

MANAGEMENT 4.0
Emerging Trends in Analytics and Digital Management
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Preface

The National Conference on Management Perspectives 2023 (NCMP 2023): Management 4.0 - Emerging Trends in Analytics and Digital Management 15th -16th December 2023 organized by department of management studies, VIGNAN's Foundation for Science, Technology & Research (Deemed to be University), Vadlamudi, Guntur, Andhra Pradesh.

In today's rapidly evolving landscape, where technology shapes the way we work, connect, and innovate, the role of management has never been more critical. As we step into the era of Management 4.0, characterized by the fusion of digital technologies with traditional management practices, it becomes imperative for organizations and professionals to stay abreast of the latest trends and insights driving this transformation.

This conference serves as a platform for thought leaders, industry experts, academicians, scholars, and practitioners to come together and delve into the multifaceted dimensions of Management 4.0. With a specific focus on analytics and digital management, we aim to explore how organizations can harness the power of data and technology to optimize decision-making processes, enhance operational efficiencies, and drive sustainable growth.

The theme of "Emerging Trends in Analytics and Digital Management" underscores the pivotal role that data analytics, artificial intelligence, machine learning, and other digital innovations play in reshaping traditional management practices. From leveraging big data for predictive analysis to implementing agile methodologies for organizational agility, this conference will delve into a myriad of topics aimed at equipping attendees with actionable insights and strategies to navigate the complexities of the digital age.

Moreover, this conference provides a unique opportunity for networking, collaboration, and knowledge sharing among peers and experts from diverse backgrounds. By fostering meaningful dialogues and exchanges of ideas, we aspire to foster a vibrant community of management professionals committed to driving positive change and innovation in their respective fields.

On behalf of the organizing committee, we extend our heartfelt gratitude to all the speakers, sponsors, participants, and volunteers whose contributions have been instrumental in making this event possible. I hope that the discussions and interactions during this conference will inspire new perspectives, spark innovative ideas, and pave the way for collective progress in the realm of Management 4.0.

Thank you for joining us on this exciting journey of exploration and discovery.

Dean Message



As the Dean of School of Law and Management, it is truly gratifying to witness the convergence of bright minds and innovative ideas in our pursuit of advancing knowledge and understanding in the field of management. This conference serves as a testament to our commitment to fostering intellectual discourse and exploration of cutting-edge concepts that are shaping the future of management practices. With a specific focus on emerging trends in analytics and digital management, we have embarked on a journey to unravel the complexities and possibilities offered by Management 4.0.

As we navigate through the various sessions, presentations, and discussions, I encourage each one of you to seize this opportunity to engage deeply, challenge assumptions, and contribute your unique perspectives to the discourse. It is through such collaborative efforts that we can unravel new insights, uncover innovative solutions, and propel the boundaries of knowledge forward.

I extend my heartfelt gratitude to the organizing committee, distinguished speakers, sponsors, and participants for their unwavering support and dedication in making this conference a resounding success. Your passion for knowledge and commitment to excellence serve as an inspiration to us all.

As we embark on this intellectual journey together, let us embrace the spirit of curiosity, creativity, and collaboration that defines our academic community. May this conference serve as a catalyst for new discoveries, meaningful connections, and transformative insights that will shape the future of management practices in the digital age.

I am confident that the proceedings of this conference will serve as a valuable resource for scholars, practitioners, and students alike, fostering continued learning and exploration in the dynamic field of Management 4.0.

HOD Message



It is with immense pleasure and pride that I extend my warmest greetings to all of you as we culminate the National Conference on Management Perspectives: Management 4.0 - Emerging Trends in Analytics and Digital Management. As the Head of the Department, I am honoured to witness the culmination of our collective efforts in exploring the frontiers of management in the digital age.

Throughout this conference, we have embarked on a journey of discovery, delving into the transformative potential of analytics and digital technologies in reshaping management practices. From insightful keynote addresses to thought-provoking panel discussions and research presentations, each session has offered invaluable insights and perspectives that have enriched our understanding of Management 4.0.

As we prepare to compile the proceedings of this conference into a comprehensive volume, I am filled with gratitude for the dedication and contributions of all involved. I extend my heartfelt appreciation to the organizing committee for their tireless efforts in planning and executing this event flawlessly. I also commend our esteemed speakers, sponsors, and partners for their invaluable support and commitment to the success of this conference.

To all the authors whose research papers have been selected for inclusion in the conference proceedings book, I offer my sincere congratulations on your scholarly achievements. Your research represents a significant contribution to the field of Management 4.0, and I am confident that it will inspire further exploration and innovation in the years to come.

As we reflect on the insights gained and connections forged during this conference, let us carry forward the spirit of collaboration, inquiry, and excellence in our academic and professional endeavours. Together, let us continue to push the boundaries of knowledge and drive positive change in the ever-evolving landscape of management.

Thank you once again for your participation and dedication to advancing the frontiers of Management 4.0. I eagerly anticipate the publication of the conference proceedings book and the enduring impact of our collective efforts.

Message from Convener



As the Conference Convener of the National Conference on Management Perspectives: Management 4.0 - Emerging Trends in Analytics and Digital Management, a significant milestone in our collective journey towards exploring the evolving landscape of management in the digital era. With the theme of Management 4.0 at the forefront, we have convened here to delve into the transformative power of analytics and digital technologies in reshaping the way organizations operate and thrive in today's dynamic business environment.

Over the course of this conference, we have had the privilege of engaging with leading experts, scholars, and practitioners who have shared their invaluable insights and experiences. Through thought-provoking discussions, illuminating presentations, and interactive sessions, we have explored the latest trends, challenges, and opportunities in analytics and digital management.

As we compile the proceedings of this conference into a comprehensive volume, I am filled with gratitude for the dedication and enthusiasm exhibited by each participant. Your active participation and contributions have been instrumental in enriching the discourse and fostering a vibrant exchange of ideas.

I would like to extend my sincere appreciation to the organizing committee for their tireless efforts in planning and executing this event seamlessly. I am also grateful to our distinguished speakers, sponsors, and partners for their generous support and invaluable contributions towards making this conference a resounding success.

To all the authors whose research papers have been selected for inclusion in the conference proceedings book, I extend my congratulations on your scholarly achievements. Your research represents a significant contribution to the body of knowledge in the field of Management 4.0, and I am confident that it will inspire further exploration and innovation in the years to come.

As we reflect on the insights gained and connections forged during this conference, let us carry forward the spirit of collaboration, curiosity, and innovation in our respective endeavours. Together, let us continue to push the boundaries of knowledge and drive positive change in the ever-evolving landscape of management.

Thank you once again for your participation and commitment to advancing the frontiers of Management 4.0. I look forward to the continued success and impact of our collective efforts.

Message from Co – Convener



It is with great pleasure that I extend my warmest greetings to all of you as we come together for the National Conference on Management Perspectives: Management 4.0 - Emerging Trends in Analytics and Digital Management. As the Conference Co-Convener, I am honoured to be part of this gathering of minds dedicated to exploring the transformative potential of analytics and digital technologies in the realm of management.

Throughout this conference, we have had the privilege of engaging with a diverse array of perspectives, insights, and experiences from esteemed speakers, scholars, and practitioners. Together, we have delved into the latest trends, challenges, and opportunities shaping the landscape of Management 4.0, and I am inspired by the depth of knowledge and passion demonstrated by each participant.

As we embark on the process of compiling the conference proceedings into a comprehensive volume, I am filled with gratitude for the contributions of all involved. From the organizing committee's meticulous planning to the speakers' thought-provoking presentations and the active participation of attendees, it is evident that this conference has been a collaborative endeavour driven by a shared commitment to excellence in management research and practice.

To all the authors whose research papers have been selected for inclusion in the conference proceedings book, I offer my heartfelt congratulations on your scholarly achievements. Your work represents a valuable addition to the body of knowledge in Management 4.0, and I have no doubt that it will serve as a source of inspiration and insight for future generations of researchers and practitioners.

I would like to express my sincere appreciation to our distinguished speakers, sponsors, and partners for their unwavering support and commitment to the success of this conference. Your contributions have been instrumental in creating an enriching and impactful experience for all involved.

As we reflect on the knowledge gained and connections forged during this conference, let us carry forward the spirit of collaboration, innovation, and continuous learning in our respective fields. Together, let us strive to harness the potential of analytics and digital management to drive positive change and foster sustainable growth in organizations and societies worldwide.

Thank you once again for your participation and dedication to advancing the frontiers of Management 4.0. I look forward to the enduring impact of our collective efforts and the insights shared in the conference proceedings book.

