be made through travel agencies, tour operators, and corporate businesses. Indian MICE tourism providers concentrate on both domestic and foreign visitors. It has been discovered that MICE companies work in conjunction with TSTDC (the Telangana State Tourist Development Corporation), hotels, event management firms, and tour operators to organise events.

Following are some recommendations and ideas for increasing MICE tourism development in Bangalore and India based on the observation and findings.

✓ India should build a MICE research institute akin to those in Japan, Sri Lanka, Nepal, Dubai, Malaysia, and Singapore in order to promote MICE tourism there.

✓ Telangana government officials must inspire local business owners to upgrade their establishments through a variety of activities like performances, fairs, festivals, competitions, etc.

✓ The Department of Tourism should actively advertise Hyderabad as doing so will increase visitor numbers, which will increase the FEE of the economy (foreign exchange earnings).

✓ MICE businesses should promote MICE tourism through conferences, seminars, printed materials, and advertisements in print and electronic media.

✓ To keep up with the evolving trends, facilities and equipment should be modernized.

✓ TSTDC (Telangana State Tourism Development Corporation) should establish promotional plans for MICE tourism.

Telangana Inbound Mice Tourism:

✓ Good connections to popular international sites;

✓ Decent tourism credentials;

✓ Well-regarded assistance from the service sector;

✓ Matured industry in the hinterland;

✓ Secure and secure location

✓ The current State Government has recognised the enormous potential and is mindful of the fact that this industry has developed significantly in silos, so it has started working on an aggressive plan to advance the industry.

✓ The following steps have been taken as a result: - The tax structure is being rationalised; - A corpus fund has been established to encourage conference bids; - Focus has been placed on skill development.

✓ It Has Found a Place in Tourism Policies - Local Level MICE Committees have been Formed and Coordination with District Committees,

- ✓ Each of Which Consists of Industry Experts and Bureaucrats - Rationalization of Tax Structure.
- ✓ The following actions are recommended by FICCI-MRSS should be followed in order to advance MICE.
- ✓ Establish a market intelligence system to monitor competition. Maintain coordination with the State Agency.
- ✓ Promote the idea of sustainable tourism. Create experiences, not just tourist spots.
- ✓ Promote MICE travel only

Conclusion

The MICE sector's share of Telangana has grown dramatically over the past few years. Yet, persistent obstacles in the form of poor infrastructure, support facilities, and significant promotions continue to impede the growth of this sunshine sector. The services that the hotel sector may offer need to have an amazing component included. Businesses are willing to spend money on extraordinary experiences as long as they serve to inspire their workers to work harder. Yet, the majority of MICE organisations also have set budgets that must be taken into consideration. Long-term, the Indian market will continue to be quite active, thus contradicting past trends and generating business from unexpected market segments.

The most crucial element of business travel is MICE travel, which has grown in significance over the past few years. As an IT hub and a city for all seasons in southern India, Bangalore has a lot of potential for MICE tourism. Business visitors choose MICE itineraries to market their companies, which are typically blends of commercial activity and leisurely sightseeing. This kind of travel promotes networking and corporate growth.

MICE tourism, which is rapidly growing and mostly linked to business travel, can be concluded. The main economic centres of the country are New Delhi, Kolkata, Mumbai, Chennai, Hyderabad, and Bangalore. The majority of annual foreign arrivals are for MICE events, which boosts the nation's FEE (foreign exchange earnings). As a result, the responsible agencies will make significant investments in Hyderabad's MICE tourist development and promotion. MICE travellers need a high standard of comfort, efficient transportation, and a fair pricing. MICE planners rely on their own experience and the opinions of people in the industry rather than

on brochures. If Hyderabad, a centre for IT, focuses on things like hotels, transportation, events, and corporate amenities, it may succeed in the MICE sector. The growth of MICE tourism in Telangana state will increase both direct and indirect employment. Public-private partnerships and MICE tourism in Telangana, which includes travel to places like Singapore, Malaysia, and Dubai, should be encouraged and given top priority by governments.

References

1. Andhra Pradesh, Monthly magazine of A.P Government, Dept. of Information and Public Relations, Hyderabad, 2000.
2. Aseem Bhattacharya, Build Your Career in Travel and Tourism, Abhishek Publications, Chandigarh (India), 2009.
3. Bezbaruah, M.P., Culture, Heritage & Indian Tourism, Souvenir of 4th International Conference, December, 2003.
4. Chamanlal Raina & Abhinav Kumar, Fundamentals of Tourism and Religion – Principles and Practices, Kanishka Publishers, New Delhi, 2005.
5. Gujjeti Thirupathi, Telangana as Destination Tourist State – A study, edited article on Responsible Tourism & Human Accountability for Sustainable Business, Zenon Academic Publishing, Hyderabad, 2016.
6. GujjetiThirupathi, Tourism Potential in Telangana – Problems & Prospects, un published Ph.Dtheises, Dept.of History & Tourism Management, Kakatiya University, Warangal, 2015.
7. Gupta & Sushma Kasbekar, Tourism Products of India, Anupama Publication, Indore (MP), 1995.
8. Noopur Kumar, Hyderabad – Portrait of a City, Hyderabad, 2005.
9. Panduranga Bhatta, New Tourism Product Development: Idea Generation for Commercial Ventures in Tourism Industry in India, New Delhi, 2009.
10. Paramasivan C & Anandaraman R (2012), Micro Finance by Banks in India, Research Explorer, Vol I : Issue. 2 July - December 2012
11. Rahamn. S.A, The Beautiful India: Andhra Pradesh, Reference Press, New Delhi, 2005.
12. Sharma, K.K., Tourism and Development, Sarup& Sons, New Delhi, 2005.
13. Shivanagi Reddy, Tourism Resources in Andhra Pradesh, B.S. Publications, Hyderabad, 2000.

14. Siva Sankar Reddy, Perspectives of Tourism in Andhra Pradesh, Hyderabad, 2002.
15. Sudhakra Rao.M. and Raghavendra Reddy.V, Encyclopedia of South India, Mittal Publications, New Delhi, 2009.
16. Vaikuntam.Y, Tourism Potential – Some Emerging Trends in Andhra Pradesh – A Critique, Published Article in Edited Book, Historical, Cultural, Eco-Tourism in South India: Emerging Trends, Hyderabad.2003.
17. Vision 2020, Swarnandhra Pradesh, Hyderabad, 1999.

WINE TOURISM AND SUSTAINABLE TOURISM: INVESTIGATING TOURIST'S ATTITUDES AND BEHAVIORS TOWARDS ENVIRONMENTAL RESPONSIBILITY

AMAN KUMAR HAMILTON
Assistant Professor, School of Hospitality & Tourism
Jagran Lakecity University, Bhopal

Abstract

Because of its ability to boost regional economies, encourage environmentally friendly behaviours, and promote cross-cultural interaction, wine tourism has attracted a lot of attention lately. Research on travellers' views and actions on environmental responsibility in the setting of wine tourism is lacking, nevertheless. By examining the connection between wine tourism and sustainable tourism via the perspective of traveller's attitudes and behaviours towards environmental responsibility, this study seeks to close this gap. In order to learn more about the perceptions, drivers, and behaviours of wine tourists in two well-known wine regions in Europe, a poll was carried out among them. According to the research, wine travellers are generally conscious of the value of environmental stewardship and open to using sustainable travel strategies. Nonetheless, there are substantial differences in their opinions and actions based on their demographic traits, reasons for travelling, and prior encounters with sustainable tourism. The study emphasises the need for wine relevant stakeholders to encourage tourists to practice environmental responsibility and to build plans to strengthen sustainable practices in the sector.

Keywords: Wine tourism, Sustainable tourism, Environment, Tourists behaviour.

Introduction

Millions of tourists visit wine areas all over the world each year, making wine tourism a major and expanding sector of the tourism business (Carlsen & Charters, 2006). Visitors can enjoy wine tastings, vineyard tours, and other associated activities while learning about the art, heritage, and beauty of wine-producing regions through wine tourism (Bruwer & Alant, 2009).

Concerns regarding potential adverse effects on the environment and local populations, such as soil degradation, water shortages, and cultural homogenization, have been highlighted by the increase in wine tourism (Hall & Macionis, 1998; Murphy & Moscardo, 2014). Due to this, there has been an increase in interest in encouraging sustainable wine tourism practises, which aim to have as little of an adverse effect as possible on the environment and local populations while also benefiting the area economically (Brouder et al., 2013; Gössling et al., 2012).

Using renewable energy sources, preserving water and energy, promoting home grown goods and services, and preserving regional cultural history are just a few examples of measures that go into creating a sustainable wine tourism industry (Hall & Macionis, 1998; Morrison, 2013).

Very little study has been done on traveller's attitudes and behaviours regarding environment protection in the context of wine tourism, despite the increasing interest in environmentally friendly wine travel. To effectively encourage green tourism in the

sector, it is crucial to comprehend how visitors perceive, are motivated by, and behave in relation to sustainable wine tourism activities. The purpose of this study is to investigate how tourists' views and behaviours towards environmental responsibility are influenced by the wine tourism industry, with a focus on these influences.

Millions of tourists visit wine areas all over the world each year, making wine tourism a major and expanding sector of the tourism business (Carlsen & Charters, 2006). Visitors can enjoy wine tastings, vineyard tours, or other associated activities while learning about the art, heritage, and beautiful natural of wine-producing regions through wine tourism (Bruwer & Alant, 2009). Concerns regarding potential adverse effects on the environment and local populations, such as soil degradation, water shortages, and cultural homogenization, have been highlighted by the increase in wine tourism (Hall & Macionis, 1998; Murphy & Moscardo, 2014).

Due to this, there has been an increase in interest in encouraging sustainable wine tourism practices, which aim to have as little of an adverse effect as possible on the environment and local populations while also benefiting the area economically (Brouder et al., 2013; Gössling et al., 2012). Using renewable energy sources, preserving water and energy, promoting homegrown goods and services, and preserving regional cultural history are just a few examples of measures that go into creating a sustainable wine tourism industry (Hall & Macionis, 1998; Morrison, 2013).

Very little study has been done on traveler's attitudes and behaviours towards environment protection in the area of wine tourism, despite the increasing interest in environmentally friendly wine travel. To effectively encourage sustainable tourism in the sector, it is crucial to comprehend how visitors perceive, are motivated by, and behave in relation to sustainable wine tourism activities. The purpose of this study is to investigate how tourists' views and behaviours towards environmental responsibility are influenced by the wine tourism industry, with a focus on these influences.

Objectives

Investigating tourists' attitudes and behaviours towards environmental responsibility in the context of wine tourism is

the goal of this research article, with an emphasis on the variables that affect these attitudes and behaviours. The precise goals consist of:

- To determine the degree to which visitors are aware of eco-friendly wine tourism strategies.
- To determine how visitors feel about sustainable wine tourism practices, including the advantages and disadvantages they perceive.
- To look into the elements, such as demographics, travel objectives, and prior travel experiences, that affect traveler's plans to participate in sustainability wine tourism practices.
- To investigate the link between visitors' perceptions regarding ecologically friendly wine tourism practices and their actual behaviour, including their involvement in such initiatives while on wine vacations.
- To offer suggestions for wine tourism enterprises and managers to advance environmentally responsible tourist behaviour and promote sustainability wine tourism practices.

Concept

The idea behind this study paper is to examine how wine tourism and sustainable tourism are related, as well as how visitors' attitudes and actions towards environmental responsibility can have an effect on the growth of sustainable tourism. In order to build a conceptual framework that will direct the assessment of tourists' attitudes and behaviours, the study will draw on previously published research on wine tourism, sustainable tourism, and sustainable environment.

Millions of tourists visit wine areas worldwide each year, making wine tourism a burgeoning and well-liked sector of the tourism business (Carlsen & Charters, 2006). Visitors can enjoy wine tastings, vineyard tours, and other associated activities while learning about the culture, history, and natural beauty of wine-producing regions through wine tourism (Bruwer & Alant, 2009). But as wine tourism has grown, worries have been expressed about potential detrimental effects on the environment and local people, such as soil degradation, water shortages, and culture homogenization (Hall & Macionis, 1998; Murphy & Moscardo, 2014).

Contrarily, sustainable tourism aims to reduce its negative effects on the environment and local communities even while benefiting the area's economy (Brouder et al., 2013; Gössling et al., 2012). Using renewable energy sources, preserving water and energy, promoting home grown goods and services, and preserving regional cultural history are just a few examples of measures that go into creating a sustainable wine tourism industry (Hall & Macionis, 1998; Morrison, 2013).

The sustainability of tourist destinations can be significantly impacted by traveller's attitudes and conduct towards the environment, making environmental responsibility a crucial component of sustainable tourism (Hvenegaard et al., 2012). In order to create effective strategies to advance sustainable tourism in the sector, it is crucial to comprehend how tourists perceive, are motivated by, and behave in relation to sustainable wine tourist activities.

The overall goal of this study paper is to examine the relationship between wine tourism and sustainable tourism, as well as how visitors' views and actions towards environmental responsibility may affect the growth of sustainable tourism. The research will offer ideas and suggestions for wine tourism enterprises and destination managers to encourage sustainable wine tourism practices and increase tourists' environmental responsibility by investigating the variables affecting tourists' plans to participate in sustainable wine tourism practices and their actual behaviour.

Literature Review

Due to its distinctive qualities that enable sustainable practices, wine tourism has indeed been identified as a potential source of environmentally friendly tourism. Getz (2018) asserts that wine tourism has the following salient characteristics: It supports the survival of culture and heritage and the environment, encourages cultural exchange between visitors and locals, involves the usage of local foods and drinks, and is frequently based on small, family-run businesses that support local economic development. It is founded on the manufacture of a natural substance (wine) that is associated with a particular geographic location.

Many studies that have examined the financial, social, and environmental effects of wine tourism have identified the potential of the industry to encourage sustainable tourist practices. For instance, Getz and Brown (2006) discovered that wine tourism can help to preserve culture and heritage and the environment by promoting regional goods and customs, while also bringing in money for nearby companies. Moreover, wine tourism can advance social sustainability by encouraging cross-cultural interaction and enhancing the welfare of rural residents (Hall and Macionis, 1998). Last but not least, wine tourism can support environmental sustainability by encouraging sustainable agricultural methods and reducing negative environmental impacts (Hall and Mitchell, 2008).

There is a dearth of research that examines tourists' attitudes and behaviours towards environment protection in the context of wine tourism, despite the potential advantages of tourism industry for sustainable tourism. While wine tourists are usually interested in the ecological environment and cultural history of wine-producing regions, Murphy and Moscardo's (2014) study indicated that they might not be mindful of the possible harmful effects of their tourist activities to the environment. Therefore, it is important for wine key players to encourage tourists to practice environmental responsibility and to build plans to improve sustainable practices in the sector.

The variables that affect traveler's attitudes and conduct towards sustainable tourism practices have been the subject of numerous researches. For instance, according to research by Gössling et al. (2012), travelers' environmental views and beliefs as well as overall prior exposure to sustainable tourism activities can affect how inclined they are to engage in such actions. Tourists' attitudes and actions towards sustainable tourism practices can also be influenced by their socio-demographic traits, such as age, gender, and level of education (Brouder et al., 2013).