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(GEN MGMT)

Social Media Influencers: As an Emerging Role Model among Teenagers

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Abstract--- In the rapid fast moving markets, teenagers have always remained the targeted choice of various companies and considered quite captivating segment for the marketers/practitioners. Due to having less busy schedule this particular segment gets sufficient time in exploring more product knowledge. Even companies are also putting their best efforts and continuously finding innovative strategy for luring this segment towards their product/brand. For example Nike, Adidas target this segment and became the most preferred brand in footwear and clothing industry of same segment. Previous studies have found that these teenagers consider their peer, T.V celebrities, athletes, elder sibling and parents as their role model and found the significant relation with their purchasing decision. As with passage of time, penetration of digital era the new paradigm of role model has been noticed in teenagers' life such as Social media influencers (SMIs). Thus this research is an attempt to discuss how influencer marketing is becoming the effective phenomenon in influencing the purchasing decision of teenage segment. The authenticity, reliability, credibility and similarity of these emerging SMI's are imputing to be considered as effective role model. Thus this conceptual study would further provide the meaningful insights to the various companies for their business development as well.

Keywords--- Social-media Influencers, Teenagers, Traditional Celebrity.

1. Introduction

The study related to purchasing behavior patterns of young generation have always been the preference of various marketers/practitioners. Marketers are taking young generation on its priority especially teenagers. As the teenage segment is one who remains connected with the each and every modification made by the company in its product line. Hence, busy schedule of their parents and fastest adaptability of digital era forcing the teenagers as they cannot stop themselves for exploring the product information. Teenagers grasp the product & consumption knowledge from their surroundings such as peers, siblings and friends etc. Even the school environment also, as curriculum part, is considered as the effective information source where they get aware about the latest fashion trends from their peers (Grant & Stephen, 2005). It is a big mystery for the marketers to solve what factors influence the purchasing decision of the teen-segment. It is also essential to understand which part of society is the most admired by this age group and to whom they consider more.

Initially, in the family the child acquire the purchasing/spending habit from their parents which are known as their direct role model (Martin and Bush 2000). As the parents provide some amount of pocket money to their child and contains the ability to influence the purchasing decision. Gradually, when the child turns into his teenage phase, is surrounded by the various alternatives such as peers, teachers, favourite athlete, favourite celebrities and elder siblings. Previous researches have claimed that teenagers consider them as their role model and their purchasing decision is further influenced by them (Martin & Bush, 2000; (Makgosa 2010).

But with the changing trends and technological advancements further taking place, it is necessary for companies to remain updated with the emerging role model in teenagers' life.

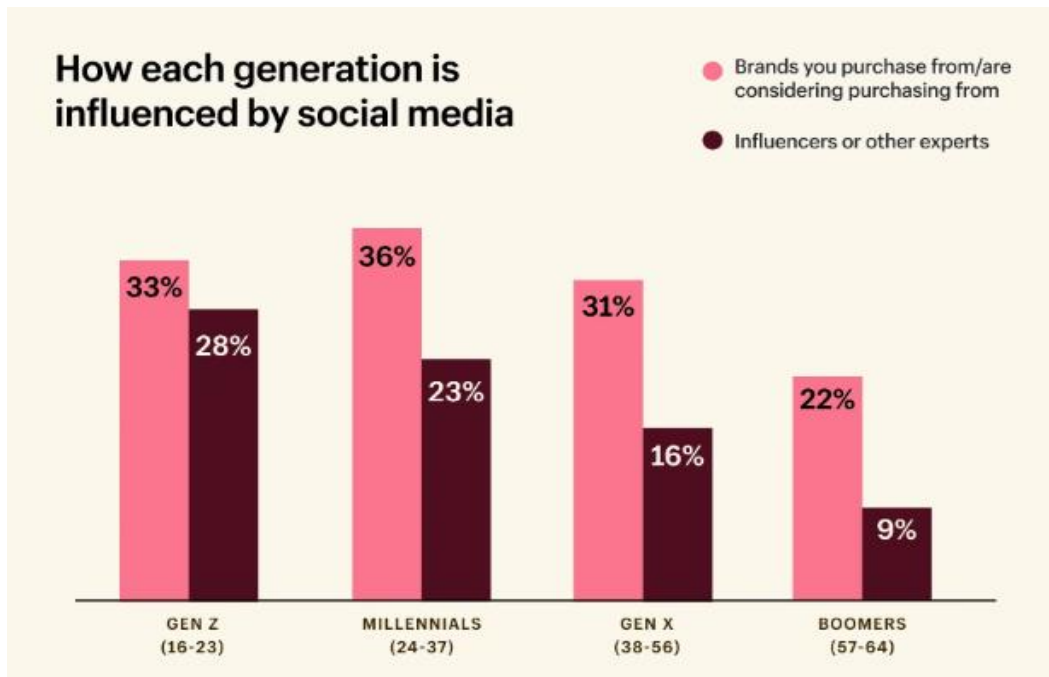


Fig. 1: Influence of Social Media on each Age Group

Source: Global web index, 2021

Social-media Influencers are the new emerging role model in teenagers' purchasing decision. These influencers contain the ability to influence the purchasing decision of the consumers. With the passage of time, social media users are increasing rapidly giving the boost to the influencer marketing through the social media influencers (SMIs). In the year 2020, 50.44% people have penetrated in social media platforms which used to be 19.13% in 2015 (statista.com). It is further expected that the trend would enhance up to 67.4% in 2025 (statista.com). The teenage group actually follows and admires these influencers and found them quite reliable, authentic and transparent in comparison to the tradition celebrities. In the US context, survey was conducted on more than 2,000 people have found that 58% people take the SMI's authenticity very important and actually follow their interest (marketingcharts.com).



Fig. 2: Most Preferred Fastest Growing Online Customer-acquisition Method

Source: tomoson.com

The teenagers get the appropriate time to spend and browse various online activities on the internet. Even in Indian context, highest internet users are found in between the age group of 12 – 29 which is 65%. Further, under this people lying in age group of 12-19 years have been found 31% after the people lying in age group of 20-29 which stands at 34% (source). SMIs target the people through the social media platforms and collaborate with the companies for product promotion purposes. On the global scale, it has been observed that young people are 1.24 times more likely to connect than the rest of the population (www.itu.int).

Thus, this conceptual paper will discuss how these SMI's are penetrating as an emerging role model of the teenagers. This study would also throw some light on how companies can take the SMI's as the cost-effective strategy for their product promotion.

2. Literature Review

In marketing field, researchers are continuously giving the attention on the purchasing behavior pattern of the young consumer specifically teenagers due to their distinct qualities than the other age groups (Makgosa 2010). With the advent of digital era, companies are always required to be focused about their changing role model. As per Bandura, 1977 "Role model can be anyone with whom individual consumer comes in contact and contains the ability to influence consumption decision." It is claimed by the study that there is significant relation of role model with the purchase intention (Makgosa 2010). In India, where more emphasize is given on its culture and tradition, the parents are termed as the role models of their children (Kaur and Medury 2011). The study conducted by Martin & Bush, 2000 has categorized the role model on the basis of their direct and indirect effect in teenagers' life. The direct role model such as father & mother has the strongest influence on their purchase intention as well as purchasing behavior in comparison to vicarious role model (Martin & Bush, 2000). In previous studies television entertainers and celebrities have been recognized as the vicarious role model of various young consumers (Clark et al., 2001; Martin & Bush, 2000). The study conducted in Botswana have claimed that teenagers' actually consider their favourite entertainer and celebrity as their role model and further their opinions may influence their purchasing decision (Makgosa 2010). These role models put the positive contribution in building the good image of product & knowledge among teenagers' mind. Even on the basis of significant relation the study has explored the further dimensions delineating the purchase intention among the teenagers - product switching, loyalty, complaining behavior and positive word of mouth. (Makgosa 2010).

With the advent of digital era, the companies need to understand that these role models are gradually shifting towards the social media platforms and promoting the products more efficiently. Further, these digital platforms are not only approachable for their role models (big celebrities) but also people having no celebrity status earlier get the appropriate opportunity to gain popularity through this medium. These are termed as the social media influencers (SMIs) emerging as the new role model among the teenagers.

These social media endorser consist more caliber to influence their follower than traditional celebrities (Schouten, Janssen, and Verspaget 2020). The SMIs are regarded as more reliable experts and have been found quite advantageous for not only local brands but international as well (Alotaibi, Alkhatlan, and Alzeer 2019; Jin and Ryu 2020). These SMI's are considered as the most trustworthy and contain the influencing power which can affect purchasing decision of their followers (Koay et al. 2022). Hence, these SMIs are further emerging as the new role model of the teenagers. Very few literatures have been contributed on this topic till now. Thus, this research paper is an attempt to open up the new area in the literature regarding SMIs among teenagers which has been noticed in various articles and magazines/ newspapers.

3. Objectives of the Study

- To discuss the growing interest of companies in captivating teenage segment.
- To draw an attention for the companies on becoming social media influencers (SMIs) as an emerging role model in teenagers' life.
- To suggest the companies adopting social media influencer (SMIs) as the cost effective strategy in comparison to traditional celebrity for their product promotion.

4. Discussions

4.1. Examples of Companies Targeting Teenagers

On the global scale, it has been found that young people are 1.24 times more likely to connect than the rest of the population (www.itu.int). The companies are also shifting towards the digital platforms for marketing communications. These are continuously putting their best efforts to target this generation and especially teen group as considered quite active in accessing these platforms. Here are some examples of companies which has achieved their objectives by targeting this segment.

Nike

As the Brand Nike is continuously putting efforts and also succeeded in luring the teenagers towards their product. As per the Piper Jaffray report, it is evident that Nike has become the first most choice of teenager in apparel and footwear category and it has gained larger share by attracting North American consumer including every age. Even in the first quarter of 2020 the sales have further grown by 4% (businessinsider.in). This brand has further become the first most choice of teenagers and retained as first position among teenagers brand preference since 2011. The company has identified the involvement of teenagers in purchasing criteria and target particularly to this segment and succeeded in achieving their objectives.

Apple

The growth in market share of the company can be noticed as particularly focused on this segment. In the year 2007 the market share of Apple used to be 3% and in the year 2022 it has reached to 18% (counterpointresearch.com). Despite of investing in huge advertisement this brand adopted the word-of-mouth marketing and attracted the teenager with its attractive designs and features. Its product mainly iPod emphasized its sales and helped in gradually penetration into the market as music is the most preferred choice of this age group. Despite of being the most expensive brand into the market, this brand succeeded in achieving their objectives.

Starbucks

The coffee company Starbucks in order to increase its market share targeted teenage segment.

Starbucks is continuously putting efforts in luring the younger crowd and implementing various marketing approaches to attract this demographic. This company has recognized the requirement of this age group which consume their beverages (trendhunter.com). As per the Piper Sandler's 44th semi-annual report indicated that the average age 15.8 years old prefer Starbucks after Chick-fil-A restaurant (forbes.com). This teen marketing helped Starbuck in increasing the revenue rapidly as in the year 2003 the net revenue was only \$4.1 billion and reached to \$26.58 billion in 2022.

Netflix

Netflix has also adopted the teen marketing strategy to gain market share by recognizing the rising importance of teenagers in the current scenario. It has involved the number of exclusive films and web series in its streaming services especially targeting teen segment only. Recently, in the third quarter of 2023 the total revenue of Netflix has reached to \$8.54 billion which used to be only \$1.02 billion in the year 2013. The development of this streaming service represents the decline in the Cable T.V. also. The survey conducted represents that the daily video time of US teens which used to be 26 % in 2016 has now been reduced to 5% in 2022. As these streaming companies provides the services to watch movies and web series on demand and enhancing their growth in the market.

4.2. SMIs as an Emerging Role Model among Teenagers

Despite of various role models among teenagers, the role of SMIs is becoming fundamental phenomenon to be looked upon. SMIs are categorized as extremely trustworthy, expertise who persist the potential talent for influencing purchasing decision of their followers (Koay et al. 2022). As the survey conducted on more than 2000 US people in Nov 2019 on the age group of 13-38 years has provided the essential statistics regarding SMIs. It has been found that 58% of respondent found SMIs very important because of their authenticity and genuine care about their interest (marketingcharts.com). Furthermore, their entertaining and engaging personality has been found very important by 53%. The SMIs’ knowledge on any object which they actually care has also been found very important by 48% of the US respondent.

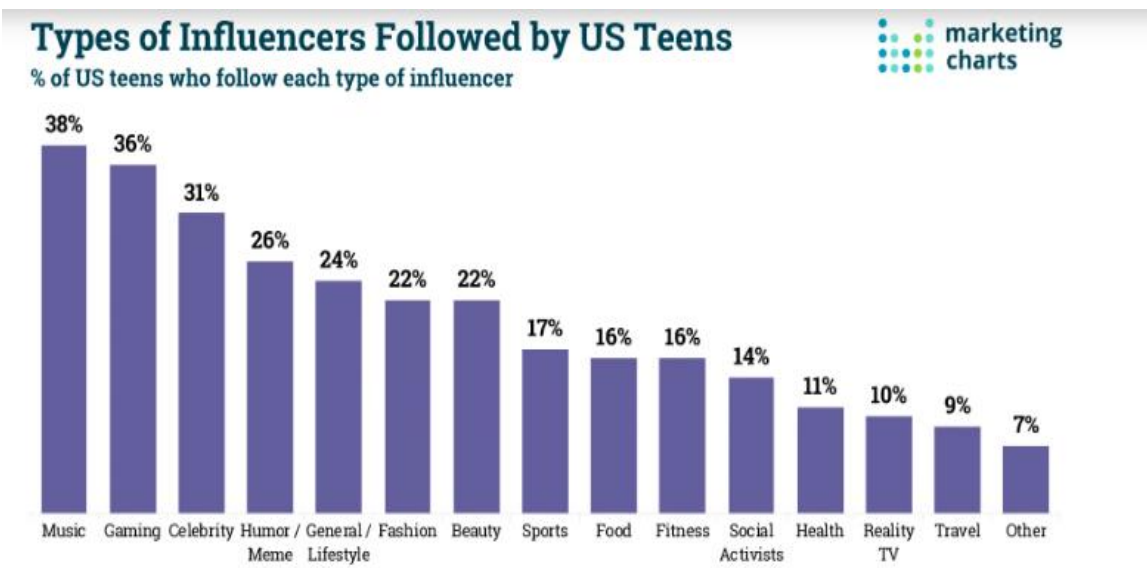


Figure 3: Various Categories of Influencers Followed by US Teens

Source: marketing charts

As shown in figure 3 it is depicted that in Dec 2021 the music influencers were found most popular among US teenagers followed by gaming. Thus, it is not necessary that teenagers follow one type of influencer only as being the versatile personality they show their interest in various field such as sports, gaming, music & fashion and many more. Hence, it would not be surprise to assume that various categories of influencers are being followed by them. These SMIs in order to entice their followers keep regularly updated in their specific field and post relevant content for their followers. With the changes in time, it need to be understood by the companies that these teenagers spend most of their time on social media application and always acquire knowledge from these platforms. The SMIs are also considered

most trustworthy by the teenagers as they promote the product without any commercial motive. These influencers are just concerned for enhancing their fan-following and building their image on social platforms. SMIs share the informative content on their channel which positively influences the purchasing intention of their followers (Saima and Khan 2020). These influencers communicate necessary information to their followers and also share their experiences with the product as well. Thus, it is a great pressure on the SMIs to communicate authentic and reliable content of the product as fake content may hamper their reputation on such platform. Even the teenagers may also not feel satisfied/ comfortable in using their videos and channels for acquiring product reviews and suggestions. Hence, these influencers give their best efforts in satisfying requirements of their followers. The teenagers observe the attitude, behavior, language and purchasing preferences of the SMIs which in results makes them as their new emerging role model. As shown in Fig 2, 38% & 36 % of US teen follow Music & Gaming influencers respectively whereas only 9% follow travel influencers. It can be observed that teenager follow the social media influencer as per their interest such as music, gaming, sports, food, travel etc. and follow their words and preferences cautiously. Thus, it is suggested to the companies to consider the social media influencers as an essential part while formulating their marketing policies. Teenagers may follow SMIs as per their interest, hobbies and preferences and gradually makes them as their role model. They provide quite genuine and authenticated information which influences the purchasing decision of the teenagers.

4.3. Challenging to Traditional Celebrities

SMIs has been observed as highly popular and well-liked peers as they combine the benefits of E-WOM and celebrities endorsement (De Veirman, Hudders, and Nelson 2019). Due to non-commercial interest in product promotion of these SMIs, still they share the informative content with their follower which in results regarded as most reliable word of mouth rather than other paid advertisements. Because of perceived authenticity of these SMIs, the message spread by them is considered highly credible than advertising (De Veirman et al., 2019). As shown in figure 4, 51% of marketers believe that better quality of customers can be acquired through influencer marketing and only 11% think it is the worst technique for customer acquisition.

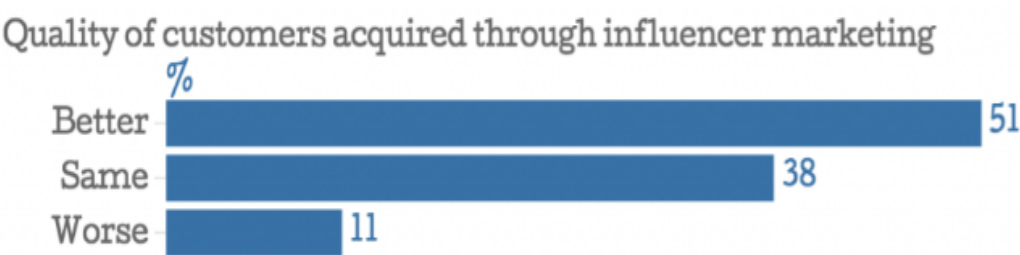


Fig. 4: Quality of Customers Acquired through Influencer Marketing

Source: tomoson.com

As in today’s era there is abundance of film celebrities and sometimes it may difficult for the companies to find the best endorses for their product. Celebrity endorsement may provide positive outcomes only if he/she is actually admired by their fans. There are more chances of getting positive outcomes if the company adopts the famous celebrity for their product promotion, but if the famous celebrity has been found involved in any scandals, crimes, or other negative behavior that may hamper the brand image as well. In comparison to social media influencer traditional celebrity does not contain the ability to engage relations between brand and consumers. The traditional celebrity endorsement does not create an engaging relationship between the brand and consumers as social media influencers do today (Guruge 2018).