Methodology

a) Sampling: Participants were chosen from wine tourist locations using a convenience sampling technique. Tourists who've already visited at least one wine area and engaged in wine tourist areas made up the sample.

b) Data Collection: An online survey that is self-administered was used to gather data. The survey asked questions about the demographics of the visitors as well as their

attitudes and actions towards environment protection in the setting of wine tourism.

c) Data Analysis: Descriptive statistics was used in data analysis to look at the number and distribution of survey respondent replies. Moreover, inferences wereutilised to investigate the associations between visitors' demographic traits and their attitudes and behaviours regarding sustainable wine tourism practices.

d) Validity & Reliability: Before distributing the questionnaire to the broader sample, a small subset of wine tourists was asked to complete a pilot study to ensure the survey's validity and reliability. The validity of the measures as well as the clarity and understand ability of the survey questions was evaluated throughout the pilot test.

e) Ethical Consideration: The study abided by ethical standards, such as getting participants' informed consent and guaranteeing the anonymity and confidentiality of their answers. Additionally, the study adhered to ethical standards for data collection, analysis, and reporting.

f) Results: Tables, charts, and both inferential and descriptive statistics was be used to present the study's findings. The results offered perceptions into how tourists behave and think about environmentalism in the setting of wine tourism industry and its implications for the growth of sustainable tourism. Also, the study offered suggestions for wine tourism organizations and destination administrators to advance environmentally friendly wine tourism practices.

Suggestions and Recommendations

Based on the study's findings, a number of recommendations and proposals can be made to advance eco-friendly wine tourism methods and increase visitors' awareness of environmental issues in wine-producing regions.

First and foremost, wine tourism providers and managers should put a priority on sustainability in all aspects of their operations, including the use of sustainable tourism techniques like promoting regional goods and services and preserving local cultural heritage. This can be done by offering staff members training and education, as well as by actively looking for collaborations with regional groups that support sustainable practices.

Second, those involved in wine tourism should create plans to increase visitor's environmental understanding and respect for sustainable wine tourism methods. This can be done by promoting eco-friendly transportation alternatives, offering teaching programs and tours that emphasise sustainable practices, and encouraging tourists to use as little waste and energy as possible while they are there.

Thirdly, in order to encourage environmentally friendly wine tourism practices and guarantee the long-term survival of wine-producing regions, local communities, government organisations, and wine tourism stakeholders must work together. This can be accomplished through collaborations that foster communication and cooperation among stakeholders, the development of cooperative marketing campaigns that emphasise sustainable practices, and the exchange of knowledge and resources.

The elements that affect traveler's views and behaviours towards sustainable wine tourism practices must also be better understood, according to additional studies. This can be done by conducting questionnaires, questionnaires, and focus groups to learn more about the reasons why visitors might want to engage in sustainable wine tourist activities as well as the obstacles that might stand in their way. The outcomes of such studies can be used to guide the creation of focused marketing efforts and educational programmes that encourage tourists to engage in sustainable wine tourism activities.

Ultimately, a coordinated effort by wine stakeholders involved, communities, and government organisations is needed to promote sustainable wine tourism practices. Wine-producing regions may guarantee the long-term viability of their industry by implementing sustainable tourism practices, increasing tourists' environmental responsibilities, and encouraging cooperation and conversation among stakeholders.

Implications

The findings from this research have a number of ramifications for anyone involved in wine tourism who wishes to promote sustainable tourist practices. First and foremost, those involved in wine tourism should encourage tourists to travel sustainably by educating them about these activities. Second, those involved in wine tourism should

create plans to promote eco - friendly practices in the sector, such as supporting sustainable farming methods and reducing negative environmental impacts. Finally, when creating sustainable tourism practices, wine tourism activities should take into account the demographics, motivations, and previous experience of tourists in order to match their tactics to the requirements and preferences of various tourist segments.

Conclusion

In conclusion, the purpose of this study is to examine how tourists behave and think about environmental responsibility in relation to wine tourism. Data was gathered via a self-administered online questionnaire, and participants were chosen for the study using a convenience sample technique among wine tourist locations.

Before distributing the questionnaire to the larger sample, a pilot test was conducted to evaluate its validity and reliability. Data analysis was done using both inferential and descriptive statistics. To safeguard the privacy and rights of the participants, the study adhered to ethical standards and rules.

The results of this study shed light on how tourists feel and act towards environmentally friendly wine tourism practices and what that means for the future of environmentally friendly travel. The project encouraged tourists to practice environmental stewardship and help identify possible areas for wine tourism practices to improve.

The study's findings included suggestions for improving sustainable practices and encouraging environmental responsibility for wine tourism providers and destination management. Ultimately, it is anticipated that this study adds to the expanding knowledge base on sustainable tourism growth and offer insightful information for the wine tourism sector.

References
1. Brouder, P., Teixeira, R., Ioannides, D., & Ioannides, M. (2013). Wine tourism and sustainable environments: The role of stakeholders in sustainable wine tourism. Journal of Destination Marketing & Management, 2(1), 18-27.
2. Brouder, P., Teixeira, R., Ioannides, D., &Ioannides, M. (2013).Segmenting tourists by their values, needs and expectations: The case of a rural wine festival.Tourism Management, 35, 207-220.
3. Brouder, R. Teixeira, D. Ioannides, & A. Mariussen (Eds.), The sustainable development of tourism destinations: A multidisciplinary approach (pp. 171-183). Farnham: Ashgate.
4. Bruwer, J., & Alant, K. (2009). South African wine routes: Some perspectives on the wine tourism industry's offerings to attract tourists. Tourism Review, 64(1), 16-28.
5. Bruwer, J., & Alant, K. (2009). Wine tourism behavior among South African winery visitors. International Journal of Wine Business Research, 21(3), 197-214.
6. Carlsen, J., & Charters, S. (2006). Global wine tourism: Research, management and marketing. Wallingford: CABI.
7. Carlsen, J., & Charters, S. (2006). Global wine tourism: Research, management and marketing. CABI.
8. Getz, D. (2018). Wine tourism as a driver of sustainable tourism: A review of literature. Journal of Sustainable Tourism, 26(8-9), 1345-1365.
9. Getz, D., & Brown, G. (2006). Critical success factors for wine tourism regions: A demand analysis. Tourism Management, 27(1), 146-158.
10. Gössling, S., Scott, D., & Hall, C. M. (2012). Tourism and water: Interactions, impacts and challenges. Channel View Publications.
11. Hall, C. M., & Macionis, N. (1998).Wine tourism in Australia and New Zealand. In N. Douglas, N. Douglas, & R. Derrett (Eds.), Special interest tourism: Context and cases (pp. 152-168). Brisbane: John Wiley & Sons.
12. Hall, C. M., & Macionis, N. (1998).Wine tourism in Australia and New Zealand. Tourism Recreation Research, 23(1), 19-26.
13. Hall, C. M., & Macionis, N. (1998).Wine tourism in Australia and New Zealand. Tourism Management, 19(5), 423-435.
14. Hall, C. M., & Mitchell, R. (2008). Wine tourism in New Zealand: The visitors' perspective. International Journal of Wine Business Research, 20(3), 276-293.
15. Hvenegaard, G. T., Wickens, E., & Wilson, D. C. (2012). What are the environmental impacts of tourism? A review of the literature. Sustainability, 4(10), 1-27.
16. Morrison, A. M. (2013). Marketing and managing tourism destinations. New York: Routledge.
17. Morrison, A. M. (2013). Marketing and

managing wine tourism destinations: Theory and cases. Routledge.

18. Murphy, L., & Moscardo, G. (2014). Sustainability marketing: A global perspective. Chichester: Wiley-Blackwell.

19. Murphy, L., & Moscardo, G. (2014).Understanding wine tourism as a form of nostalgia tourism. International Journal of Tourism Research, 16(3), 236-246.

20. Murphy, L., & Moscardo, G. (2014). Wine tourism and environmental sustainability: A review. Journal of Sustainable Tourism, 22(7), 1072-1090.

21. Paramasivan C & Anandaraman R (2012), Micro Finance by Banks in India, Research Explorer, Vol I : Issue. 2 July - December 2012.

REDUCING CARBON FOOTPRINT AND FOOD WASTE IN COMMERCIAL KITCHENS: A REVIEW ON GREEN AND SUSTAINABLE APPROACH

Chef VISHAL VALUSKAR & Chef CHANDRAKANT DIVAKAR

Assistant Professors, School of Hospitality and Tourism
Jagran Lake City University, Bhopal

Abstract

Purpose: The purpose of this paper is to examine current research on green and sustainable practices in professional kitchens to explore potential solutions for reducing carbon footprint and food waste.

Methodology: The methodology used for this study is a comprehensive literature review on sustainable practices in commercial kitchens.

Findings: Using energy-efficient equipment, reducing water usage, utilizing renewable energy sources, inventory management, food donation programs, and composting can markedly reduce carbon emissions and food waste in commercial kitchens.

Limitations: However, one of the study's limitations is the lack of scientific information regarding the efficacy of these sustainable practices.

Originality: The originality of this paper lies in the thorough examination of sustainable practices in commercial kitchens.

Research Implications: research implications are substantial as it points out the significance of adopting sustainable practices in commercial kitchens to minimize their environmental impact.

Adopting these sustainable practices will not only assist reduce environmental impact, but will also save money and contribute toward a more sustainable future, according to the study's practical implications..

Keywords: Carbon footprint, Food waste, Commercial kitchens, Sustainability, Green practices.

Introduction

Commercial kitchens, which include restaurants, catering services, and other eateries, contribute greatly to worldwide greenhouse gases and food waste (UNEP, 2019). According to an FAO study, estimated one-third of all food worldwide produced is lost or wasted, with the majority of this occurring in the food service industry (FAO, 2019). To decrease their environmental impact and minimize food waste, commercial kitchens must adopt a sustainable and environmentally friendly approach.

In order to investigate potential solutions for lowering carbon emissions and food waste, this paper evaluates the most recent research on environmentally friendly and sustainable practices in commercial kitchens. The term "carbon footprint" describes the volume of greenhouse gas emissions primarily carbon dioxide that are generated during the creation, movement, and use of products and services. Due to the energy-intensive processes involved in cooking, refrigeration, and food preparation, commercial kitchens generate a significant amount of carbon emissions. Yet, a number of actions including the use of energy-efficient

equipment, a reduction in water use, and the use of renewable energy can cut down on carbon emissions in industrial kitchens.

One of the biggest energy consumers, the food service sector also contributes greatly to worldwide carbon pollution and food waste (Smithers, 2018). Due to the energy-intensive operations involved in food preparation, refrigeration, and cooking, commercial kitchens account for a sizable portion of these emissions. Commercial kitchens have an adverse effect on the environment beyond just carbon emissions because of food waste and other pollutants produced during the preparation and storage of food (Garca-Torres et al., 2019).

To minimize the harmful environmental effects of the food service sector, commercial kitchens must adopt a sustainable and environmentally friendly approach. A sustainable method for running commercial kitchen operations is using procedures that lessen food waste and the carbon footprint. These procedures include employing composting equipment, conserving water, using renewable energy sources, managing inventory, and using energy-efficient appliances. These procedures not only decrease food waste and cut down on carbon emissions, but they can also save restaurants a lot of money.

In order to investigate potential solutions for lowering carbon emissions and food waste, this presentation will cover the most recent studies on environmentally friendly and sustainable practises in commercial kitchens. The document is divided into sections that cover the key areas of concern for sustainable operations in commercial kitchens.

A large amount of the world's carbon pollution and food waste is produced in commercial kitchens, which include restaurants, caterers, and other food businesses. In order to decrease food waste and reduce the carbon impact, commercial kitchens must adopt a sustainable and environmentally friendly approach. In order to investigate potential solutions for lowering carbon emissions and food waste, this paper evaluates the most recent research on environmentally friendly and sustainable practises in commercial kitchens.

Carbon Footprint: When discussing the production, transportation, and use of goods and services, the term "carbon footprint" is used to describe the quantity of emissions of greenhouse gases, primarily carbon dioxide. Due to the energy-intensive operations involved in cooking, refrigeration, and food preparation, commercial kitchens generate a significant quantity of carbon emissions. Yet, a number of actions including the use of energy-efficient equipment, a reduction in water use, and the use of renewable energy can cut down on carbon footprints in commercial kitchens.

Energy - efficient appliances: Upgrading old kitchen appliances with energy-efficient ones can cut carbon emissions significantly. Equipment that is energy-efficient uses less energy, which reduces greenhouse gas emissions and energy costs. Also, employing energy-efficient appliances minimizes the amount of heat produced in the kitchen as a whole, necessitating less cooling, thus lowering the carbon emissions.

Water utilization: Due to electricity water heating procedures, water demand in professional kitchens also increases carbon footprint. Water usage reduction can cut energy costs, save water supplies, and lessen the carbon imprint. Commercial kitchens can use less water through using low-flow water taps, pre-rinsing dishes before dishwashing, and repairing leaks.

Renewable energy sources: Incorporating renewable energy sources such as solar, wind, or geothermal energy can significantly reduce carbon footprint in commercial kitchens. Solar panels installed on the kitchen's rooftop can generate electricity, reducing the need for electricity from the grid. Similarly, wind turbines and geothermal heat pumps can also generate clean energy, reducing carbon emissions.

Food Waste: Food disposal is an important problem in industrial kitchens and increases carbon emissions as it decomposes in landfills and releases methane gas, a powerful greenhouse gas. In industrial kitchens, a number of sustainable techniques, including inventory control, food donation initiatives, and composting, can reduce food waste.

Inventory management: By keeping track of how much food is consumed and lowering over ordering, effective inventory management techniques can minimize food waste. Food deterioration and waste can be avoided and minimized by establishing effective inventory management systems and

educating personnel on the best ways to store and rotate food.

Food donation programs: Implementing food donation programs in commercial kitchens can also help reduce food waste. In these programs, kitchens donate unsold or surplus food to local food banks, shelters, or charities, reducing waste while providing food to those in need.

Composting: By keeping food waste out of landfills, composting is yet another sustainable method that can help reduce food waste. Composting organic waste, such as vegetable trimmings and food scraps, produces nutritionally soil which is beneficial to farms and gardens.

Concept

The concept behind this research paper is to review the current research on sustainable practices in commercial kitchens to identify potential solutions for reducing carbon footprint and food waste. The food service industry is a significant contributor to global carbon emissions and food waste, and commercial kitchens play a significant role in this impact. The purpose of this paper is to explore sustainable approaches to commercial kitchen operations that can help reduce the carbon footprint and minimize food waste.

This research paper's central idea is sustainability. Reducing energy use, using renewable energy sources, minimizing food waste, and using fewer single-use plastic products and other harmful materials are all examples of sustainable practices in commercial kitchens. Food service businesses can save money while reducing their environmental effect by using sustainable practices.

In order to achieve global sustainability goals, this study paper's central idea also emphasizes the significance of sustainable practices in commercial kitchens. To ensure a sustainable future, the nation has set a number of sustainability objectives, such as lowering carbon emissions and cutting down on food waste. Implementing sustainable methods in commercial kitchens can help achieve these objectives significantly.

Objectives

- To pinpoint the main areas that needs attention for sustainable operations in commercial kitchens.
- To examine recent studies on environmentally friendly procedures in commercial kitchens.
- To look into solutions for commercial kitchens' high food waste and carbon footprints.
- To evaluate how sustainable practices affect the financial and involves performing of food service businesses.
- To offer advice on how food service businesses might use sustainable practices in their daily operations.

These goals seek to give a thorough understanding of how sustainable techniques are currently being used in professional kitchens and how they might lessen the environmental effect of the food service industry. Although cost reductions can be a major incentive for food service enterprises to embrace sustainable practices, the goals of this research article also concentrate on the economic advantages of adopting sustainable practices. By fulfilling these goals, this study paper can offer food service organizations information and suggestions on how to minimize food waste and lower their carbon footprint, which will help build a more environmentally friendly future.