5. Conclusion

With the advancement in technology, social media applications are becoming more popular and used by all age groups especially teenagers. Even the companies are also suggested to use these platforms for their product promotion. Teenage is the segment can be targeted as they spend most of their time on social media applications. Many companies are already using teen marketing strategy for enhancing their sales revenue as keeping in mind their capacity of influencing purchasing decision of other age-group as well. Further, this study also suggests to the companies that latest digital trends of product promotion should be adopted where the concept of social media influencers come into the spotlight. As Fig 3 depicts that influencer marketing has been found as the fastest growing method for customer acquisition. Even adopting social media influencers are the cost-effective technique for the companies who promote the product without any commercial motive. According to Tomoson study, it has been found that organizations are making \$6.50 on every \$1 spent through influencer marketing strategy (tomoson.com). Hence, this study suggests the companies to opt these methods for their product promotion (tomoson.com).

Furthermore, it is the Teenagers who spend their time acquiring product knowledge such as consumption patterns, purchasing reviews, defects, quality etc. The social media influencers have been found very authenticated, similar and reliable. This study further suggests to companies that targeting teenagers through influencer marketing is the most effective customer acquisition strategy to adapt for product promotions. Also 51% of marketers believe that better quality of customer can be acquired through this emerging method as shown in Fig 4. The social media influencers are further emerging as the role model. These influencers are further giving the challenge to traditional celebrities as well. Product promotion through traditional celebrities is also not much effective.

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(FINANCE)**Impact of GDP on Indian IT Sector – An analysis of Nifty IT Index**

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Abstract--- The IT industry in India is propelling the Indian economy to new levels, and according to all forecasts, its contribution to the Indian economy is expected to grow significantly in the future. In FY 2022, the contribution of the IT sector to India's GDP is at 7.4%. The projected revenue for the IT industry in fiscal year 2023 is around US\$ 245 billion. The IT industry is projected to generate \$51 billion in domestic sales and \$194 billion in export revenue in FY 2023. This study investigates the influence of Gross Domestic Product (GDP) on the Information Technology (IT) sector in India. It aims to determine the correlation between the growth rates of GDP and Nifty IT. This study incorporates data from external sources and encompasses a time frame of 10 years, specifically from 2013 to 2022. Descriptive statistics and one-way ANOVA were employed as statistical methods.

Keywords--- GDP, Nifty IT, Indian Economy, NSE, Economic Growth, Investments, etc.

1. Introduction

Every nation's capital market is essential because it has the power to alter the national budget and regulate the economy. The capital market plays a pivotal role in economic expansion by facilitating the transfer of capital and attracting fresh resources. The degree to which the capital market is comprehended and controlled has played a significant role in the industrial and commercial growth of the nation. To expand, the commercial and industrial sectors require long-term funding, which the capital markets supply.

The entire market value of the finished goods and services produced in a nation divided by the total number of its citizens is known as GDP per capita. The GDP is a metric used to quantify the size of an economy. The Indian economy is currently the sixth largest in the world by nominal GDP. It is the third largest in terms of purchasing power parity (PPP). Two of the greatest measures to monitor changes in outputs and people's level of life are GDP and GDP per capita. One of the most crucial concepts that the government and decision makers need to understand for organizing and establishing policies is the gross domestic product (GDP). We can determine whether the economy is experiencing a boom, recession, or depression using GDP. A nation's GDP is a comprehensive indicator of its overall economic health and level of revenue. The following formula is used to determine GDP:

$$\text{GDP} = (X - M) + C + I + G.$$

Whereas C stands for consumption (personal consumer expenditure) annually.

I = All of the nation's private investment.

G stands for government expenditure.

X = Total Amount of Exports

M is the total amount of imports, and X-M is the total amount of net exports (however the total amount of net exports may also be negative).

Various factors affect the GDP growth of India. These factors include consumer demand, investment, infrastructure, workforce and others. Every year the Economic Survey is tabled right before the Union Budget that provides data on the GDP growth of India for the upcoming fiscal year along with the economic scenario of the prevailing year. In India, GDP has three key sectors segmentation – industry, agriculture and associated services as well as services. As per recent data, the agriculture sector's growth rate came at 3.5% for FY23 against 3% of the previous year, while the manufacturing sector will see a 1.6% growth and mining and electricity with 2.4% and 9% growth, respectively.

2. IT Sector in India

One of the sectors in India with the quickest rate of growth is information technology. Over the years, India has developed significant brand equity in this industry. ITES-BPO, IT services, and software are the main categories used to describe the Indian IT industry. India is becoming one of the most popular locations for business process outsourcing (BPO) in IT enabled services (ITES).

India's information technology (IT) sector has been instrumental in establishing the country's international recognition. One of the biggest drivers of economic growth in India has been the country's IT sector. The sector has been crucial in changing the perception of India from a bureaucratic economy with slow growth to one that is home to creative entrepreneurs and a major player in the world market for high-end business services and technology. This sector has aided India's economic transition from one centered on agriculture and rural areas to one centered on knowledge.

Rapid access to information has been made feasible by information technology. Millions of people who live in remote and rural areas and are economically disadvantaged have seen a significant improvement in their quality of life. With the potential for e-government initiatives like e-health, e-education, e-agriculture, etc., the internet has brought about revolutionary changes. These days, all it takes is a few mouse clicks to file income tax returns, apply online for a passport, or purchase an electronic train ticket. India's IT potential is steadily advancing toward global competitiveness, enhancing defense capabilities, and addressing issues related to energy and the environment, among other things.

The IT and BPM industries have emerged as one of the major drivers of economic growth in India, making substantial contributions to both the GDP and the welfare of the populace. By 2025, the IT sector is predicted to have contributed 10% of India's GDP, up from 7.4% in FY22. The National Association of Software and Service Companies (Nasscom) reports that the Indian IT industry generated US\$ 227 billion in sales in FY22, representing a YoY rise of 15.5%.

Gartner expects that India's IT spending would rise from an estimated US\$ 81.89 billion in 2021 to US\$ 101.8 billion in 2022. By 2025, the Indian software product market is projected to grow to \$100 billion. In order to improve their global delivery centers and increase their global presence, Indian businesses are concentrating their investments abroad.

3. The National Stock Exchange

The NSE was established in 1992. SEBI granted it recognition as a stock exchange in April 1993. The exchange began operations in 1994, when it introduced the wholesale debt market. The cash market segment was subsequently introduced shortly thereafter. The NSE has been instrumental in driving reforms across the Indian securities market with regards to market practices, trading volumes, and microstructure. Present-day market operations are facilitated by cutting-edge information technology that ensures transparency and efficiency in the clearance, settlement, and trading processes. Additionally, the market has experienced a multitude of product and service innovations.

The NSE has operated as a demutualized exchange since its inception; ownership, management, and trading are each controlled by a distinct group of three individuals. Leading financial institutions, banks, insurance companies, and other financial intermediaries own the NSE, which is managed by professionals who do not trade on the Exchange directly or indirectly. This has effectively eradicated any potential conflicts of interest and enabled NSE to vigorously pursue policies and practices that are in the best interest of the public. However, the NSE model does not exclude trading members from participation, support, or contribution in any manner; on the contrary, it encourages it. The Board is composed of distinguished individuals from promoter institutions, eminent experts in finance, taxation, law, economics, accountancy, and other relevant disciplines, public representatives, SEBI nominees, and one full-time executive of the Exchange.

4. GDP and Indian IT Sector

In this competitive environment, IT-based services are crucial for organizations to increase productivity, facilitate the flow of business processes, and expand economically and efficiently. In addition to influencing India's economic development, the IT sector has rendered the government more approachable and capable. Information technology has facilitated and reduced the cost of obtaining government-related services and data. Information technology has improved the transparency and efficiency of the administration and delivery of government services such as education information, health care services, and consumer rights and services.

Given its status as a prominent offshoring destination for numerous IT companies worldwide, India's business process management market holds significant prominence. During fiscal year 2023, the information technology/business process management (IT-BPM) industry made a contribution of approximately 7.5 percent to the nation's gross domestic product (GDP). BPM is more of a discipline than a process, as it consists of techniques for automating, analyzing, and enhancing business processes.