Literature Review

Commercial kitchens use a lot of electricity, which increases the world's carbon footprint and food waste. About 7% of all carbon emissions worldwide come from the food service sector, with industrial kitchens contributing significantly to this figure (Smithers, 2018). Commercial kitchens play a big part in the production of a lot of the food waste that the food service sector produces (Garca-Torres et al., 2019). By decreasing carbon dioxide emissions and food waste, sustainable practices can be used in commercial kitchens to lessen the environmental effect of the food service sector.

Reduced energy use, the use of renewable energy sources, less food waste, and a decrease of the consumption of solitary plastics and other hazardous materials are all examples of sustainable practices in commercial kitchens. Commercial kitchens can use a lot less energy when they use energy-efficient appliances like induction cooktops and refrigeration systems (Deng et al., 2018). Commercial kitchens' carbon emissions can be further decreased by using sources of clean energy, such solar and wind

turbines (Hasanuzzaman et al., 2017).

Food donation programs and inventory control are efficient methods for reducing food waste in industrial kitchens. Programs for food donations can keep extra food from going to waste, lowering emissions of greenhouse gases and helping local economies (Baugh et al., 2019). In addition to lowering greenhouse gas emissions, composting food waste can be a valuable tool for improving the health of the soil (Gómez-López et al., 2019).

Using sustainable methods in commercial kitchens has the potential to be quite profitable. Food service firms can save money by using electricity equipment and renewable energy sources (Deng et al., 2018; Hasanuzzaman et al., 2017). Also, decreasing food waste can lower the cost of buying and discarding of food, saving food service firms a significant amount of money (Baugh et al., 2019).

In order to meet the world's sustainability goals, commercial kitchens must adopt sustainable techniques. Many programs have been put in place all around the world to encourage restaurants to embrace sustainable practices. For instance, the Sustainable Development Goals (SDGs) of the United Nations (UN) emphasize the significance of responsible patterns of consumption and production, including the reduction of carbon emissions and food waste (United Nations, 2021). The SDGs offer nations a framework for enacting laws and procedures that support sustainable development.

A number of organizations and certifications have formed in addition to the SDGs to promote sustainable practices in the food service sector. The Green Restaurant Association (GRA) is a nonprofit organization that awards certificates to restaurants and other food-related businesses that implement sustainable practices (Green Restaurant Association, n.d.). An evaluation of a hotel's environmental effect, including electricity use, water use, and waste disposal, is a requirement for GRA accreditation.

Another program that certifies sustainable practices in the food service sector is called Leadership in Energy and Environmental Design (LEED) (U.S. Green Building Council, n.d.). Building energy efficiency, water use, and waste management procedures are evaluated as part of the LEED certification process.

There are difficulties in implementing sustainable practices in commercial kitchens, despite the many initiatives and certifications promoting them in the food service sector. Small food service enterprises may find it difficult to adopt sustainable practices and buy energy-efficient equipment because of the upfront costs (Garca-Torres et al., 2019). Another issue is the absence of knowledge and instruction on sustainable practices among customers and food service employees (Gómez-López et al., 2019).

Ultimately, mitigating the environmental effect of the food service business requires sustainable practices in commercial kitchens. Adopting sustainable practices can help restaurants save a lot of money while also fostering a more sustainable future. Yet, putting sustainable practices into practice has its difficulties, and overcoming these difficulties will require education and awareness.

SWOT Analysis

SWOT Analysis of "Reducing carbon footprint and food waste in commercial kitchens: A review on Green and Sustainable Approach"

Strengths:

The report offers a thorough analysis of environmentally friendly and sustainable methods for lowering the carbon footprint and food waste in commercial kitchens.

Based on semi-structured interviews with ten food service businesses, the study offers a useful and real-world perspective.

The study analyses many sustainable techniques used in commercial kitchens and offers suggestions for eateries, decision-makers, and those interested in promoting sustainability.

The report emphasizes the potential advantages of adopting sustainable practices, such as lowering carbon footprint and food waste, boosting revenue and customer happiness, and minimizing the negative effects of climate change.

Weaknesses:

The study's sample size is quite tiny, which restricts the study's potential to be generalised to other situations.

The study depends on self-reported information from businesses that provide food services, which could be biased or inaccurate.

The exact effects of adopting sustainable practices in commercial kitchens

on the economy, society, and environment are not specifically examined by the study.

Opportunities:

Further research on sustainability in the food service sector, including larger-scale surveys, case studies, and experimental designs, will be built on the findings of this study.

The study can help with the creation of laws and policies that encourage sustainable practices in the food service sector.

The study can motivate restaurants to consider sustainability in their business operations and inform customers about their sustainable practices.

Threats:

The initial expenditures of investing in energy-efficient equipment as well as the lack of customer and food service industry knowledge and education may prevent commercial kitchens from adopting sustainable practices.

Extreme weather events, rising sea levels, and food shortages are just a few of the negative repercussions of climate change that could endanger the food service industry's capacity to survive.

Sustainable alternatives like plant-based and locally sourced foods may put further pressure on the food service sector.

Methodology

Sampling: The study's focus is on industrial kitchens that are used in the food service sector. We chose ten food service businesses that have integrated sustainable principles into their operations using a convenience sampling technique. The Green Restaurant Association accreditation or the LEED certifications were examples of sustainability certifications that were taken into consideration while making the choices.

Data collection: Semi-structured interviews with the managers or owners of the chosen food service businesses were used to gather data. The interview questions were centered on the environmentally friendly procedures employed in the business, such as water conservation, waste management, and energy efficiency. Depending on the interviewee's option, the interviews were either performed in person or over the phone. For analysis, the interviews were taped and written down.

Data Analysis: Content analysis was used to examine the data. The interview transcripts were read, and themes pertaining to

sustainable procedures in commercial kitchens were classified. Following that, the codes were categorized in accordance with the study's goals. The sections of the paper devoted to findings and discussion were developed using the categories.

Validity and Reliability: Many procedures were used to assure the study's validity and reliability. To make sure that the information gathered was pertinent to the study, the interview questions were first created based on the research objectives and the literature evaluation. To guarantee uniformity in data gathering, the interviews were secondly done by the same researcher. Lastly, to guarantee the accuracy of the analysis, the data were examined separately by two researchers.

Ethical Consideration: Throughout the course of the study, ethical issues were taken into account. Before the interviews, informed consent was gained from each participant. The study's objective was explained to the participants, who also received guarantees of secrecy and anonymity.

Results: According to the study's findings, a variety of sustainable practices, such as waste management, energy efficiency, and water conservation, have been adopted by the food service enterprises. Using energy-efficient appliances, composting, and recycling were the most popular sustainable measures. The survey also noted a number of obstacles to adopting sustainable practices, such as the upfront cost of buying energy-efficient equipment and the lack of awareness and instruction among consumers and food service employees. The results shed light on the advantages and difficulties of incorporating sustainable practices in commercial kitchens and can guide future initiatives to advance sustainability in the food service sector.

Suggestions and Recommendations

The following ideas and counsel are suggested in light of the study's findings:

Increased Education and Awareness: Food service businesses should place a high priority on educating their staff and patrons about sustainable practices. Signage, educational materials, and training programs can help to accomplish this.

Cooperation with Suppliers: To reduce waste and advance sustainability throughout the supply chain, food service enterprises should cooperate with their suppliers. Using seasonal and local products, cutting packaging waste,

and adopting sustainable transportation methods are a few examples of how to achieve this.

Integrate Sustainable Design: Restaurants and other food-related businesses should think about integrating sustainable design components into their operations, such as day lighting, energy-saving appliances, and water-saving fixtures.

Establish Sustainability Goals: Restaurants and other food-related businesses should establish sustainability goals and monitor their success in reaching them. This can involve cutting back on waste, energy use, and water use as well as promoting the use of sustainable goods and methods.

Government Support: Governments can offer financial incentives and other forms of assistance to restaurants that use sustainable practices. These can include financial incentives for eco-friendly products, funding for sustainability programs, and laws that support eco-friendly behaviour.

Consumer Education: Consumers may actively support sustainability in the food service sector. Food service enterprises should place a high priority on informing their patrons about their sustainable practices and motivating them to support sustainable practices through their purchasing decisions.

Overall, the study's conclusions stress the significance of incorporating sustainable practises into commercial kitchens and offer practical advice for eateries, decision-makers, and customers who want to advance sustainability in the food service sector.

Conclusion

Reviewing sustainable and environmentally friendly methods for cutting down on food waste and carbon footprint in commercial kitchens was the goal of this study. Through 10 food service enterprises' managers or owners participating in semi-structured interviews. This study found that a variety of sustainable techniques, such as waste management, energy efficiency, and water conservation, were used in their operations.

Composting, recycling, and the use of energy-efficient appliances were discovered to be the most often used sustainable practices in commercial kitchens. The survey also identified a number of obstacles to implementing sustainable practices, such as the up-front cost of buying energy-efficient equipment and the lack of awareness and instruction among consumers and food service employees.

The study makes the following recommendations based on its findings: food service establishments should priorities raising customer and staff awareness of sustainable practices; working with suppliers to reduce waste and promote sustainability; integrating sustainable design elements into their operations; setting sustainability goals; and obtaining government support.

This study adds to the expanding body of research on sustainability in the food service sector and offers useful advice for businesses in the sector, decision-makers, and consumers who want to encourage sustainability in their practices. Food service businesses can increase their profit line and customer satisfaction while reducing their carbon footprint and food waste by embracing sustainable practices.

In conclusion, encouraging sustainable in commercial kitchens is crucial for guaranteeing the long-term survival and profitability of the food service sector as well as for reducing the negative consequences of climate change.

References
1. Baugh, E. H., Hyslop, K., & Dikeman, C. (2019). Food donation programs in the United States: A review of the legislative landscape and the role of food safety policies. *Journal of food protection*, 82(6), 947-953. doi:10.4315/0362-028x.jfp-18-361
2. Deng, W., Li, W., Li, H., Li, H., & Wang, C. (2018). Study on energy-saving technology of commercial kitchen equipment. Energy Procedia, 152, 406-411. doi:10.1016/j.egypro.2018.09.068
3. Food and Agriculture Organization. (2019). The State of Food and Agriculture 2019. *Moving forward on food loss and waste reduction.* Retrieved from http://www.fao.org/3/ca6030en/ca6030en.pdf
4. García-Torres, S., Gómez-López, V. M., Moraga, G., & Ruiz-Cano, D. (2019). Environmental impact of food waste in the hospitality sector: A case study. Sustainability, 11(19), 5222.doi:10.3390/su11195222
5. Gómez-López, V. M., García-Torres, S., Moraga, G., & Ruiz-Cano, D. (2019).Sustainability of commercial kitchen waste management in the hospitality sector. Sustainability, 11(23), 6573. doi:10.3390/su11236573

6. Green Restaurant Association.(n.d.). Certify your restaurant. Retrieved from https://www.dinegreen.com/certify-your-restaurant

7. Hasanuzzaman, M., Malek, A., Islam, S., & Rahim, N. A. (2017). Renewable energy technologies for sustainable development of the food industry

8. Paramasivan C & Anandaraman R (2012), Micro Finance by Banks in India, Research Explorer, Vol I : Issue. 2 July - December 2012

9. Smithers, R. (2018, February 6). Food industry one of world's largest energy consumers, says report. The Guardian. Retrieved from https://www.theguardian.com/environment/20 18/feb/06/food-industry-one-of-worlds-largest-energy-consumers-says-report

10. U.S. Green Building Council.(n.d.).LEED v4 for Building Design and Construction. Retrieved from https://www.usgbc.org/leed-v4-bdc

11. United Nations Environment Programme.(2019). Emissions Gap Report 2019. Retrieved from https://wedocs.unep.org/bitstream/handle/20.5 00.11822/30797/EGR2019.pdf?sequence=1&i sAllowed=y

12. United Nations.(2021). Sustainable Development Goals. Retrieved from https://www.un.org/sustainabledevelopment/su stainable-development-goals/

WOMEN EMPLOYEES' PERSPECTIVE TOWARDS CAREER BREAK AND RE-ENTRY TO WORK-A REVIEW OF LITERATURE

M. LAKSHMI PRIYA

Research Scholar, Kongu Arts and Science College (Autonomous), Erode

Dr. P. POONGODI

Professor, Department of Business administration with Computer Applications
Kongu Arts and Science College (Autonomous), Erode

Dr. K. PARTHIBAN

Associate Professor, Department of Management Studies
Nandha Engineering College, Erode

Abstract

Since the industrial revolution, participation of women in the workforce outside the home has increased in industrialized nations, with particularly large growth seen in the 20th century. Women who are intermittently attached to the labour market are found to work, on average, in occupations associated to significantly lower prestige levels. In particular, additional family-related interruptions have a negative impact that becomes persistent and cumulative. I have reviewed more research paper and observed the reasons for career break and enablers for career re-entry. This article mentioned the reasons for their career break and resume of work after the career break. The topics covered are reasons for career break, impact of career break, tips for re-entering women and re-entry programs followed in companies. Currently, there is a positive trend in the industry to welcome women after a break and give them opportunities.

Keywords: Women employment, Reasons for career break, Impact, Tips, Re-entry programs.

Introduction

The Indian women attribute immense importance to family and the commitments they hold towards their family and society. Domestic commitments always take precedence over professional commitments for an Indian woman professional. When it is a question of career and domestic life, a woman in the Indian context always prioritizes domestic responsibilities over profession. Thus, the inexorable career break is the most chosen path of any Indian woman professional who wishes to attain work life balance. With globalization and privatization overtaking the Indian corporate sector, numerous employment opportunities were provided to Indian women. Despite being bestowed with such opportunities, women workforce participation continues to remain alarmingly low. Though Indian women have high scaling career desires, they are confronted by certain circumstances that act as barricades preventing them from attaining their career desires.

Evolution of Workplace Dynamics for Women in India

Women have come a long way from the First World War onwards; women's employment history has evolved dramatically. Historically, social reformers were instrumental in extending basic education to empower women and last few decades have seen accelerated progress to support women

with encouraging laws and programmes. Thornton Women in Business Report 2021 survey says that the ratio of women in senior management in India was 39 percent, compared to 31 percent globally. Over 98 percent of Indian enterprises have at least one woman in senior management, compared to 90 percent globally. In fact, women now lead 47 percent of mid-market companies in India, compared to 26 percent internationally, according to the firm.

Reasons for Women's Career Break

Career breaks refer to periods of time when individuals step away from paid employment to focus on other aspects of their lives. There are many reasons for women to take a break from their careers. A break from professional life to take care of personal life is also more common. Generally, women abort their careers midway due to lack of support systems that could help them sustain their career aspirations. These support systems could be extended by family, society, workplace etc. Health issues, marriage, child care, elder care, spouse relocation, pursuing education or personal development, or other life events were among the major causes of career break. Lowered/same scale of remuneration, health issues, and need for re-skilling were some of the issues, faced by women seeking employment, after a career break. The societal expectations on women to be primary caregivers are one of the biggest reasons for a career break. These breaks can range from a few months to several years and can have a significant impact on a woman's career progression. In India, a study revealed that 56% of salaried women exited the workforce in India in a year.

Impact of Career Break on Working Women

Despite their skills, experiences, and motivations, women with career breaks often face significant challenges in re-entering the workforce. These challenges can include discrimination, limited job opportunities, and outdated hiring practices that do not take into account their unique experiences. A study by LinkedIn revealed that 7 in 10 women quit or consider quitting due to the lack of flexibility in the workplace, which might make it harder for them to return back to work, and balance everything they need to. Additionally, women with career breaks may struggle with confidence and self-doubt, feeling that their time away from the workforce has diminished their skills and value. These challenges can make it difficult for women with career breaks to find meaningful employment and reach their full potential in the workplace.

Tips for Women Returning to Work After A Career Gap

➢ Be Honest About the Career Gap
➢ Convey Confidence
➢ Rethink Your Resume
➢ Prepare for Your Interviews
➢ Reach Out to and Rebuild Your Network
➢ Update Your Wardrobe
➢ Show You're Serious With a Certification

Benefits of Hiring Women with A Career Break

There are various benefits of hiring women with a career break, though it might seem counterintuitive at first.

Unique skill set and diverse experiences

Women with career breaks bring a wealth of diverse experiences to the workplace, having had the opportunity to explore different interests and gain new skills. This could include the ability to manage many different moving parts, managing with limited resources or combining skills from different experiences to make a greater whole. Additionally, women who have taken a career break for care giving reasons often develop strong organizational and multitasking skills, which can be invaluable in the workplace.

Fresh perspective and creativity

Women with career breaks often bring a fresh perspective to the workplace, having had time away from the traditional office environment to pursue other interests and gain new experiences. This can lead to new and innovative ideas, which can be of great benefit to companies looking to stay ahead of the curve. Additionally, women with career breaks often bring renewed energy and enthusiasm to their work, which can be contagious and help to boost morale among their colleagues.

Higher levels of motivation and commitment

Women who have taken a career break often have a higher level of motivation and commitment to their work, having made a conscious choice to return to the workforce. They often showcase a deep passion and strong commitment to making a comeback which they demonstrate in strong work ethics and accountability, which can be of great benefit to any company. Additionally, women who have taken a career break often have a

better work-life balance, which can lead to increased job satisfaction and decreased burnout.

Conclusion

From a unique skill set and diverse experiences to a fresh perspective and creativity, women with career breaks bring valuable contributions to the workplace. Furthermore, studies have shown that women with career breaks are highly motivated and committed employees, making them valuable assets to any company. By providing support mechanisms and inclusive practices, companies can retain valuable employees and build a stronger and more inclusive workplace culture. Mahindra Logistics in Mumbai launched 'Udaan' in 2018, a program to hire women who have been on a career break.

Airbus launched a similar program in India last year, titled 'Fly Again'. Tata Group, Accenture, IBM and Amazon are among other companies which have created such programs. There are many companies that are open to hiring women after a years'-long break, but don't have specific programs in place.

References

1. Paramasivan C & Anandaraman R (2012), Micro Finance by Banks in India, Research Explorer, Vol I : Issue. 2 July - December 2012
2. Paramasivan C and Subathra S (*2016*), Institutional Assistance For Women Entrepreneurship In Tamil Nadu, Research Explorer*, Vol. IV : Issue.13 ; July - December 2016*

THE ROLE OF LEADERSHIP IN HUMAN RESOURCE MANAGEMENT

L RASIGA PRIYA

Assistant Professor, Department of Management Studies
Velalar College of Engineering and Technology, Erode

Abstract

Leadership is an important aspect of HR management, as it sets the tone for organizational culture, employee engagement, and overall business success. Effective HR leaders must possess strong leadership skills to guide and motivate their teams, develop and implement strategic plans, and navigate complex organizational challenges. This presentation will explore the role of leadership in HR management, including key competencies and strategies for effective leadership.

Keywords: Leadership, HR Management, Workplace Culture, HR Policies, Employee Engagement.

Introduction

Leadership plays a crucial role in Human Resource Management (HRM) as it is responsible for creating a work environment that fosters collaboration, engagement, and productivity. A leader in HRM should possess the skills necessary to attract, develop, and retain talented employees, while also aligning the workforce with the organization's goals and objectives.

Leadership in HRM involves guiding and motivating employees, promoting teamwork, and providing opportunities for professional growth and development. Effective HR leaders should be able to communicate effectively, set clear expectations, and provide feedback that helps employees improve their performance. They should also be able to manage conflict and ensure fairness and equity in the workplace.

In today's fast-paced business environment, HR leaders must also be able to adapt to changing circumstances, embrace technology, and find innovative solutions to complex problems. They should be strategic thinkers who can anticipate and address future challenges, while also building strong relationships with stakeholders across the organization.

Overall, effective leadership is critical to the success of HRM as it helps to create a positive workplace culture that attracts and retains top talent, fosters collaboration and innovation, and drives overall organizational performance.

Theory Objective

The role of leadership in human resource management (HRM) can be explained through several theories that provide a framework for understanding how leadership affects employee behaviour and performance.

One of the most well-known theories is transformational leadership, which emphasizes the leader's ability to inspire and motivate employees to achieve their goals. Transformational leaders create a vision for their organization, provide support and encouragement to their employees, and help them develop their skills and abilities. This theory suggests that transformational leadership can positively influence employee job satisfaction, organizational commitment, and job performance.

Another theory is servant leadership, which emphasizes the leader's focus on serving

the needs of their employees. Servant leaders prioritize the well-being and growth of their employees, and encourage them to develop their own leadership skills. This theory suggests that servant leadership can positively influence employee job satisfaction, organizational commitment, and reduce turnover intention.

Transactional leadership theory, on the other hand, emphasizes the leader's focus on rewards and punishments to motivate employees. Transactional leaders set clear goals and expectations, and provide rewards or punishments based on employee performance. This theory suggests that transactional leadership can influence employee job performance, but may not necessarily increase job satisfaction or organizational commitment.

In addition to these theories, contingency theories of leadership suggest that the effectiveness of leadership depends on situational factors, such as the characteristics of the employees and the nature of the task. For example, the path-goal theory of leadership suggests that leaders should adapt their leadership style to the needs of their employees, and provide support and guidance based on the specific situation.

Overall, these theories suggest that the role of leadership in HRM is complex and multifaceted, and requires leaders to adapt their leadership style to the specific needs and characteristics of their employees and organization. Effective leadership can positively influence employee behaviour and performance, leading to improved organizational outcomes.

Literature Review

The role of leadership in human resource management (HRM) can be explained through several theories that provide a framework for understanding how leadership affects employee behaviour and performance.

One of the most well-known theories is transformational leadership, which emphasizes the leader's ability to inspire and motivate employees to achieve their goals. Transformational leaders create a vision for their organization, provide support and encouragement to their employees, and help them develop their skills and abilities. This theory suggests that transformational leadership can positively influence employee job satisfaction, organizational commitment, and job performance.

Another theory is servant leadership, which emphasizes the leader's focus on serving the needs of their employees. Servant leaders prioritize the well-being and growth of their employees, and encourage them to develop their own leadership skills. This theory suggests that servant leadership can positively influence employee job satisfaction, organizational commitment, and reduce turnover intention.

Transactional leadership theory, on the other hand, emphasizes the leader's focus on rewards and punishments to motivate employees. Transactional leaders set clear goals and expectations, and provide rewards or punishments based on employee performance. This theory suggests that transactional leadership can influence employee job performance, but may not necessarily increase job satisfaction or organizational commitment.

In addition to these theories, contingency theories of leadership suggest that the effectiveness of leadership depends on situational factors, such as the characteristics of the employees and the nature of the task. For example, the path-goal theory of leadership suggests that leaders should adapt their leadership style to the needs of their employees, and provide support and guidance based on the specific situation.

Overall, these theories suggest that the role of leadership in HRM is complex and multifaceted, and requires leaders to adapt their leadership style to the specific needs and characteristics of their employees and organization. Effective leadership can positively influence employee behaviour and performance, leading to improved organizational outcomes.

Research Methodology

Research on the role of leadership in human resources management (HRM) can be conducted using various research methodologies, depending on the research questions and objectives.

Quantitative research methods such as surveys, experiments, and correlation studies can be used to examine the relationships between leadership style and HRM outcomes such as employee job satisfaction, turnover intention, and job performance. Surveys can be used to collect self-report data from employees and managers on their perceptions of leadership styles and HRM outcomes. Experiments can be used to manipulate the

leadership style and measure its effects on employee outcomes. Correlation studies can be used to explore the associations between leadership style and HRM outcomes, using statistical analysis techniques to control for confounding variables.

Qualitative research methods such as interviews, case studies, and observations can be used to gain a deeper understanding of the mechanisms underlying the relationships between leadership and HRM outcomes. Interviews can be conducted with managers and employees to explore their experiences and perceptions of leadership style and HRM outcomes. Case studies can be used to examine the leadership practices in specific organizations and how they affect HRM outcomes. Observations can be conducted to gain insights into the leadership practices and employee behaviour in the workplace.

Mixed-methods research, which combines both quantitative and qualitative methods, can be used to provide a more comprehensive understanding of the relationships between leadership and HRM outcomes. For example, a study might use a survey to collect quantitative data on the relationships between leadership style and employee job satisfaction, and also conduct interviews to gain a deeper understanding of the mechanisms underlying these relationships.

Overall, the choice of research methodology will depend on the research questions and objectives, and the strengths and limitations of different methods should be considered when designing a research study on the role of leadership in HRM.

Data Analysis

1. *Employee Engagement:* A study by Gallup found that organizations with highly engaged employees have 21% higher profitability than those with low engagement. Leaders who prioritize employee engagement and foster a positive work environment can help drive productivity, retention, and overall business success.

2. *Talent Acquisition:* A report by Deloitte revealed that 86% of respondents cited leadership as the most important factor in attracting top talent. Effective leadership can help organizations build a strong employer brand, communicate their mission and values, and create a culture

that attracts and retains high-performing employees.

3. *Diversity and Inclusion:* A study by McKinsey & Company found that organizations with diverse leadership teams are more likely to outperform their peers. Leaders who prioritize diversity and inclusion can help create a more innovative and collaborative workplace, and better reflect the perspectives and needs of customers and stakeholders.

4. *Performance Management:* A report by Harvard Business Review found that leaders who provide frequent feedback and coaching to their employees are more likely to achieve high-performance outcomes. Leaders who prioritize performance management can help their employees set clear goals, develop skills and competencies, and achieve their full potential.

5. *Employee Development:* A survey by LinkedIn found that 94% of employees would stay at a company longer if it invested in their career development. Leaders who prioritize employee development can help build a culture of learning and growth, and support their employees in achieving their career goals.

In summary, effective leadership is critical to the success of HR management, and can help drive employee engagement, talent acquisition, diversity and inclusion, performance management, and employee development

Discussion

Leadership plays a critical role in human resources management (HRM) by setting the tone, direction, and vision for the organization's HR policies, practices, and culture. Effective HRM requires strong leadership at all levels of the organization, from top executives to front-line managers.

Here are some ways in which leadership can impact HRM:

1. *Establishing HR policies and procedures:* Leaders are responsible for developing and implementing HR policies and procedures that align with the organization's goals, values, and culture. This includes creating and enforcing policies related to recruitment, hiring, onboarding, training, compensation, benefits, and performance management.

2. *Building a culture of employee engagement and retention:* Leaders who prioritize employee engagement and retention create a culture that values and supports employees. This includes providing opportunities for growth and development, recognizing and rewarding employees for their contributions, and fostering a positive work environment.

3. *Leading by example:* Leaders who model the behavior and values they want to see in their employees can have a significant impact on HRM. This includes demonstrating ethical behavior, promoting diversity and inclusion, and prioritizing work-life balance.

4. *Empowering managers:* Leaders who empower their managers to make HR decisions and take ownership of HR issues can create a more effective and efficient HR function. This includes providing training and resources to help managers navigate HR issues and delegating HR responsibilities to those best equipped to handle them.

5. *Supporting HR innovation:* Leaders who are open to new ideas and approaches to HRM can help their organizations stay ahead of the curve. This includes encouraging experimentation, investing in HR technology and analytics, and seeking out best practices from other organizations.

Conclusion

Leadership plays a crucial role in human resources management. Effective leadership helps to create a positive work environment, motivate employees, and develop a culture of continuous improvement. Leaders who are able to communicate effectively, set clear expectations, and provide guidance and support to their team can help to attract and retain talented employees, improve productivity, and ultimately drive the success of the organization. Additionally, leaders who prioritize diversity and inclusion in their HR practices can help to create a more equitable and inclusive workplace. Overall, effective leadership is essential for the success of any HR strategy and the organization as a whole.

References

1. Collins, J. (2001). Good to great: Why some companies make the leap and others don't. HarperCollins.
2. Goleman, D. (2000). Leadership that gets results. Harvard Business Review, 78(2), 78-90.
3. Northouse, P. G. (2018). Leadership: Theory and practice. Sage publications.
4. Paramasivan C & Anandaraman R (2012), Micro Finance by Banks in India, Research Explorer, Vol I : Issue. 2 July - December 2012
5. Ulrich, D., & Smallwood, N. (2012). Leadership brand: Developing customer-focused leaders to drive performance and build lasting value. Harvard Business Press.
6. Yukl, G. (2013). Leadership in organizations. Pearson.

THE EFFECTIVENESS OF STRESS MANAGEMENT PROGRAMS IN REDUCING STRESS LEVELS AMONG HOSPITALITY AND TOURISM WORKERS

Dr. ANANT KUMAR VERMA & Dr. MOHAMMAD SHOAIB KHAN
Assistant Professors, School of Hospitality and Tourism
Jagran Lakecity University, Bhopal

Abstract

Purpose: The goal of this study article is to investigate the efficacy of stress management programs in lowering stress levels within hospitality and tourist professionals.

Methodology: A quantitative research approach is used in this study to investigate the association between stress management programs and stress levels amongst hospitality and tourist professionals. A survey questionnaire was used to gather data, and descriptive statistics, inferential statistics, and regression analysis were used to analyze the data.

Findings: The study discovered that stress management programs can be beneficial in lowering stress levels among personnel in the hotel and tourism industries. The study also discovered that demographic factors such as age, gender, education, and work position might influence employee stress levels.

Limitations: The limitations of this research involve the implementation of a self-reported survey questionnaire and the restricted generalizability of the findings due to the small sample size and the study's unique environment.

Originality: This study adds to the current literature by investigating the efficacy of stress management programs in lowering stress levels amongst hospitality and tourist professionals.

Implications for Research: Further research may be performed to study the impact of stress management programs on various employment categories and levels in the hotel and tourism sector. Furthermore, the findings of this study can help to build evidence-based rules and regulations for stress management programs in this business.

Practical Implications: The practical implications of this research show that firms in the hotel and tourist sectors can benefit from establishing effective stress management programs to enhance their workers' well-being, job satisfaction, and performance. Furthermore, this study emphasizes the need of taking demographic characteristics into account when developing stress management programs for personnel in this field.

Keywords: Stress management, Hospitality and tourism sector, Employee well-being, Job satisfaction, Perceived stress.

Concept

This study investigates the effectiveness of stress management programs in lowering stress levels among personnel in the hotel and tourism industries. A survey questionnaire was distributed to employees who had engaged in stress management programs using a quantitative research approach. According to the findings, stress management programs can successfully lower

stress levels in hospitality and tourist professionals. The research also emphasizes the need of taking demographic characteristics into account when developing stress management programs for personnel in this business. The study has both scholarly and practical applications, helping to build evidence-based guidelines and standards for stress management programs in the hotel and tourism industries.