The IT industry's share of India's gross domestic product (GDP) has risen from 1.2% in 1998 to nearly 8% in 2018 and 7.7% in 2020, despite the COVID-19 pandemic. Based on data from the Software Technology Park of India (STPI), the initial quarter of fiscal year 22 (FY22) witnessed an astounding 1.20 Lakh crore (US\$16.29 billion) in software exports by IT companies. Revenue for the Information Technology and Business Services sector is projected to reach \$6.96 billion in the first half of 2021, representing a year-over-year growth of 6.4%. IT companies anticipate export revenues of approximately \$150 billion in 2021. Gartner projects that the expenditures of IT companies will accumulate to US\$93 billion in 2021, expanding by 7.3% year-over-year in India, before further escalating to US\$98.5 billion in 2022. Together, the IT and BPM sectors employ over 4.5 million individuals as of FY21.

With the expansion of the Indian digital economy, IT companies have established their primary operations in tier 2 and tier 3 cities, contributing to the overall development and mitigation of disparities. As announced by the government, its attention will be directed towards cutting-edge technologies including blockchain, hyper-scale computation, artificial intelligence, and cybersecurity.

By 2025, it is anticipated that India's digital economy will be worth \$1 trillion. India's Technology Services sector has the potential to generate \$300-\$350 billion in annual revenue by 2025 if it can capitalize on the rapidly expanding business opportunities presented by emergent technologies such as cloud, AI, cybersecurity, and others.

5. Objectives of the Study

- a) Emphasize the significance of GDP in the expansion of the IT industry in India.
- b) Compare the GDP growth rates to those of the Nifty IT Index for the purpose of analysis.
- c) Predict the growth of the Nifty IT Index in relation to GDP.

6. Methodology of the Study

The investigation is founded upon pre-existing information sourced from the official NSE website. The data was collected throughout the course of eleven years, from 2012 to 2022.

Tools for Analysis Founded on Statistics

Descriptive statistics and one-way ANOVA were employed to analyze the data in the study.

7. Data Analysis

Table 1: Annual Growth Rates of GDP and Nifty IT
(Figures in %)

Year	GDP	Nifty IT
2012	5.46	-1.81
2013	6.39	57.97
2014	7.41	17.84
2015	8.00	-0.04
2016	8.26	-7.25
2017	6.80	12.17
2018	6.45	23.79
2019	3.74	8.39
2020	-6.60	54.94
2021	8.95	59.58
2022	7.00	-26.04
Average	5.624	18.14
Standard Deviation	4.294	28.540
Co-efficient of Variance	0.763	1.573

(Source: Calculation based on information from web)

Table 1 shows that the GDP and Nifty IT's yearly growth rates over an 11-year period were compared. There was variation in GDP growth rates across all years. The growth peaked in 2021 at 8.95 and peaked in 2020 at -6.60. GDP growth from 2012 to 2018 was more than 5%. From 2016 to 2020, it consistently fell from 6.26% to -6.60%. COVID-19 caused a 10.34% decline in GDP growth in 2020. The Nifty IT growth rates saw a high of 59.58 in 2021 and a low of -26.04 in 2022. All years saw a constant fluctuation in growth returns, with a few exceptions.

Table 2: Descriptive Statistics of GDP and Nifty IT

	GDP	Nifty IT
Mean	5.624	18.14
Standard Error	1.295	8.605
Median	6.8	12.17
Standard Deviation	4.294	28.541
Sample Variance	18.439	814.570
Range	15.55	85.62
Minimum	-6.6	-26.04
Maximum	8.95	59.58
Sum	61.86	199.54
Count	11	11

Table 2 displays the statistical measures of the average growth rates of GDP and Nifty IT. The GDP growth rate ranges from a maximum of 8.95 to a minimum of -6.60, resulting in a standard deviation of 4.294. The mean GDP growth rate is 5.624, the median growth rate is 6.80, and the range is 15.55. The variance of the GDP growth rates is 18.439. The maximum growth rate of Nifty IT is 59.58, while the smallest growth rate is -26.04. The calculated value for the standard deviation is 28.541. The Nifty IT has an average growth rate of 18.14, a median rate of 12.17, and a range of 85.62. The variance of the growth rates in the Nifty IT index is 814.570.

One - Way ANOVA – Test

H0: The growth rates of GDP and Nifty IT are homogeneous during the study period.

H1: The growth rates of GDP and Nifty IT during the study period are not homogeneous.

Significance Level: The appropriate significance level is 5%.

Table 3: One-way ANOVA Test

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (Df)	Mean Square (MS)	F Calculated Value	F Table Value
Between Groups	861.6265	1	861.6265	2.068708	4.35
Within Groups	8330.092	20	416.5046		
Total	9191.718	21			

Table 3 presents a one-way analysis of variance of the growth rates of GDP and Nifty IT. In this experiment, the hypothesis is being tested at a significance level of 5%. The tabulated value exceeds the calculated value. Therefore, the null hypothesis (H0) is deemed to be valid. The study period indicates a similarity in the growth rates of GDP and Nifty IT, suggesting homogeneity.

8. Conclusion

Based on this study, it is evident that the two variables, GDP and Nifty IT, exhibit a positive correlation in most years. This demonstrates a correlation between GDP and the IT sector, with both indices exhibiting parallel growth rates. It is evident that the GDP growth rate is positive in all years, except for 2020, when it was negatively affected by the impact of COVID-19. Similarly, the growth of Nifty IT exhibits oscillations in certain years, which can be attributed to

the volatility in the Capital Market over the study period. The data suggests that the growth rates of GDP and Nifty IT have exhibited homogeneity, indicating that these two metrics have similar frequencies of increase. Ultimately, it is evident that the IT sector is greatly impacted by India's GDP.

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Free Cash Flow to Frame Approach Versus Relative Valuation Approach in Estimating the Value of Firm and Equity

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Abstract--- Free income to the business FCFF, or free income to firm, is how much money left over in the business after assessments, deterioration, and other speculation costs are deducted from income. It is likewise alluded to as unlevered income and shows how much income is accessible to all subsidizing holders, including obligation holders, investors, favored investors, and investors. This paper principally depicts two techniques for valuation: the FCFF-based approach and the general valuation approach, which utilize different venture worth and value esteem exchanging products to decide the fair worth of the organization and value. Not with standing that this paper uncovers the contrast between FCFF strategy for valuation and relative valuation. At long last, this paper uncovers the fair worth of the firm and value of Public Aluminum Organization Restricted (NALCO).

Keywords--- Fair Value, Equity, Firm, FCFF (Free Cash Flow to Firm), Relative Valuation.

1. Introduction

FCFF or Free Income to Firm is quite possibly of the main idea in Value Exploration and Speculation Banking firms. "The worth of any stock, security or business not entirely settled by the money inflows and outpourings limited at a suitable loan cost that can be anticipated to happen during the leftover existence of the resource." Relative valuation models are an option in contrast to outright esteem models, which attempt to decide an organization's natural worth in view of its assessed future free incomes limited to their current worth, with next to no reference to another organization or industry normal. Like outright worth models, financial backers might utilize relative valuation models while deciding if an organization's stock is a decent purchase.

2. Objectives of the Study

- To find out the process involved in finding out the fair value of the firm and equity using FCFF based approach of valuation and Relative Valuation.
- To find out the difference between FCFF approach and relative valuation approach of valuation of the firm and equity.

3. Literature

As indicated by Mill et al. (2002:38), free income is the money that accessible subsequent to meeting every ongoing responsibility, which is required instalments proceed with tasks. Those installments are including profits, current obligation reimbursement and standard reinvestment to keep up with current working exercises. Free income turns into a reason for estimating an organization's capacity to meet proceeding with capital prerequisites. According to Jensen (1986), a company's free cash flow is the cash flow left over after investing in all positive NPV projects that are available.

Ross et al. (2010) expressed that free income alludes to cash that the firm is allowed to appropriate to loan bosses and investors since it isn't required for working capital or fixed resource speculation. Wild (2009), characterizing FCF as income accessible to investors subsequent to working resource reinvestments and obligation installments. In

accordance with Wang (2010), Lehn and Poulsen (1989), and Lang (1991), free income is characterized as working pay before devaluation cost, less corporate annual duty, premium costs, and money profit. This definition is advantageous because it shows how much free cash flow was actually available for management use. A company with a lot of free cash flow may perform better than another company because they have an advantage over different opportunities that the other company may not have. Organization with colossal measure of free income is anticipated to be more make due in corrupted circumstance. Additionally, a company with negative free cash flow indicates that its internal fund sources are insufficient to meet the demand for investment, necessitating external funding in the form of debt or the issuance of additional shares (Rosdini, 2011).