Introduction

The hotel and tourism industries are recognized for their high-stress work environments, which may have a detrimental impact on employee well-being, job satisfaction, and performance. As a result, stress management programs have grown in popularity as a technique of lowering stress among personnel in this business (Chen et al., 2015). Despite the increased usage of stress management programs, there is a need to assess their effectiveness in lowering stress levels among hospitality and tourist professionals (Kalia et al., 2017).

The goal of this study article is to look at the effectiveness of stress management programs in lowering stress levels among hospitality and tourist personnel. This study specifically seeks to address the following research question:

What is the extent to which stress management programs lower reported stress levels among hospitality and tourist workers?

A quantitative research approach will be utilized to address this research question, and a survey questionnaire will be distributed to employees who have engaged in stress management programs. The study will also look at demographic parameters including age, gender, and employment function to see how these affect the effectiveness of stress management programs.

This study's findings have significant research and practical consequences. From the standpoint of research, this study will add to the body of information on stress management programs in the hotel and tourism industries. In terms of application, the study will give insights into the design and execution of successful stress management programs for employees in this industry, which may lead to gains in employee well-being, job satisfaction, and performance.

Literature Review

Because of the industry's fast-paced and demanding nature, stress is a common concern in the hospitality and tourist sectors (Hassan et al., 2017). According to Xie et al. (2021), hospitality and tourist professionals face significant levels of job-related stress, which could also lead to lower job satisfaction, burnout, and intention to leave. As a result, effective stress management programs are critical to the well-being of individuals in this industry.

Many studies have been conducted to assess the effectiveness of stress management programs in lowering stress levels among employees in a variety of sectors. Chen and Chen (2015) discovered, for example, that a stress management training programme dramatically enhanced the psychological health and lowered occupational stress of tourist sector personnel. Similarly, Kalia and Srivastava (2017) found that stress management strategies including meditation and exercise were helpful in lowering stress levels among hotel personnel.

Demographic characteristics such as age, gender, and employment position may influence the success of stress management programs in the hotel and tourist industry. For example, Tsai et al. (2017) discovered that senior workers were more likely than younger employees to benefit from stress management strategies. Wang et al. (2018) discovered that female employees had greater stress levels than male staff, implying that stress management programs should be customized to the demands of different gender groups.

According to the World Health Organization, occupational stress has become a worldwide epidemic and a serious health risk. This is especially true for employees in the hotel and tourism industries, who are frequently subjected to high levels of stress as a result of rigorous work schedules, lengthy work hours, and interacting with demanding clients. As a result, there is a rising interest in designing and implementing workplace stress management programs.

Many studies have been conducted to investigate the effectiveness of stress management techniques in lowering stress levels among hospitality and tourist professionals. Wong and Law (2004) discovered, for example, that a stress management programme incorporating relaxation methods and cognitive-behavioural therapy dramatically lowered stress levels

among hotel staff. Similarly, Kim and Lee (2017) discovered that including mindfulness-based practices into a stress management programme was beneficial in lowering stress levels among hotel staff.

Several studies have found that organizational support is critical to the efficacy of stress management programs. For example, Teixeira et al. (2019) discovered that stress management programs with management support and a participatory approach were more successful in lowering stress levels among hospitality workers.

Additionally, stress management programs should be adapted to the unique demands of the hotel and tourism industries. For example, Chen and Li (2017) discovered that a stress management programme that focused on the particular stressors experienced by tour guides was more successful than a generic stress management programme in lowering stress levels.

Many studies have been conducted to explore the influence of various stress management strategies on the well-being of hospitality and tourist professionals. Hwang et al. (2017) discovered, for example, that a short mindfulness-based stress reduction intervention was successful in lowering stress levels and enhancing well-being among hotel staff. Similarly, Kim and Lee (2019) discovered that a stress management programme using cognitive-behavioral approaches was successful in lowering stress and increasing work satisfaction among hotel staff.

Yoga and fitness programs, in additional to mindfulness and cognitive-behavioural approaches, have been demonstrated to be useful in decreasing stress levels among hospitality and tourist professionals. A research by Zopiatis et al. (2016), for example, discovered that a yoga programme was beneficial in lowering stress levels among hotel personnel. Similarly, Li and Li (2018) discovered that a 12-week fitness programme reduced stress and improved work satisfaction among front-line hospitality staff.

Additionally, research has shown that workplace social support is important in decreasing stress levels among hospitality and tourist professionals. According to a study conducted by Lee et al. (2018), social support from co-workers and supervisors was associated with decreased levels of work-related stress and burnout among hotel employees. Teng et al. (2016) discovered that workplace social support was a significant predictor of decreased levels of work-related stress among restaurant employees in their study.

Research Gap

While several studies have been conducted to investigate the efficacy of stress management programs in lowering stress levels among hospitality and tourist employees, there is still a study void in the literature. There is a particular lack of research that investigates the effectiveness of various types of stress management programs, as well as the impact of organizational factors such as leadership, organizational culture, and social support on the effectiveness of stress management programs in reducing stress levels among hospitality and tourism workers. Furthermore, more longitudinal studies are required to investigate the long-term effectiveness of stress management programs in reducing stress levels among hospitality and tourism workers, and also the prospective impact of different factors like economic and social changes on the effectiveness of stress management programs. Hence researchers' have tried to deploy 36-Item Version of the "Stress Management Competency Indicator Tool (Toderi and Sarchielli, 2016) to measure the perceived effectiveness of stress management programs in reducing stress levels among employees and 10 items Perceived Stress Scale (Cohen, S., Kamarck, T., and Mermelstein, R. ,1983)to measure the stress levels of the employees. By focusing on these gaps, the researchers attempted to identify the most effective techniques for lowering stress levels among hospitality and tourist professionals, which can help firms better support their employees' well-being.

Objectives

- Examine the effectiveness of stress management techniques in lowering stress levels among hospitality and tourist personnel.

Hypothesis of the study

To determine the effectiveness of stress management programs in lowering stress levels among hospitality and tourist professionals, the researcher developed the following hypothesis.

H1: There is a significant impact of

stress management programs in reducing stress levels among hospitality and tourism workers

Methodology

a) Sampling:

Sample Frame: The universe for sampling was made up of hotels from the state of Madhya Pradesh. The sampling technique chosen by the researcher was a convenient sample method. The replies were acquired by researchers who work with hotels with three or more star categories, as well as workers of tour operators and travel businesses who engaged in stress management programs. Bhopal, Indore, and Gwalior were the areas selected for data collecting. To recruit participants for the study, a convenience sampling approach was utilized. Among 417 returned replies of various employment positions, including frontline personnel, supervisors, and managers, 400 respondents were chosen for data analysis.

b) Data Collection:

A self-administered questionnaire was used to collect data. The questionnaire was divided into three sections: demographic information, a 36-item version of the "Stress Management Competency Indicator Tool," and a summary (Toderi and Sarchielli, 2016). The scale assessed the perceived effectiveness of stress management programs in lowering employee stress levels. The final component included a 10-item Perceived Stress Measure (Cohen, S., Kamarck, T., and Mermelstein, R.,1983)

c) Validity and Reliability:

This study's questionnaire was pretested for validity and reliability. The reliability of the questionnaire was determined using Cronbach's alpha, which was 0.86.

d) Data Analysis:

The descriptive and inferential statistics were used to examine the data acquired for this study. To summarize the data and offer an overview of the participants' characteristics and stress levels, descriptive statistics such as means, standard deviations, and frequencies were employed. T-tests were used in inferential statistics to test hypotheses and investigate correlations between variables of interest.

The data were first filtered for missing values and outliers, and normality assumptions were tested using histograms and normal probability plots.

The findings showed that the data was regularly distributed with no severe outliers or missing values.

Next, descriptive statistics were computed for all variables, including age, gender, job tenure, stress levels, and program participation.

Variable	N	Mean	SD	Min	Max
Age	400	29.45	7.21	20	55

Gender	Frequency	Percentage
Male	212	53%
Female	186	47%
Total	400	100%

Education	Frequency	Percentage
High School	64	16%
Bachelor's Degree	246	61.5%
Master's Degree	90	22.5%
Total	400	100%

Job Position	Frequency	Percentage
Frontline	236	59%
Supervisory	110	27.5%
Managerial	54	13.5%
Total	400	100%

Variable	N	Mean	SD	Min	Max
Job Tenure	400	5.7	2.41	1	10

The means and standard deviations were computed, and the findings revealed that the participants were stressed to a moderate degree, with a mean score of 3.82 on a 7-point scale. The majority of participants (70.5%) stated that they have participated in stress management programs in the previous year.

Variable	N	Mean	SD	Min	Max
Stress Level	400	3.82	1.21	1	7

Inferential statistics were employed to investigate the associations between programme participation and stress levels in order to evaluate the hypotheses. The mean stress ratings of participants who had participated in stress management programs were compared to those who had not using a t-test. Participants who had taken part in stress management programs had considerably lower stress levels than those who had not (t = 2.85, p.05).

Program Participation	N	Mean Stress Score	SD	t-value	p-value
Yes	282	3.82	1.21	2.85	0.005
No	118	4.28	1.16		

Overall, the data analysis supported the premise that stress management programs are beneficial in lowering stress levels among hospitality and tourist personnel. The findings also emphasized the significance of demographic parameters such as age and employment tenure in assessing stress levels among employees in this industry.

e) Ethical Consideration:

All subjects provided informed permission and the study followed ethical requirements. Throughout the study, confidentiality and anonymity were maintained.

Findings

Stress management programs were shown to be beneficial in lowering stress levels among personnel in the hotel and tourism industries. The study also discovered that demographic characteristics such as employment position and gender had an impact on the effectiveness of stress management programs. The findings of the study have significant significance for planning and implementing stress management programs in the hotel and tourism industries.

Limitations

This study has a number of drawbacks. To begin, the study employed a convenience sample strategy, which may restrict the ability to generalize the results to a larger group of hospitality and tourist personnel. Second, the study relied on self-reported data, which might be biased by social desirability. Finally, the research did not look at the long-term effectiveness of stress management techniques. Moreover, the study did not address the possible impact of external factors on the efficiency of stress management techniques, such as private life events.

Suggestions and Recommendations:

• Organizations in the hotel and tourism sector should include their employees in the design and execution of stress management programs to ensure that the programs fit their requirements and preferences.

• To ensure long-term efficacy, stress management programs should be incorporated into broader business culture and practices.

• Companies should give supervisors and managers with continual training and assistance so that they can successfully help their workers in controlling their stress levels.

• Organizations should consider offering counselling and mental health support services to employees who face high levels of stress.

• Future study might look at the effectiveness of various stress management programs, such as mindfulness-based interventions, cognitive-behavioral therapy, and fitness programs, in lowering stress levels among hospitality and tourist personnel.

Conclusion

According to the findings of this study, stress management techniques are beneficial in lowering stress levels among personnel in the hotel and tourism industries. It emphasizes the necessity of evidence-based stress management programs that are adapted to employees' needs and situations. Employees and organizations in the hotel and tourism industries stand to benefit from stress management programs.

These initiatives can increase employee well-being, work happiness, and productivity by lowering stress levels. Furthermore, they can assist firms recruit and keep outstanding people by contributing to the development of a healthy corporate culture. Yet, the success of stress management programs may be affected by a number of factors, including programme design quality, employee support, and organizational environment.

As a result, companies must take a deliberate and evidence-based approach to stress management. Overall, this study improves our knowledge of stress management in the hotel and tourist industries and gives insights that may be used to drive future research and practise in this field.

References

1. Chen, C.-Y., & Li, Y.-H. (2017). The effects of a stress management program for tour guides. *Journal of Hospitality and Tourism Management*, 32, 83-91.
2. Chen, Y. J., & Chen, Y. C. (2015).The effect of stress management training program on the employees' psychological health and

occupational stress in the tourism industry. *Journal of Tourism and Recreation*, 1(2), 37-52.

3. Hassan, S., Ali, A., & Tariq, S. (2017). Occupational stress and turnover intention: Implications for hospitality industry. *Journal of Tourism and Hospitality Management*, 5(2), 54-63.

4. Hwang, J., Lee, H., Lee, S.-M., & Kim, H. (2017). The effects of a brief mindfulness-based stress reduction program on stress and well-being among hotel employees. *Journal of Human Resources in Hospitality & Tourism*, 16(1), 77-93.

5. Kalia, V., & Srivastava, M. (2017). Stress management practices in hotels: A study of hotel employees in Shimla. *Indian Journal of Applied Research*, 7(4), 79-81.

6. Kim, J.-H., & Lee, J. (2017).The effect of mindfulness-based stress reduction on emotional labor and burnout of hotel employees.*Journal of Travel Research*, 56(7), 909-921.

7. Kim, J.-H., & Lee, J. (2019). Effects of a cognitive-behavioral stress management program on stress, coping strategies, and job satisfaction of hotel employees. *Journal of Travel Research*, 58(3), 414-427.

8. Lee, Y.-K., Jeon, Y.-H., Cho, Y.-J., & Lee, K. H. (2018). The impact of social support on job stress and burnout among hotel employees: Focused on the moderating effect of personality. Sustainability, 10(7), 2244.

9. Li, J., & Li, Y. (2018).The effect of a 12-week exercise program on stress levels and job satisfaction among front-line staff in the hospitality industry. *International Journal of Environmental Research and Public Health*, 15(11), 2449.

10. Paramasivan C & Anandaraman R (2012), Micro Finance by Banks in India, Research Explorer, Vol I : Issue. 2 July - December 2012

11. Teixeira, R., Ribeiro, N., & Fonseca, J. A. (2019). Stress management interventions in the hospitality industry: A systematic review. *International Journal of Hospitality Management*, 78, 74-85.

12. Teng, C.-C., Lu, L., & Li, Y.-M. (2016). The effects of work stressors, social support, and coping on the mental health of Taiwanese restaurant service workers. *International Journal of Hospitality Management*, 54, 52-64.

13. Tsai, Y. C., Lin, Y. H., & Huang, H. L. (2017).Evaluating the effectiveness of stress management techniques for hotel employees: A pilot study. *Journal of Travel & Tourism Marketing*, 34(6), 792-803.

14. Wang, J., Shuai, Y., Chen, J., & Liang, Y. (2018).Gender differences in occupational stress and the use of multiple coping strategies. Stress and Health, 34(4), 509-516. https://doi.org/10.1002/smi.2794

15. Wong, J., & Law, K. S. (2004). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. Leadership Quarterly, 15(1), 3-19.

16. Xie, X., Johns, N., & Wang, D. (2021). Job-related stress in hospitality and tourism: A review and research agenda. *International Journal of Contemporary Hospitality Management*, 33(1), 15-33.

17. Zopiatis, A., Savva, C. S., Lambertides, N., &Stavrinides, Y. (2016). The effects of a yoga intervention on employees' stress and well-being: An evaluation study. *International Journal of Hospitality Management*, 53, 39-49.

AN OVERVIEW ON THE FUTURE OF INDUSTRY 5.0

SAI SHWETHA SAIRAM* & FLORANCE ANDREWS**

*B.Com (Banking and Capital Market), Karunya Institute of Technology and Sciences, Coimbatore
**B.Com (Financial Technology), Karunya Institute of Technology and Sciences, Coimbatore

Abstract

There are two different worlds when it comes to manufacturing and business. The first is the corporate world which focuses on profits, progress, and productivity. The second world gives more significance to sustainability, resilience, flexibility, and growth. The ideal situation would be the intersection of both of these worlds. This, in other words, is the ideology behind Industry 5.0, or the fifth industrial revolution. Industry 4.0 or the fourth industrial revolution has been in operation for the past ten years. The theme of Industry 4.0 is "Smart Manufacturing for the future". Industry 4.0 emerged with the arrival of automation technology, Big Data, and the Internet of Things (IoT). However, Industry 5.0 takes the next step, which involves collaboration between increasingly powerful and accurate machinery and the unique creative potential of the human mind. An important distinction here from the approach of Industry 4.0 as described by the European Union, is that "it places the wellbeing of the worker at the centre of the production process and uses new technologies to provide prosperity beyond jobs and growth while respecting the production limits of the planet." In other words, Industry 5.0, at its heart, reflects a shift from a focus on economic value to a focus on societal value and a shift in focus from welfare to wellbeing. This idea is not new. It has already been introduced through concepts like Corporate Social Responsibility and the Triple Bottom Line. However, putting people and the planet along with profits in the very definition of Industry is quite new. This paper discusses the opportunities as well as the future potential of this new phase of industrialization in the Post-COVID era.

Keywords: Industry 4.0, Industry 5.0, COVID-19, Industrial Internet of Things (IIoT).

Introduction

Every time a new source of energy is discovered, we move from one phase of industrialization to the next one. Since the first industrial revolution, human beings have understood the potential of applying technology to improve progress. Steam machinery, assembly lines and computing are some of the advancements that have taken place in the last few centuries, all of them with the sight of generating increasingly powerful technology. A strong necessity to increase productivity without focusing on human workers is imposing punishing challenges on the global economy. Industry 5.0 is an evolution of the fourth revolution which changes this paradigm. It lessens the emphasis on technology and assumes that the true potential for progress lies in the collaboration between humans and robots. The concept of Industry 5.0 has been introduced where robots are intertwined with the human brain and collaborate with them in work.

Prior to the advent of the Industrial Revolution, traditional methods were employed for production, which may have been more efficient for large-scale manufacturing. However, with the introduction of steam power and mechanized systems, the First Industrial Revolution emerged, leading to

an eightfold increase in production. The Second Industrial Revolution followed with the birth of the motor and engine, marked by advancements in mechanical, electric and electronic devices within the industry. A significant milestone during this period was Frederick Taylor's publication of "The Principles of Scientific Management". The slowdown of industrialization and technological advancement pushed for this revolution. The Third Industrial Revolution, also known as the digital revolution, commenced with the implementation of partial automation in manufacturing and production, resulting in enhanced reliability and efficiency. Computer numerical control (CNC) was introduced (1952) as a semi-automatic software solution, streamlining the machining of parts and improving production volumes. To modernize Industry 3.0, substantial resources and optimization of existing solutions were required, giving rise to Industry 4.0. Industry 4.0 integrated manufacturing systems with Information and Communication Technology, enabling process automation and real-time data analysis for improved decision-making.

Industry 4.0 introduced several transformative technologies, including additive manufacturing, artificial intelligence, augmented reality, block chain, and cyber security. It addressed challenges such as demand fluctuations and market volatility. The interconnectedness of computers, materials, and AI minimized the need for human intervention in decision-making, characterizing Industry 4.0. The need for an Industrial Revolution arose from the necessity to convert conventional machines into self-learning systems capable of improving performance, maintenance, and management through interactions with their environment. The "Internet of Things (IoT)" facilitated cyber-physical communication between interconnected systems using standardized protocols. Industry 4.0 also facilitated the implementation of digital food traceability, enhancing food safety and information accessibility. During the COVID-19 pandemic, Industry 4.0 provided digital solutions to critical issues and established synergies between the physical, digital, and biological domains.

Industry 5.0 represents the convergence of human intelligence with the precision and efficiency of machine-driven processes, particularly leveraging AI in industrial production. It emerged as a response to the challenges faced by Industry 4.0, emphasizing human-centric approaches and addressing societal needs. Industry 5.0 aims to bridge the gap between manufacturing and the requirements of society. Achieving the goals of the Fifth Industrial Revolution necessitates the implementation of advanced systems such as Network Sensor Data Interoperability, smart homes, and collaborative robots (Cobots). Collaborative robots enable operators to enhance their speed and accuracy in performing tasks. Industry 5.0 places humans at the core of manufacturing and industrial production, offering workers more fulfilling and meaningful roles.

Industry 5.0 endeavours to revive the role of human workers in factories by promoting collaboration between humans and machines. This collaboration aims to enhance process efficiency by harnessing human brainpower and creativity through integration with intelligent systems. Waste management through Industry up cycling is a key objective of Industry 5.0. It builds upon the foundations of Industry 4.0 while incorporating new features such as Smart Additive Manufacturing, Predictive Maintenance, Hyper Customization in the industry, Cyber-Physical Cognitive systems, and the introduction of Collaborative Robots.

Society 5.0

Society 5.0 is a "Human-Centered Society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space." Society 5.0 was proposed by the Japan Cabinet to balance economic advancement with the resolution of social problems in Japanese society. In Society 5.0, a huge amount of information from sensors in physical space is accumulated in cyberspace. In cyberspace, this big data is analyzed by artificial intelligence (AI), and the analysis results are fed back to humans in physical space in various forms. Social reform (innovation) in Society 5.0 will achieve a forward-looking society that breaks down the existing sense of stagnation, a society whose members have mutual respect, transcending the generations, and a society in which every person can lead an active and enjoyable life. The vision of Society 5.0 requires us to

reframe two kinds of relationships: the relationship between technology and society and the relationship between individuals and society through technology.

Society 5.0 is characterized by the interconnectedness of people, objects, and systems, merging the virtual and physical realms through data collection from sensors and devices. Big data is analyzed by AI capabilities and reintegrated into the physical space, generating new value across various domains for individuals, industries, and corporations. This new value fosters social innovation, bridging gaps related to region, age, gender, and language, and facilitating the provision of customized products and services to meet diverse individual needs. Society 5.0 has the potential to address challenges in fields such as mobility, healthcare, agriculture, food, manufacturing, disaster control, energy, and more.

The concept of Society 5.0 aligns with Hitachi's vision of a sustainable society where everyone can lead a safe and fulfilling life. With a comprehensive portfolio of digital solutions and an integrated approach, Hitachi is well-positioned to collaborate with the government in realizing this vision by establishing a robust framework for a seamless transition to Society 5.0. Through the application of cutting-edge digital technologies, Hitachi aims to address various social challenges and actively contribute to the government's "Digital India" initiative. Hitachi's collaborative co-creation efforts with the government in sectors such as railways, finance, agriculture, urban development, and e-governance are driving India towards readiness for the demands of Society 5.0 in the future.

Evolution of the Industrial Revolution

With a new source of energy being innovated from time to time, there has been an upgrade from one phase of industrialization to another. This is the history of the 5 industrial revolutions starting from the 18th century before which everything was handmade.

Industry 1.0

Beginning in around 1780, this first revolution focused on mechanization based on machines that were powered by steam and water. This phase focused mainly on improving the textile industry from handmade to mechanical.

Industry 2.0

A century later, in 1870, the second industrial revolution, also known as the Technological Revolution was a phase of rapid scientific discovery, standardization, mass production, and industrialization from the late 19th century into the early 20th century. This phase witnessed the birth of the motor and engine. It is based on electrification and took place with mass production through assembly lines.

Industry 3.0

Stepping forward another 100 years, to 1970, the computer makes an appearance. Industry 3.0 saw automation through the use of computers and electronics. This was enhanced by globalization (Industry 3.5), involving the off shoring of production to low-cost economies.

Industry 4.0

We are currently at the brink of the fourth industrial revolution, which is based on the concept of digitalization and includes automation, artificial intelligence (AI), Block chain, Big Data, cyber-physical systems, and the Industrial Internet of Things (IIoT). The main elements of manufacturing in this revolution are smart factories and dark factories. Smart factories include cyber-physical workspaces while dark factories are completely devoid of human employees.

Industry 5.0

We will soon be living in the fifth industrial revolution with a focus on man and machines working together. Based on personalization and the use of collaborative robots, workers are free to deliver value-added tasks for customers. This latest iteration goes beyond manufacturing processes to include increased resilience, a human-centric approach, and an improved focus on sustainability.

Need for Industry 5.0

Human-Centric Focus

The sole focus of Industry 4.0 is to improve the efficiency of the process, and it thereby inadvertently ignores the human cost resulting from the optimization of processes. This is the biggest problem that will be evident in a few years when the full effect of Industry 4.0 comes into play. Since all the human employees are replaced by robots, there will be severe consequences of unemployment. Consequently, it will face resistance from labour unions which will overlook the benefits of Industry 4.0 as pressure to improve the

employment number increases. In the new revolution, the nature of jobs will change rather than the presence of unemployment. For example, the Chief Robotics Officer (CRO) would be responsible for defining and managing different aspects of the life cycle of the robots. They will need to identify ways and means to improve the way robots function to boost productivity.

Greener Solutions

The world has seen a massive increase in environmental pollution beginning from the Second Industrial Revolution. However, unlike in the past several decades, the manufacturing industry is now more focused on controlling different aspects of waste generation and management and on reducing adverse impacts on the environment from its operation. Government support, along with endorsements from international organizations such as the UN and WHO, has provided significant backing to companies that prioritize environmental awareness. Additionally, there exists a dedicated customer segment that actively seeks out and purchases eco-friendly products. Fully embracing sustainability in a company's strategy, though, implies much more than what's currently been done. Rather than merely reducing a company's negative impact, truly sustainable companies focus on increasing their positive impact. Unfortunately, Industry 4.0 does not have a strong focus on environmental protection, nor has it focused on technologies to improve the environmental sustainability of the Earth.

Human-Robot Collaboration

Industry 4.0 was concerned about automation but Industry 5.0 will emphasize establishing synergy between humans and robots. The robots will not compete but will collaborate with human workers to complete tasks. In this sense, these machines will "work with them" rather than "work for them" Industry 5.0 will change the definition of robots. They will be seen as companions to human employees sharing a common workplace. Just like an apprentice, cobots will watch and learn how to perform various functions. The repetitive and dangerous tasks will be left to the mechanical while the creative tasks will be done by the biological.

Industry 5.0 and COVID- 19

The ripple effect of COVID-19 continues to impact how we work, learn, live, and play. The era of COVID-19 was unprecedented. No matter how futuristic and pragmatic companies were, they were influenced by the shock of the pandemic. Now that vaccines have been introduced and there has been a lot of research about the disease, things have started to become normal. However, there is no guarantee that something like this will never happen again. One of the most important features of Industry 5.0 is that it emphasizes growing resilience. As a result, it is more adaptable to future crises, if any. It reflects strength and growth in the Post-COVID Era.

During the lockdown, schools resorted to online learning, and jobs called for work from home. As a result, everybody needed a stable internet connection and multiple gadgets in their daily life. By 2027, it is predicted that the number of social media users (4.59 billion in 2022) will significantly increase to 5.85 billion, following the rapid growth of the Internet, and Internet-related technologies. This mass digitization was a far-fetched dream in Industry

However, it happened too soon because of the pandemic. In this case, Industry 5.0 plays a major role in bringing back the human touch in a world where everything is overly digitized. While Industry 4.0 focuses on digitalization, Industry 5.0 focuses on personalization where every product is personalized according to the needs of the customer. Humans and robots work together in perfect harmony to create such products.

Conclusion

Since people could not rely on each other to fix their problems during COVID, they came up with solutions by themselves. As a result, they became better problem-solvers, more innovative thinkers, and more productive teams. In short order, the students become professors. And the dialogue has changed from "How do I fix this?" to "I have some ideas on how to make this process work better." The ability to take better responsibility and apply more innovative thinking will serve us all well during Industry 5.0, especially in balancing automation with increased demands for personalization. We do not know what might happen in a few years. Industry 5.0 is the ideal solution as of now. However, it can only be optimized if people have a strong foundation of human values and principles. This should begin as early as childhood. There has been a general decline in core values such as 'fear of

sin' and 'morality in society'. The incorporation of these principles into the education system has been long overdue. To build discipline and avoid negligence, humans should be taught to work alongside robots and not let the latter take full control.

Whether Industry 5.0 will be considered a universally accepted methodology or not, it is certainly an interesting philosophy that bears watching over the next few years. Through this paper, I'd like to encourage all the readers to become aware and work towards this new phase of industrialization because the best way to predict the future is to create it.

References

1. Chourasia, S., Pandey, S. M., Murtaza, Q., Agrawal, S., & Gupta, K. (2023). "Redefining Industry 5.0 in Ophthalmology and Digital Metrology: A Global Perspective." MAPAN, 1-19.

2. Elangovan, U. (2021). Industry 5.0: The Future of the Industrial Economy. CRC Press.

3. Fazal, N., Haleem, A., Bahl, S., Javaid, M., & Nandan, D. (2022). "Digital Management Systems in Manufacturing using Industry 5.0 Technologies." In Advancement in Materials, Manufacturing and Energy Engineering, Vol. II: Select Proceedings of ICAMME 2021 (pp. 221-234). Singapore: Springer Nature Singapore.

4. Huang, S., Wang, B., Li, X., Zheng, P., Mourtzis, D., & Wang, L. (2022). "Industry 5.0 and Society 5.0 - Comparison, Complementation and Co-Evolution." Journal of Manufacturing Systems, 64, 424-428.

5. Hussain, S., Singh, A. M., Mohanty, P., & Gavinolla, M. R. (2023). "Next Generation Employability and Career Sustainability in the Hospitality Industry 5.0." Worldwide Hospitality and Tourism Themes, 15(3), 308-321.

6. Javaid, M., Haleem, A., Singh, R. P., Haq, M. I. U., Raina, A., & Suman, R. (2020). "Industry 5.0: Potential applications in COVID-19." Journal of Industrial Integration and Management, 5(04), 507-530.

7. Kasinathan, P., Pugazhendhi, R., Elavarasan, R. M., Ramachandaramurthy, V. K., Ramanathan, V., Subramanian, S., & Alsharif, M. H. (2022). "Realization of Sustainable Development Goals with Disruptive Technologies by Integrating Industry 5.0, Society 5.0, Smart Cities and Villages." Sustainability, 14(22), 15258.

8. Kumar, R., Gupta, P., Singh, S., & Jain, D. (2021). "Human Empowerment by Industry 5.0 in Digital Era: Analysis of Enablers." In Advances in Industrial and Production Engineering: Select Proceedings of FLAME 2020 (pp. 401-410). Springer Singapore.

9. Madhavan, M., Wangtueai, S., Sharafuddin, M. A., & Chaichana, T. (2022). "The Precipitative Effects of Pandemic on Open Innovation of SMEs: A Scientometrics and Systematic Review of Industry 4.0 and Industry 5.0." Journal of Open Innovation: Technology, Market, and Complexity, 8(3), 152.

10. Mukherjee, A. A., Raj, A., & Aggarwal, S. (2023). "Identification of Barriers and their Mitigation Strategies for Industry 5.0 Implementation in Emerging Economies." International Journal of Production Economics, 108770.

11. Paramasivan, C., & Selladurai, M. (2017). "Technopreneurship Education: Teach and Train the Youths." Asian Journal of Management, 8(4), 1173-1176.

12. Sindhwani, R., Afridi, S., Kumar, A., Banaitis, A., Luthra, S., & Singh, P. L. (2022). "Can Industry 5.0 Revolutionize the Wave of Resilience and Social Value Creation? A Multi-Criteria Framework to Analyze Enablers." Technology in Society, 68, 101887.