Jensen and Meckling (1976) bat propose hypothesis about the connection between head (investor or proprietor of a firm) with the specialist (supervisor). It makes sense of that the interest of the executives and investor premium frequently struggle, so that clashes can emerge between them. The investor needs to get exceptional yield on the venture they have placed on the firm by getting profits. In the other hand, supervisor needs to get pay with respect to the accomplishment they have made for the firm. Consequently, directors can make moves to work on their privately invested money, instead of attempting to augment the market esteem. Irreconcilable circumstances among director and investor can be limited by an observing instrument to change the connected revenue. Subsequently, investor paid a specific expense to screen the presentation of director. This will have brought about organization cost for the administration to pay the observing movement. To decrease the organization cost, the administration deliberately gives monetary data to the investor. By consistently revealing the fiscal summary to the investor, the board expects that the organization cost will be diminished.

4. Results and Findings

FCFF Valuation to Find Out Fair Value of the Firm and Equity

	2023	2024	2025	2026	2027	Supporting Calculations		
EBIT	23,441.53	26,893.81	30,854.50	35,398.50	40,611.69			
T	25%	25%	25%	25%	25%	g	4%	
EBIT(1-T)	17,581.15	20,170.35	23,140.88	26,548.87	30,458.77	WACC	12.74%	
Capital Exp	14859.3033	17047.658	19558.296	22438.679	25743.26112			
Depreciation	8601.45338	9868.204	11321.511	12988.849	14901.73903	Cost of Equity		
Change in Non-cash Working Capital	3,025.44	81.87	93.93	107.77	123.64	Risk-free rate	7.30%	
FCFF	8,297.86	12,909.03	14,810.16	16,991.28	19,493.61	Beta (1 year)	1.187124528	
Terminal Value					159161.78	E(Rm)	11.91%	
Total FCFF	8,297.86	12,909.03	14,810.16	16,991.28	1,78,655.39	Re	12.77%	Cost of Equity
T	1	2	3	4	5			
PV of FCFF	7360.33037	10156.781	10336.028	10518.438	98100.83283	Cost of debt		
Value of Firm	136472.411	Fair value of firm				Rd	8.00%	
Debt	771							
Cash	36328.1					D	771	millions
Value of Equity	172029.511	Fair value of equity				E	1,48,124.35	millions
Fair price per share (Rs)	93.67					Price per share	80.65	Market price
Market Price	80.65					No. of shares outstanding	1,836.6	millions
	(Share is undervalued)							

(Prepared by the author by taking into account financial statements of selected firm from Prowess Database)

- EBIT of the firm is estimated based on the financial information of earlier years. EBIT is increasing year by year.
- Tax rate is assumed to be 25% and is the same for projected period.
- Free cash flow to firm value is estimated and is increasing year.
- Total free cash flow to firm value is estimated after taking into account terminal value.
- Total free cash flow to firm values are discounted at weighted average cost of capital to present value.
- Fair value of the firm is found to be Rs. 136472.4106 million.
- Debt and cash of the firm are observed as Rs. 771 million and Rs. 36328 million.
- Value of equity is about Rs. 172029.5106 million.
- Price per share is Rs. 93.67 (computed value/fair value per share).
- Market price per share is 80.65.
- When the market price per share is compared to fair value, share is under valued.

Relative Valuation to Find Out Fair Value of the Firm and Equity

COMPANY NAME	ENTERPRISE VALUE MULTIPLES			EQUITY MULTIPLES		
	TEV/TOT.REVENUE	TEV/EBITDA	TEV/EBIT	P/DILUT ED EPS BEFORE EXTRA	P/TANG BV	
FOR NACL						
AVERAGE MULTIPLE	1.1	4.566666667	5.733333333	7.8	1.66667	
REVENUE LATEST	1,41,808.1					
EBITDA LATEST		45,413.7				
EBIT LATEST			39,515.2			
DILUTED EPS LATEST				16.07		
BV PER SHARE LATEST					68.34	
ENTERPRISE VALUE (IN MILLIONS)	1,55,988.91	2,07,389.23	2,26,553.81			
DEBT SUBTRACT	771	771	771			
CASH ADD	36328.1	36328.1	36328.1			
VALUE OF EQUITY	1,91,546.01	2,42,946.33	2,62,110.91			
NO. OF STOCKS OUTSTANDING	1,836.6	1,836.6	1,836.6			FCFF
PRICE PER SHARE	104.2920042	132.2781908	142.7128264	125.35	113.91	93.6658
AVERAGE PRICE	123.7072909	EXPECTED SHARE PRICE				
STD DEV	15.08592536					

For determining the enterprise value and equity value, total enterprise value to total revenue, enterprise value to EBITDA, total enterprise value to EBIT, price to diluted EPS, price to tangible book value multiples are considered.

- Enterprise value is increasing year by year.
- Value of equity is found to be Rs. 1,91,546.01 million, 2,42,946.33 million, 2,62,110.91 million respectively.
- PRICE PER SHARE is observed as Rs. 104.2920042, 132.2781908, 142.7128264, 125.35 and 113.91 respectively.

- When fair value of equity under FCFF is compared with fair value of equity under relative valuation, fair value of equity under relative valuation is found to be higher. Therefore, person who is undertaking valuation of the firm and equity can adopt any of the valuation approaches depending upon time, flexibility and availability of the data.
- There exists a difference between with respect to fair value of the company between FCFF and relative valuation approach.

5. Findings

- EBIT of the firm is estimated based on the financial information of earlier years. EBIT is increasing year by year.
- Tax rate is assumed to be 25% and is the same for projected period.
- Free cash flow to firm value is estimated and is increasing year.
- Total free cash flow to firm value is estimated after taking into account terminal value.
- Total free cash flow to firm values are discounted at weighted average cost of capital to present value.
- Fair value of the firm is found to be Rs. 136472.4106 million.
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- Price per share is Rs. 93.67 (computed value/fair value per share).
- Market price per share is 80.65.
- When the market price per share is compared to fair value, share is under valued.
- For determining the enterprise value and equity value, total enterprise value to total revenue, enterprise value to EBITDA, total enterprise value to EBIT, price to diluted EPS, price to tangible book value multiples are considered.
- Enterprise value is increasing year by year.
- Value of equity is found to be Rs. 1,91,546.01 million, 2,42,946.33 million, 2,62,110.91 million respectively.
- PRICE PER SHARE is observed as Rs. 104.2920042, 132.2781908, 142.7128264, 125.35 and 113.91 respectively.
- When fair value of equity under FCFF is compared with fair value of equity under relative valuation, fair value of equity under relative valuation is found to be higher. Therefore, person who is undertaking valuation of the firm and equity can adopt any of the valuation approaches depending upon time, flexibility and availability of the data.
- There exists a difference between with respect to fair value of the company between FCFF and relative valuation approach.

6. Conclusion

In order to analyse enterprise value, equity value, and firm value approaches have been used. such approaches include FCFF, and relative valuation in both of the approaches it is found that the value of equity, firm value, or different relative valuation approaches consider trading multiples while FCFF considers financial statements of earlier years. an appropriate approach can be adopted depending up on the goal of the study.

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Free Cash Flow to Firm Approach Versus Relative Valuation Approach in Estimating Value of the Firm and Equity - A Financial Analysis

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Abstract--- In this paper, we firstly discussed how to determine fair value of the company and equity using the FCFF based valuation method and Relative Valuation method using various enterprise value (EV) and equity value (EV) trading multiples. Secondly, we discussed how FCFF method is different from relative valuation method. Finally, we discussed the fair value of company and equity of Sun Pharma Industries Limited.

Keywords--- Fair Value, Equity, Firm, FCFF (Free Cash Flow to Firm), Relative Valuation.

1. Introduction

Free Cash Flow to Firm FCFF or Unlevered Cash Flow, also known as FCFF, is the amount of cash that remains with the company after deducting depreciation, taxes, and other investment costs from the revenue. FCFF represents the amount of free cash flow available to all the company's funding holders, such as debt, stock, preferred stock, or bond holders.

A relative valuation model, or FCFF, is a business valuation technique that compares a firm's financial worth to the financial worth of its competitors or its industry peers. FCFF is a key concept in equity research and investment banking firms.

The value of an asset, such as a stock, bond, or business, is determined by the amount of cash flows and outflows discounted to an appropriate interest rate over the lifetime of the asset.

What is a relative valuation model?

A relative valuation model is an alternative to an absolute value model. An absolute value model attempts to estimate a company's intrinsic value by discounting its future FOCVs to their current value, without taking into account other companies or industry averages. Like an absolute value model, an investor may use a relative valuation model to determine whether a stock is good to buy.

2. Objectives of the Study

Determine the methodology for calculating the fair value of a company and its equity through the FCFF-based valuation approach and Relative Valuation method.

Determine the distinction between the FCFF approach and the relative valuation approach when valuing a company and its equity.

3. Literature

According to Mills et al. (2002), free cash flow is the cash available after fulfilling all current obligations, such as dividends, debt repayment, and reinvestment for operational activities. It serves as a measure of a company's capability to meet ongoing capital needs. Jensen (1986) defines free cash flow as the remaining cash after investing in all profitable NPV projects.

Ross et al. (2010) Describe free cash flow as the cash that a company can distribute to creditors and shareholders as it is not required for working capital or fixed asset investments. Wild (2009) defines FCF as the cash available to shareholders after reinvesting in operating assets and paying off debts. Wang (2010), Lehn and Poulsen (1989), and Lang (1991) define free cash flow as operating income before depreciation, minus taxes, interest, and dividends. This definition helps in determining the actual free cash flows available for management decisions.

Companies with excess free cash flow may outperform others as they can take advantage of opportunities that others cannot. Companies with substantial free cash flow are expected to survive better in tough times. On the other hand, companies with negative free cash flow lack internal funds for investments and may need to seek external financing through debt or issuing shares (Rosdini 2011).

Agency Theory was first introduced by Jensen and Meckling (1976) to explain the conflicts of interest between principals (shareholders) and agents (managers). It highlights that the interests of management and shareholders may clash, leading to potential conflicts.

4. Results and Findings

FCFF Valuation to Find Out Fair Value of the Firm and Equity

Sun Pharmaceutical Industries Limited.	2023	2024	2025	2026	2027
EBIT	74151.56428	81643.497	89892.379	98974.691	108974.6372
Tax rate	25%	25%	25%	25%	25%
EBIT(1-T)	55613.67321	61232.622	67419.284	74231.018	81730.97791
Capital Exp	25989.72229	28615.604	31506.793	34690.094	38195.02105
Depreciation	24815.53661	27322.784	30083.352	33122.835	36469.41404
Change in Non-cash Working Capital	(14,873.94)	3,710.27	4,085.14	4,497.88	4,952.33
FCFF	69,313.43	56,229.53	61,910.71	68,165.88	75,053.05
Terminal Value					1290314.43
Total FCFF	69,313.43	56,229.53	61,910.71	68,165.88	13,65,367.48
Time	1	2	3	4	5
PV of FCFF	62983.96953	46429.051	46451.928	46474.817	845887.9934
Value of Firm	1048227.76				
Debt	12903				
Cash	126547.9				
Value of Equity	11,61,872.66				
Fair price per share Rs	484.25				
Market Price	998.45				
	Share price is Overvalued				

Growth rate	4%	
WACC	10.05%	
Cost of Equity		
Risk-free rate	7.34%	
Beta (1 year)	0.602039716	
E(Rm)	11.91%	
Re	10.09%	Cost of Equity
Cost of debt		
Rd	3.00%	
Debt	12903	millions
Equity	23,95,616.00	millions
Price per share	998.45	Market price
No. of shares outstanding	2,399.3	millions

(Prepared by the author by taking into account financial statements of selected firm from Prowess Database).

- EBIT of the firm is estimated based on the financial information of earlier years. EBIT is increasing year by year.
- Tax rate is assumed to be 25% and is the same for projected period.
- Free cash flow to firm value is estimated and is increasing year.
- Total free cash flow to firm value is estimated after taking into account terminal value.
- Total free cash flow to firm values are discounted at weighted average cost of capital to present value.
- Fair value of the firm is found to be Rs. 1048227.76 millions.
- Debt and cash of the firm are observed as Rs. 12903 millions and Rs. 126547.9 millions.
- Value of equity is about Rs. 11,61,872.66 millions.
- Price per share is Rs. 484.25 (computed value/fair value per share).
- Market price per share is 998.45.
- When the market price per share is compared to fair value, share is overvalued.

Relative Valuation to Find Out Fair Value of the Firm and Equity

COMPANY NAME: Sun Pharmaceutical Industries Limited.	ENTERPRISE VALUE MULTIPLES			EQUITY MULTIPLES		
	TEV/TOT.REVENUE	TEV/EBITDA	TEV/EBIT	P/DILUTED EPS BEFORE EXTRA	P/TANG BV	
FOR SUN PHARMA						
AVERAGE MULTIPLE	3.028571429	16.84285714	20.8	29.33333333	6.242857143	
REVENUE LATEST	3,86,544.9					
EBITDA LATEST		1,01,447.0				
EBIT LATEST			81,471.7			
DILUTED EPS LATEST				13.6		
BV PER SHARE LATEST					200.1	
ENTERPRISE VALUE (IN MILLIONS)	11,70,678.84	17,08,657.33	16,94,611.36			
DEBT SUBTRACT	12903	12903	12903			
CASH ADD	126547.9	126547.9	126547.9			
VALUE OF EQUITY	12,84,323.74	18,22,302.23	18,08,256.26			
NO.OF STOCKS OUTSTANDING	2,399.3	2,399.3	2,399.3			FCFF
PRICE PER SHARE	535.2832164	759.5030504	753.6489413	398.93	1,249.21	484.24779
AVERAGE PRICE	739.3155943	EXPECTED SHARE PRICE WHICH MARKET EXPECTS IF THE FIRM PERFORMS ON PAR WITH INDUSTRY				
STD DEV	323.3009421					

- For determining the enterprise value and equity value, total enterprise value to total revenue, enterprise value to EBITDA, total enterprise value to EBIT, price to diluted EPS, price to tangible book value multiples are considered.
- Enterprise value is increasing year by year.
- Value of equity is found to be Rs. 12,84,323.74 millions, 18,22,302.23 millions, 18,08,256.26 millions respectively.
- PRICE PER SHARE is observed as Rs. 535.2832164, 759.5030504, 753.6489413, 398.93 and 1,249.21 respectively.
- When fair value of equity under FCFF is compared with fair value of equity under relative valuation, fair value of equity under relative valuation is found to be higher. Therefore, person who is undertaking valuation of the firm and equity can adopt any of the valuation approaches depending upon time, flexibility and availability of the data.
- Finally under FCFF approach Fair price per share is Rs. 484.25 and under relative valuation approach average Fair price per share is Rs. 739.3155943 (Expected share price which market expects if the firm performs on par with industry).
- There exist a difference between with respect to fair value of the company between FCFF and relative valuation approach.

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Review on Assessing the Impact of Fintech on the Banking Industry through Open Banking

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Abstract--- As technological advancements continue to reshape the financial landscape, traditional banking institutions are faced with unprecedented challenges and opportunities. This research investigates the multifaceted impact of open banking on the banking sector, encompassing aspects such as customer experience, operational efficiency, regulatory compliance, and innovation. Through a comprehensive analysis of case studies, industry reports, and empirical data, the study evaluates how open banking fosters collaboration, promotes innovation, and enhances competition. Furthermore, it delves into the evolving role of traditional banks as they adapt to the changing dynamics of the industry, fostering partnerships and coexistence with emerging Fintech entities. The findings of this study reveal that open banking not only catalyzes innovation but also improves customer accessibility to financial services, leading to a more inclusive and competitive financial ecosystem. Additionally, the research highlights the challenges and risks associated with open banking implementation, including data security concerns and regulatory hurdles. By addressing these challenges, banking institutions can harness the full potential of open banking, ensuring sustainable growth and relevance in the digital age. The financial technology (Fintech) sector has witnessed a rapid transformation in recent years, disrupting traditional banking practices and reshaping the financial services landscape. Open banking, driven by technological innovation and regulatory mandates, has created a dynamic ecosystem where banks collaborate with third-party providers to offer customers new, innovative, and personalized financial services. This research delves into the multifaceted dimensions of Fintech's influence on traditional banking, highlighting how open banking has emerged as a catalyst for change. We explore the evolution of open banking, from its inception to its current state, examining the regulatory framework and key stakeholders involved. Furthermore, we analyze the benefits and challenges of open banking for both banks and consumers, shedding light on the enhanced competition, increased customer-centricity, and data privacy concerns that have arisen in this new financial paradigm.

Keywords--- Fintech, Banking Industry, Open Banking, Financial Technology, Innovation, Collaboration, Customer Experience, Regulatory Compliance, Digital Transformation, Financial Inclusion.

1. Introduction

This technological revolution has significantly impacted the traditional banking sector, prompting a paradigm shift in the way financial services are delivered and consumed. One of the pivotal developments within FinTech that has reshaped the banking industry is the concept of Open Banking. This sharing of data aims to foster innovation, enhance competition, and ultimately provide consumers with a more seamless and personalized banking experience. Through a comprehensive analysis, we aim to explore the multifaceted effects of FinTech adoption on traditional banking models, customer behavior, regulatory frameworks, and the overall financial ecosystem. Explore the technological advancements that underpin FinTech and how they disrupt traditional banking models. Analyze the innovative solutions introduced by FinTech firms, such as digital wallets, robo-advisors, and blockchain technologies. Define the concept of Open Banking and elucidate the principles guiding its implementation. Examine the role of APIs in facilitating

data sharing between banks and third-party providers. Investigate how FinTech, especially through Open Banking, has reshaped the customer experience in banking. Evaluate the benefits and challenges faced by consumers in adopting new FinTech-driven services. Assess the regulatory environment surrounding FinTech, with a focus on Open Banking regulations. Examine the role of regulators in balancing innovation with the protection of consumer interests and data privacy. Explore how traditional banks are adapting to the FinTech revolution, with a specific emphasis on their strategic responses to Open Banking. Evaluate partnerships, collaborations, and competitive strategies employed by banks to stay relevant in the evolving financial landscape. Discuss potential future developments in FinTech and Open Banking and their anticipated impact on the banking industry. Consider the implications of emerging technologies such as artificial intelligence, machine learning, and decentralized finance (DeFi) on the financial sector. As FinTech continues to reshape the banking industry, understanding the impact of Open Banking becomes crucial for stakeholders ranging from financial institutions to policymakers. This assessment aims to provide a comprehensive overview of the intricate relationship between FinTech, Open Banking, and the traditional banking sector, shedding light on the opportunities, challenges, and potential future trajectories in this dynamic landscape.