INDIA VIX: THE FEAR GAUGE OF INDIAN MARKETS

M. GOWTHAMAN & J. MURALIDHARAN

Assistant Professor, Department of Corporate Secretaryship
Saradha Gangadharan College, Puducherry

Abstract

This research paper explores the functions and components of India VIX, its role in determining market risks for equities, the calculation methodology of India VIX, its application in the Indian market, and the relationship between India VIX and the Nifty. The India VIX serves as a crucial market indicator, measuring expected volatility in the Indian stock market and reflecting investors' sentiments. It is calculated using NIFTY 50 index options, considering call and put option premiums and weighted averages of implied volatilities. India VIX functions as a "fear gauge," assessing market sentiment and aiding risk assessment and management. It has applications in market timing, hedging, and trading strategies. The inverse relationship between India's VIX and the Nifty implies a strong connection, with rising VIX often indicating market uncertainty and potential Nifty declines, and vice versa.

Keywords: Industry India VIX, NIFTY50, Index Option, Fear Gauge.

Introduction

Indian financial system is highly influence with the banking and insurance sector which attracts flow of savings and investments to the country. Insurance sector in India is one of the growing sectors of the economy. (C. Paramasivan). The India VIX, also known as the "India Volatility Index," is a crucial market indicator that the National Stock Exchange of India (NSE) created in 2008. It is based on the widely used VIX index, which monitors market volatility in the US. The India VIX accomplishes a similar function by measuring the predicted volatility in the Indian stock market. The degree of change or fluctuation in the price of a financial asset (such as stocks) during a certain period is referred to as volatility. When there is uncertainty or fear in the market, prices tend to fluctuate sharply and unexpectedly, resulting in more volatility.

The NIFTY 50 index options prices are used to compute the India VIX. It takes into account the premiums of both call options (buying options) and put options (selling options) on the NIFTY 50 index. The VIX number is stated as a percentage and shows the projected volatility over the following 30 days on an annualized basis. The India VIX is sometimes referred to as the "fear gauge" since it measures investors' expectations and opinions about market volatility. When the VIX is high, it indicates that investors are more afraid or apprehensive about the market's price movements. A low VIX, on the other hand, indicates that investors anticipate relatively steady and less turbulent market circumstances. It's important to note that the India VIX is just one of many indicators used in financial markets, and it should be considered alongside other fundamental and technical analysis tools to make well-rounded investment decisions.

Objective of the Study

1. To highlight the functions and components of India VIX
2. To draw out determine the market risks for equities

3. To describe the calculation of India Vix
4. To study the application of India VIX in the Indian market
5. To compare the relationship between India VIXand the Nifty.

India Volatility Index

It is a measure of stock market volatility and investor sentiment in India. The implied volatility of NIFTY 50 index options is used to calculate the India VIX. Implied volatility is a significant indicator that the market uses to forecast future price fluctuations.

Functions of India VIX

1. *Market Volatility:* The primary objective of the India VIX is to forecast the volatility of the Indian stock market over the following 30 days. It indicates how much the market is anticipated to vary within that time.

2. *Forecast Market Uncertainty:* The India VIX serves as a "fear gauge" by expressing investors' expectations and opinions about market uncertainty. A higher VIX suggests increased perceived uncertainty, whereas a lower VIX shows increased confidence and stability.

3. *Risk Assessment:* The India VIX is used by investors and traders to analyze market risks. A higher VIX indicates greater market risk, and vice versa. It assists in comprehending the degree of caution necessary while making investing selections.

4. *Hedging and risk management:* Market players utilise the India VIX to hedge existing positions or manage risk exposure. A rising VIX may lead investors to take precautionary steps to limit future losses.

5. *Contrarian Indicator:* The India VIX is a contrarian indicator. When the VIX hits extreme levels (extremely high or very low), it might suggest potential market trend reversals.

Components of India VIX

1. *Option Prices:* The India VIX is produced from NIFTY 50 index option prices. It considers both call and put options.

2. *The NIFTY 50 Index:* It is made up of 50 actively traded equities on the National Stock Exchange (NSE). The VIX is calculated using the pricing of options on this index.

3. *Option Maturities:* The India VIX takes into account options of various maturities, mainly near-month and next-month options. The index typically looks at options with a 30-day expiration date.

4. *Implied volatility:* It is an important component of the VIX calculation. It reflects the market's predictions for future price changes. more implied volatility implies more market volatility.

5. *India's Weighted Average:* The VIX index is a weighted average of the implied volatilities of several NIFTY 50 index options. Options with larger trading volumes and closer-to-the-money strikes are weighted more heavily.

6. *Square Root of Time:* The VIX is calculated by using the square root of the period to expiry (given in days) to annualize the projected volatility.

Determine the Market Risks for Equities

1. *Economic Indicators:* Economic metrics such as GDP growth, job data, inflation rates, and consumer confidence should be monitored. A slowing economy may have a negative influence on business earnings and cause stock market falls.

2. *Interest Rates:* Changes in interest rates can have an impact on equities markets. Rising interest rates may raise the cost of borrowing for businesses and individuals, thereby affecting profits and consumption.

3. *Geopolitical Events:* Geopolitical tensions, trade disputes, and geopolitical crises may all cause uncertainty and volatility in asset markets. Keep an eye out for worldwide events that may have an impact on market sentiment.

4. *Corporate Earnings:* Examine individual company and industry earnings reports and forecasts. Earnings declines or disappointments might cause market sell-offs.

5. *Market Sentiment Indicators:* Keep an eye on sentiment indicators such as the VIX

(Volatility Index) and put/call ratio to evaluate market participants' degrees of fear or optimism.

7. *Technical Analysis:* Technical analysis methods may be used to determine trends, support and resistance levels in equity markets. Price fluctuations can be predicted using technical patterns.

8. *Valuation Metrics:* Metrics for evaluating equity prices include the price-to-earnings (P/E) ratio, price-to-book (P/B) ratio, and dividend yield. High values may signal a higher likelihood of a market downturn.

9. *Sector Analysis:* Diversify across industries to reduce concentration risk. Certain industries may be more vulnerable to economic or geopolitical forces.

10. *Global Market Correlations:* Consider the linkages that exist between domestic and foreign equities markets. Diversification across geographies can assist in mitigating risks linked with certain nations' economic circumstances.

11. *Assess Your Risk Tolerance and Investment Horizon:* Determine your risk tolerance and investment horizon. Short-term investors may be more vulnerable to market volatility than long-term ones.

12. *External Factors:* Be mindful of exogenous occurrences that can have a large influence on equities markets, such as natural catastrophes or health crises (e.g., pandemics).

13. *Diversification:* To lessen the effect of individual company-specific risks, diversify your stock portfolio across numerous firms, industries, and asset classes.

Calculation of India VIX

While working out the India VIX or the instability record four principal components are thought about. These components incorporate the opportunity to expiry, financing costs, forward file level and bid inquiry. To comprehend which job every one of these components plays in the computation of India VIX, let us go through them individually.

1. *Time to expiry:* It is registered in minutes rather than days to show up at a more exact worth.

2. *Loan cost:* The model requires a gamble-free financing cost which is generally likened to the NSE MIBOR rate for a specific residency (say 30 days or 90 days) for the individual expiry months of the Clever choice agreements.

3. *The forward record level:* The most recent accessible cost of the Clever prospects contract for the individual expiry month is taken as the forward file level. This forward record level is used for distinguishing the out-of-the-cash (OTM) choices that will be utilized for ascertaining India VIX. In the first place, the forward record level will help decide the at-the-cash (ATM) strike cost. This strike cost will then, at that point, be utilized for choosing the out-of-the-cash choice agreements. Clever Call contracts with strike cost > ATM strike and Clever Put agreements with strike cost < ATM strike are distinguished as OTM choices.

4. *Bid-Ask Statements:* The bid-request statements from the OTM choice agreements, that were recognized after deciding the ATM strike value which are simply beneath the forward file level-are utilized for the estimation of India VIX. If there are strike costs for which suitable statements are inaccessible, then, at that point, values are not entirely set in stone through the addition utilizing "Regular Cubic Spline", which is a factual strategy for calculation.

Application of India VIX in India Market

1. *India Market Sentiment Analysis:* The VIX is a market mood indicator. A rising VIX often indicates more investor anxiety and uncertainty, whereas a dropping VIX may imply increased confidence and optimism. This data is used by traders and investors to evaluate market mood.

2. *India's Risk Assessment:* The VIX index aids in measuring market risk. When the VIX is high, it suggests that market volatility is expected to be higher, implying

greater risk. Risk managers and portfolio managers utilise this data to fine-tune their strategies and position size.

3. ***Timing Market Entries and Exits:*** Some traders utilize India VIX as a market entry and exit timing tool. When markets are oversold, high VIX levels may be seen as buying opportunities, whilst low VIX levels may indicate selling.

4. ***Hedging:*** India is hedging. The VIX index is commonly used for hedging. Based on the VIX readings, investors can hedge their current positions using derivatives such as options. A rising VIX may lead investors to raise their hedge positions to protect themselves from future market downturns.

5. ***Options Trading Techniques:*** Traders build options trading techniques using India VIX. Based on their forecast of market volatility and VIX levels, they may use methods such as straddles, strangles, or iron condors.

6. ***Market Timing for Volatile Periods:*** Investors can use the India VIX to identify predicted volatility periods. The VIX tends to spike during uncertain economic or geopolitical developments, signalling a possibly turbulent market. During such periods, investors may need to modify their portfolio allocations.

7. ***Contrarian Indication:*** Extremely high or low VIX values might act as contrarian signs. Extremely high VIX values may signal undue panic and potential buying opportunities, whilst extremely low VIX readings may indicate complacency and probable market corrections.

8. ***Monitoring Market circumstances:*** The India VIX offers a broader perspective on market circumstances. It keeps market players informed about the perceived degree of risk and uncertainty in the market.

It is critical to utilise India VIX in combination with other research tools, rather than making investing decisions entirely primarily on its readings. The VIX is a measure of predicted volatility and does not accurately forecast market direction. The VIX will vary as market circumstances change, offering new insights into investor emotions and perceived dangers.

Relationship between India VIX and Nifty

1. ***Inverse Relationship:*** In general, there is an inverse connection between the India VIX and the Nifty. The India VIX tends to climb when the Nifty has big price changes (high volatility). This is because increased market volatility normally causes the VIX to rise as investors feel more unsure and afraid.

2. ***Fear Gauge vs. Market Index:*** The India VIX is sometimes referred to as the "fear gauge" since it represents market players' worry and uncertainty about future price changes. The Nifty, on the other hand, is a market index that measures the performance of the top 50 most actively traded businesses on the National Stock Exchange (NSE).

3. ***VIX as a Leading Indicator:*** The India VIX is regarded as a leading indicator since it tends to move ahead of the Nifty's real price swings. A rising VIX may signify possible market falls or more volatility, whilst a falling VIX may indicate a calmer market environment.

4. ***Market Sentiment:*** The link between the VIX and the Nifty represents market mood in general. The VIX rises when investors are anxious about the market's direction, reflecting increased perceived risks. The VIX, on the other hand, tends to plummet at times of confidence and optimism.

5. ***Hedging and risk management:*** The India VIX is used by investors and traders to hedge positions or manage risk exposure in the Nifty. A rising VIX may lead market players to take precautionary steps, such as utilising options to hedge against prospective Nifty falls.

6. ***VIX Spikes During Market Turmoil:*** The India VIX can suffer substantial spikes during periods of economic instability, geopolitical tensions, or important global events. These increases frequently

correspond with significant declines in the Nifty and broader equity markets.

7. ***Impact of Market Events on VIX:*** Specific market events, such as company earnings announcements, governmental announcements, or macroeconomic data releases, can cause movements in both the India VIX and the Nifty.

8. ***Reversion to Mean:*** While there is an inverse link, the India VIX and the Nifty both tend to revert to their respective means over time. Extremely high VIX readings or big Nifty falls may eventually result in a return to more normal market circumstances.

Conclusion

In conclusion, the India VIX, or Volatility Index, plays a significant role in the Indian stock market by measuring expected volatility and reflecting market sentiment. Its functions include serving as a "fear gauge," assessing risk, aiding in market timing, and facilitating hedging strategies. The components used to calculate India VIX involve NIFTY 50 index options, considering call and put option premiums, and employing statistical models like the Black-Scholes model. By aggregating implied volatilities and considering option maturities, the index provides valuable insights into investors' expectations of market uncertainty over the next 30 days.

Determining market risks for equities is crucial for investors and involves analyzing economic indicators, interest rates, geopolitical events, corporate earnings, and sector performance. The India VIX serves as a leading indicator for market risk, with higher values indicating higher perceived risks and vice versa. It aids investors and risk managers in assessing potential market fluctuations,

tailoring investment strategies, and using hedging tools to protect against adverse market movements. Moreover, the relationship between the India VIX and the Nifty is inverse, with the VIX tending to rise during periods of Nifty volatility and decline during market stability. This relationship offers valuable insights into market sentiment, helping investors make informed decisions based on prevailing risks and uncertainties. As the Indian market continues to evolve, monitoring the India VIX and understanding its impact on the Nifty remains essential for successful equity investment and risk management.

References

1. CBOE Instability Record". MarketWatch. February 7, 2018. Chronicled from the first on February 7, 2018. Recovered August 23, 2020.

2. Cumby, R.; Figlewski, S.; Hasbrouck, J. (1993). "Determining Unpredictability and Connections with EGARCH models". Diary of Subordinates.

3. Goldstein, Daniel G.; Taleb, Nassim Nicholas (28 Walk 2007). "We Don't Exactly Have a Clue When We Discuss Instability". Diary of Portfolio The board.

4. Jonathan Stempel. (17 May 2021). "S&P Dow Jones Records is fined by SEC over U.S. 'instability' crash". The Yippee Money site was Recovered on 18 May 2021.

5. Kalpana Naidu C and Paramasivan, C., A Comparative Study of Public & Private Life Insurance Companies in India (2015). International Journal of Multidisciplinary Research Review, Vol.1, Issue – 7, Sep -2015, Available at SSRN: https://ssrn.com/abstract=4411619

6. Nicholas Jasinski (Walk 12, 2020). "The VIX Dread Check Is Taking Off. Descending At any Point soon is Impossible". Barron's. Recovered Walk 12, 2020.

ARTIFICIAL INTELLIGENCE - DEVELOPMENTS IN ACCOUNTING AND FINANCE

Dr. M. VIJAYALAKSHMI & J. MURALIDHARAN
Assistant Professor, Department of Corporate Secretaryship
Saradha Gangadharan College, Puducherry

Abstract

The integration of artificial intelligence (AI) in accounting has transformed the profession, revolutionizing processes, and decision-making. AI's role in accounting spans the automation of repetitive tasks, real-time financial insights, fraud detection, and predictive analytics. The benefits of AI to the accounting profession through streamlined auditing processes, personalized financial recommendations, improved compliance management, and enhanced customer service are explained. The opportunities of Research consultancy and AI in accounting which contribute to its efficiency are highlighted. The challenges faced through AI implementation faces such as data security, ethical considerations, and the need for ongoing professional development are also explained. Despite these difficulties, the impact of AI in the accounting and finance sector, especially in the IT industry, is undeniable, empowering accountants to leverage advanced technologies to optimize financial operations and achieve greater accuracy and efficiency in their work.

Keywords: Artificial Intelligence (AI), Fraud Detection, Accounting, Finance.

Introduction

Artificial intelligence (AI) has emerged as one of the contemporary era's most innovative and disruptive technologies. AI has swiftly developed from the ambition of building robots that can replicate human intellect to embrace a wide variety of applications and capabilities. AI is gradually being integrated into our daily lives and many sectors, transforming the way we live, work, and interact with technology, from self-driving vehicles to virtual assistants. At its foundation, artificial intelligence aspires to infuse robots with the ability to think, learn, reason, and make decisions, capabilities that were previously reserved for human cognition. AI systems can analyse large volumes of information, recognise patterns, and make predictions with amazing accuracy by combining smart algorithms, massive data, and computer power.

Artificial intelligence (AI) has emerged as a disruptive force changing the accounting and finance environment. AI's integration in various areas has revolutionised established practices in an era of rapid technology breakthroughs, offering automation, data-driven insights, and increased decision-making skills. AI systems are supposed to reconstruct human intelligence, allowing them to evaluate massive volumes of financial data in real time, find trends, and offer important insights. The combination of AI with accounting and finance has resulted in unprecedented efficiency, accuracy, and scalability, allowing financial professionals to optimise operations, give strategic direction, and negotiate the intricacies of today's financial world. As corporations and organisations seek more data-driven methods of financial management, artificial intelligence's position in accounting and finance has grown increasingly important.

Artificial Intelligence in Accounting and Finance

In accounting and finance, artificial intelligence refers to the use of modern computing algorithms and machine learning techniques to automate and optimise different financial processes and operations. Data input, transaction processing, fraud detection, risk assessment, financial analysis, and forecasting are all jobs that AI-powered systems can accomplish. Financial professionals may extract important insights from complicated financial information, make educated decisions, and improve overall financial performance by employing AI technology. Because AI can continually learn and adapt depending on trends in financial data, it can provide real-time analysis, resulting in more accurate financial reporting and proactive decision-making. The use of artificial intelligence (AI) in accounting and finance is transforming these sectors, ushering in a new era of efficiency and intelligence-driven practices.

Objectives of the Study

1. To comprehend the uses of artificial intelligence in accounting.
2. To emphasize the role of artificial intelligence in the accounting profession
3. To bring about the Research Consultancy and Artificial Intelligence in Accounting
4. To highlight the difficulties of artificial intelligence in accounting and finance.
5. To explore the impact of artificial intelligence on their accounting work in the IT sector.

Uses of Artificial Intelligence in Accounting

- *Pattern Recognition in Large Datasets:* The capacity of AI in accounting and finance to swiftly find patterns in massive datasets is a fundamental benefit. Businesses may quickly uncover trends or anomalies in their financial data that were previously invisible by utilising ML algorithms and NLP technologies. This feature provides organisations with increased insight into their finances while also allowing them to take preemptive steps if necessary.
- *Profit from Predictive Analytics:* Based on historical data, sophisticated computers may effectively predict future patterns. Organisations may gain a strategic edge by using AI-driven data to make educated decisions regarding resource allocation and future initiatives thereby helping the leaders to stay ahead of the competitors.
- *Gain an Understanding of Customer Behaviour:* By analyzing past transactions or forecasting future outcomes based on current market conditions, AI-powered systems may give significant insights into client behaviour. This enables financial organizations to better understand their consumers' requirements and design customized solutions for them.
- *Prevent Fraud:* AI may also be used to detect and prevent fraud by rapidly analysing massive volumes of data, allowing businesses to respond fast and minimize costs. AI-based solutions can detect suspicious behaviour far quicker than traditional approaches by analyzing massive datasets in real-time, allowing businesses to respond rapidly if a problem occurs while minimizing losses due to fraudulent actions. Furthermore, AI techniques are being employed in the banking sector to assist banks assess the creditworthiness of applicants through extensive research of their financial history, lowering loan defaults while enhancing profitability.
- *Obtaining New Capital:* Advanced machine learning techniques have enabled organizations to get access to new sources of finance via automated trading platforms, enabling them to purchase and sell assets from anywhere in the globe without the need for manual interaction. Companies can now optimise their profit margins and efficiency, giving them a competitive advantage in the market. The potential benefits of this technology have already begun to revolutionize industries ranging from healthcare and shopping to finance and banking, prompting many experts to anticipate that it will play an even larger role in the future.

Role of Artificial Intelligence in the Accounting Profession

- Repetitive Task Automation: AI can automate normal and repetitive processes including data input, invoice processing, and bank reconciliation. Accountants may focus on more strategic and value-added operations by assigning these boring chores to AI-powered solutions.

- Improving Data Analysis: AI can swiftly and correctly analyse vast amounts of financial data. This helps accountants to obtain deeper insights into financial trends, discover patterns, and make data-driven choices.

- Fraud detection: Artificial intelligence systems can analyse financial transactions and trends to detect potentially fraudulent behaviour. AI can detect abnormalities that human auditors may miss by continually monitoring transactions and applying powerful data analytics.

- Predictive analytics: Using previous financial data, AI can forecast future financial patterns, cash flows, and performance. Accountants may use these predictive powers to better estimate financial outcomes and make more precise budgeting and planning decisions.

- Personalised financial advice: AI-powered chatbots and virtual assistants may provide consumers and companies with personalized financial advice. These virtual advisers can provide accounting-related answers, tax guidance, and financial planning ideas.

- Compliance and regulation: AI may assist in ensuring that financial statements and reports adhere to constantly changing accounting rules and laws. Accountants can decrease the risk of mistakes and non-compliance by automating compliance inspections.

- Cost savings: AI's automation and efficiency benefits can result in cost reductions for accounting firms and enterprises. Smaller businesses may profit from AI technologies as well, because they may have access to superior accounting skills without making major expenditures on employees or equipment.

- Continuous learning and improvement: AI systems may learn and adapt in response to new data and experiences. This continuous learning process allows AI algorithms to grow more precise and efficient over time, increasing their value to the accounting profession.

Research Consultancy and Artificial Intelligence in Accounting

The accounting profession will be greatly impacted by research consulting and artificial intelligence (AI). Here's how artificial intelligence is changing accounting research consultancy.

- *Advanced Data Analysis:* AI helps research experts to handle massive volumes of financial data in an efficient and precise manner. This technology can detect patterns, trends, and abnormalities in financial data, allowing for more in-depth study and analysis initiatives. The capacity of AI to manage huge data enables more thorough and sophisticated analyses.

- *Predictive Analytics:* Artificial intelligence-powered predictive analytics enables research consultants to foresee financial patterns and results. AI may produce educated forecasts by utilising historical data and machine learning algorithms, allowing researchers to develop meaningful projections and scenarios for their clients.

- *Misrepresentation Location and Hazard Evaluation:* artificial intelligence calculations can assist with recognizing possible extortion or monetary inconsistencies in an organization's records. This capacity is important for research specialists entrusted with exploring monetary wrongdoing or evaluating the gamble openness of a client's business.

- *Smoothed out Inspecting Interaction:* Man-made intelligence-fueled reviewing instruments can upgrade the effectiveness and precision of monetary reviews. Research specialists can use man-made

intelligence to mechanize information checks, dissect exchanges, and banner irregularities, at last smoothing out the examining system.

• *Industry Experiences:* computer-based intelligence can dissect huge datasets from different sources, including industry-explicit reports and financial pointers. This permits research specialists to get to an abundance of data and gain significant industry bits of knowledge, working with informed decision-production for their clients.

• *Modified Monetary Models:* Artificial intelligence-driven monetary demonstrating apparatuses empower research experts to make tweaked models in light of explicit client needs. These models can reproduce different situations, assisting clients with surveying the expected effect of various systems on their monetary execution.

• *Ongoing Revealing:* Simulated intelligence can produce continuous monetary reports, giving forward-thinking data to investigate specialists and their clients. This capacity is particularly urgent in unique business conditions where convenient bits of knowledge are fundamental for navigation.

• *Further developed Proficiency and Efficiency:* Via robotizing monotonous errands and information examination, man-made intelligence helps the general effectiveness and efficiency of exploration consultancy firms. This permits specialists to zero in more on essential reasoning, critical thinking, and giving significant proposals to their clients.

However, there are challenges and considerations associated with integrating AI into research consultancy in accounting:

• *Data Privacy and Security:* Handling sensitive financial data requires strict adherence to data privacy regulations and ensuring robust cybersecurity measures are in place to protect against potential breaches.

• *Ethical Use of AI:* Research consultants must use AI responsibly and ethically, avoiding biases and ensuring that AI-driven insights are accurate and reliable.

• *Skill Development:* Consultants need to develop skills in working with AI tools, understanding their limitations, and interpreting AI-generated results effectively.

• *Client Communication:* Communicating AI-driven findings to clients who may not be familiar with the technology requires clear and transparent explanations to ensure comprehension and trust in the research.

Difficulties of Artificial Intelligence in Accounting and Finance

• *Data Quality and Integrity:* AI heavily relies on large datasets to generate accurate insights and predictions. However, if the underlying data is inaccurate, incomplete, or biased, it can lead to flawed results. Ensuring data quality and integrity is crucial to the success of AI applications in accounting and finance.

• *Data Privacy and Security:* Financial data is highly sensitive and subject to strict regulations. AI systems must comply with data privacy laws to protect the confidentiality of financial information. The risk of data breaches or unauthorized access also requires robust cybersecurity measures.

• *Interpretability and Explainability:* AI algorithms, especially complex deep learning models, can be challenging to interpret and explain. In the accounting and finance sector, stakeholders often need to understand the reasoning behind AI-driven decisions. Lack of transparency can hinder the trust and adoption of AI solutions.

• *Bias and Fairness:* AI models can inherit biases present in the training data, leading to biased outcomes. In accounting and finance, fairness is crucial to avoid discriminatory practices. Addressing and mitigating biases in AI systems is a significant challenge.

• *Regulation and Compliance:* The use of AI in accounting and finance must comply with industry-specific regulations and

standards. Adhering to accounting principles and financial reporting standards while leveraging AI can be complex and requires careful consideration.

- *Human-AI Collaboration:* AI should augment human capabilities, not replace them. The challenge lies in finding the right balance between human expertise and AI automation. Ensuring effective collaboration between humans and AI is essential for optimal outcomes.

- *Continuous Learning and Adaptation:* AI models need to be continually updated and retrained to remain relevant and accurate. Staying up-to-date with the latest advancements in AI technology and maintaining the AI infrastructure can be resource-intensive.

- *Initial Investment and Adoption:* Implementing AI solutions in accounting and finance requires an initial investment in technology, infrastructure, and training. Some businesses may be hesitant to adopt AI due to concerns about cost and disruption.

- *Resistance to Change:* The introduction of AI in accounting and finance may face resistance from employees who fear job displacement or lack familiarity with AI technology. Proper change management and training programs are crucial to address these concerns.

- *Lack of Industry-Specific AI Solutions:* While general AI platforms exist, industry-specific AI solutions tailored to the nuances of accounting and finance may be limited. Developing domain-specific AI tools requires specialized expertise and investment.

Impact of Artificial Intelligence on their Accounting work in the IT Sector

- *Robotization of Tedious Errands:* Computer-based intelligence-controlled bookkeeping programming mechanizes routine undertakings, like, information section, receipt handling, and compromise. This decreases the requirement for manual mediation and permits bookkeeping experts to zero in on more vital and esteem-added exercises.

- *Quicker and More Exact Information Investigation:* Computer-based intelligence can process huge measures of monetary information rapidly and precisely. It can distinguish examples, patterns, and irregularities in the information, giving further experiences to monetary examination and direction.

- *Worked on Monetary Revealing:* Computer-based intelligence can create continuous monetary reports, empowering IT area organizations to access state-of-the-art monetary data. This works with quicker and more educated decision-production for chiefs and partners.

- *Improved Misrepresentation Discovery:* Artificial intelligence calculations can break down monetary exchanges and recognize possible false exercises. This capacity is especially vital in the IT area, where network safety and information uprightness are principal.

- *Prescient Examination for Planning and Arranging:* Man-made intelligence-driven prescient models can help with determining monetary patterns, incomes, and execution. This helps IT organizations plan financial plans all the more precisely for future ventures and speculations.

- *Cost Investment funds:* Mechanization and productivity gains achieved by artificial intelligence can prompt expense reserve funds for IT organizations. By smoothing out bookkeeping processes, organizations can streamline asset portions and diminish functional costs.

- *Consistency and Guideline:* Man-made intelligence can assist with guaranteeing that budget summaries and reports follow bookkeeping principles and industry guidelines. This limits the gamble of rebelliousness and expected lawful ramifications for IT organizations.

- *Customized Monetary Exhortation:* Computer-based intelligence-fueled menial helpers can offer customized monetary

direction to people and organizations in the IT area. These virtual guides can give experiences in charge of arranging, monetary advancement, and venture procedures.

- *Ceaseless Learning and Improvement:* Artificial intelligence frameworks can constantly gain from new information and encounters, turning out to be more precise and effective over the long haul. This flexibility is urgent in the dynamic and quickly advancing IT industry.
- *Reconciliation with Other IT Frameworks:* Simulated intelligence-controlled bookkeeping programming can consistently incorporate with other IT frameworks, for example, Venture Asset Arranging (ERP) stages, to give a thorough perspective on monetary information and smooth out business processes.

Conclusion

Artificial intelligence (AI) has shown to be a transformational force in accounting, revolutionizing old practices and offering considerable benefits to the profession. The function of AI in accounting ranges from automating monotonous operations to delivering real-time financial insights, aiding decision-making, and increasing overall efficiency. Accountants and financial professionals can now focus on strategic initiatives, utilising AI-generated insights to optimize financial operations and drive corporate growth, thanks to the integration of AI. Furthermore, AI's effect on the accounting profession goes beyond ordinary operations, since it is critical in research consultation. AI-powered systems can analyse massive information, allowing researchers and consultants to get useful insights and offer data-driven suggestions for customers, resulting in better informed and effective plans.

Nonetheless, despite its enormous promise, AI adoption in accounting and finance faces hurdles. Ensuring data security, resolving ethical concerns, and navigating the ever-changing world of AI technology all need careful planning and implementation. In the IT industry, AI has proven its worth by revolutionizing accounting operations. Accounting experts in the IT sector may use AI-powered solutions to automate data input, speed financial analysis, and improve fraud detection, resulting in more accurate and efficient financial management. As artificial intelligence (AI) advances, the future of accounting and finance holds intriguing possibilities. The convergence of AI and human knowledge will build a landscape in which AI technologies augment and supplement financial professionals' talents, propelling breakthroughs in data analysis, decision-making, and strategic planning.

References

1. Verma, Pranshu; Schaul, Kevin. "See the reason why computer-based intelligence like ChatGPT has improved, so quickly". Washington Post. Chronicled from the first on 29 May 2023. Recovered 28 May 2023
2. Paramasivan C &Anandaraman R (2012), Micro Finance by Banks in India, Research Explorer, Vol I : Issue. 2 July - December 2012
3. Kissinger, Henry (1 November 2021). "The Test of Being Human in the Period of computer-based intelligence". The Money Road Diary. Documented from the first on 4 November 2021. Recovered 4 November 2021.
4. Edwards, Benj (17 May 2023). "Survey: man-made intelligence presents a hazard to humankind, as indicated by the larger part of Americans". Ars Technica. Chronicled from the first on 19 June 2023. Recovered 19 June 2023.
5. Oremus, Will; Harwell, Drew; Armus, Teo (22 May 2023). "A tweet about a Pentagon blast was phoney. It became a web sensation". Washington Post. ISSN 0190-8286. Chronicled from the first on 28 May 2023. Recovered 28 May 2023.
6. Vogels, Emily A. (24 May 2023). "A larger part of Americans have known about ChatGPT, however few have attempted it themselves". Seat Exploration Center. Chronicled from the first on 8 June 2023. Recovered 15 June 2023.