2. Review of Literature

This review aims to provide an overview of key themes and findings from existing literature, emphasizing the transformative effects of FinTech on traditional banking models and the role of Open Banking in this paradigm shift. The literature consistently highlights the disruptive nature of FinTech in the banking sector. Studies by Smith (2017) and Jones et al. (2018) delve into the technological innovations brought about by FinTech, including the utilization of artificial intelligence, block chain, and data analytics. These technologies have not only streamlined banking processes but have also paved the way for enhanced customer experiences and the emergence of new financial services. Research by Brown (2019) and Lee and Kim (2020) provides a comprehensive understanding of the Open Banking framework. These studies discuss the fundamental principles of Open Banking, such as data sharing through Application Programming Interfaces (APIs), and how it serves as a catalyst for increased competition, innovation, and collaboration within the financial ecosystem. The literature consistently underscores the positive impact of FinTech, particularly Open Banking, on the customer experience. Smith and Johnson (2018) explore how Open Banking has empowered consumers by providing them with greater control over their financial data and fostering a more personalized banking experience. However, concerns raised by Martin (2021) highlight potential challenges, including data privacy and security issues that need to be addressed to ensure a positive customer experience. Regulatory aspects are extensively covered in the literature, with studies by Regulatory Insights (2019) and Peters et al. (2020) emphasizing the role of regulators in balancing innovation and risk. These works discuss the evolving regulatory frameworks surrounding FinTech and Open Banking, aiming to create an environment that encourages innovation while safeguarding the interests of consumers and maintaining the stability of the financial system. The literature reviewed acknowledges the strategic responses of traditional banks to the FinTech wave. Reports by McKinsey (2018) and Dr. Naveen Prasadula (2021) delve into how traditional banks are adapting by forming strategic partnerships, investing in technology, and redefining their service offerings. The discussions provide valuable insights into the evolving dynamics between traditional banks and FinTech disruptors. Future-oriented studies, such as that by FinTech Futures (2022), speculate on the potential trajectories of FinTech and Open Banking. These works explore emerging technologies, including decentralized finance (DeFi), and anticipate how they may shape the future of the financial industry. The literature consistently highlights the need for continuous adaptation and innovation to stay ahead in this dynamic landscape. While there is a consensus on the transformative effects of FinTech, scholars also recognize the challenges and

complexities associated with this rapid evolution. This review, conducted with a commitment to academic integrity, provides a solid foundation for further research into the dynamic interplay between FinTech, Open Banking, and the traditional banking sector.

3. Objectives

- 1. Investigate the extent to which FinTech has disrupted traditional banking models.
- 2. Identify and analyze the specific technological innovations within FinTech that have contributed to this disruption.
- 3. Assess the role of Open Banking as a pivotal component of the FinTech revolution in the banking sector.
- 4. Examine how Open Banking facilitates collaboration, innovation, and competition within the financial ecosystem.
- 5. Investigate the impact of FinTech, particularly through Open Banking, on the overall customer experience in the banking industry.

4. Research and Methodology

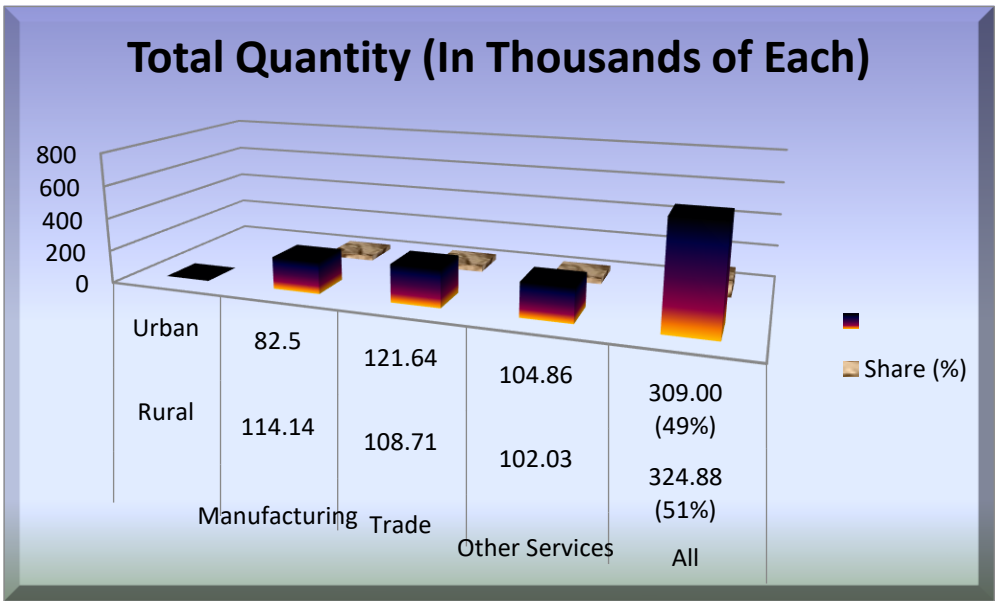
Utilize statistical techniques, such as regression analysis, to identify correlations between variables such as customer satisfaction, adoption rates, and demographic factors.

5. Analysis

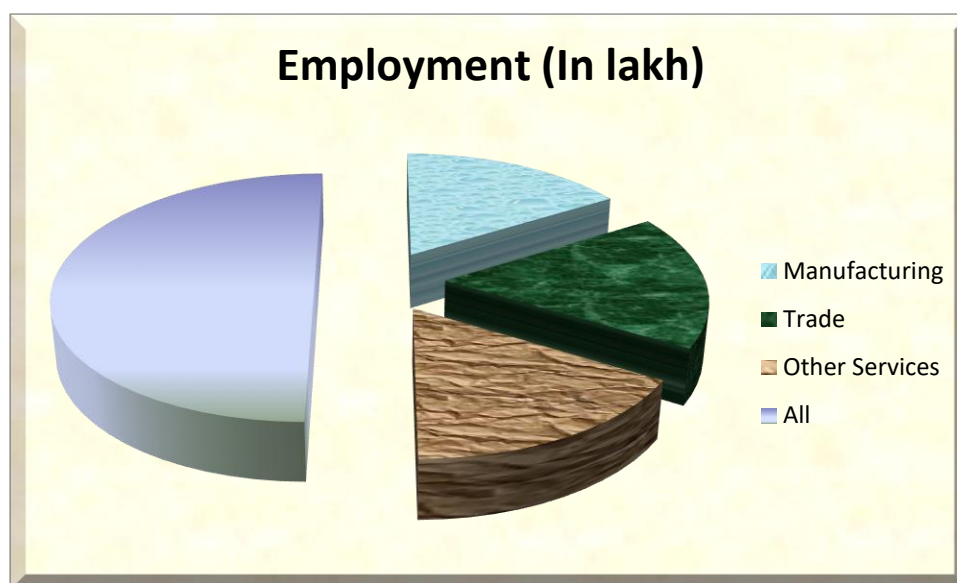
There are about 110 million individuals working for India's FINTECHs, according to the government of India (2022). According to Biswas (2015), more than 90% of all businesses are classified as FINTECHs. In 2020, 95% of all businesses.

"Estimated FINTECHs				
Sector	Number of Entities (In lakhs)			Share (%)
	Rural	Urban	Total	
Manufacturing	114.14	82.50	196.65	31
Trade	108.71	121.64	230.35	36
Other Services	102.03	104.86	206.88	33
All	324.88(51%)	309.00 (49%)	633.88	100

(Government of India) Micro, Small, and Medium Enterprises Annual Report 2021-2022.



Employment in the FINTECH		
Sector	Employment (In lakh)	Share (%)
Manufacturing	360.41	32
Trade	387.18	35
Other Services	362.29	33
All	1109.89	100



FINTECH Annual Report, 2021-22 (Government of India).

Sixty-seven percent or more of all jobs and the largest share of GDP came from micro, small, and medium-sized enterprises. In 2020–21, FINTECHs accounted for around 36% of the manufacturing sector as a whole. Its market share of global exports in the next year will be more than 45.03 percent.

FINTECHs in total GDP (%)			
	2018-2019	2019-2020	2020-2021
FINTECH GVAasa percentage of Indian GDP	30.5	30.5	26.8

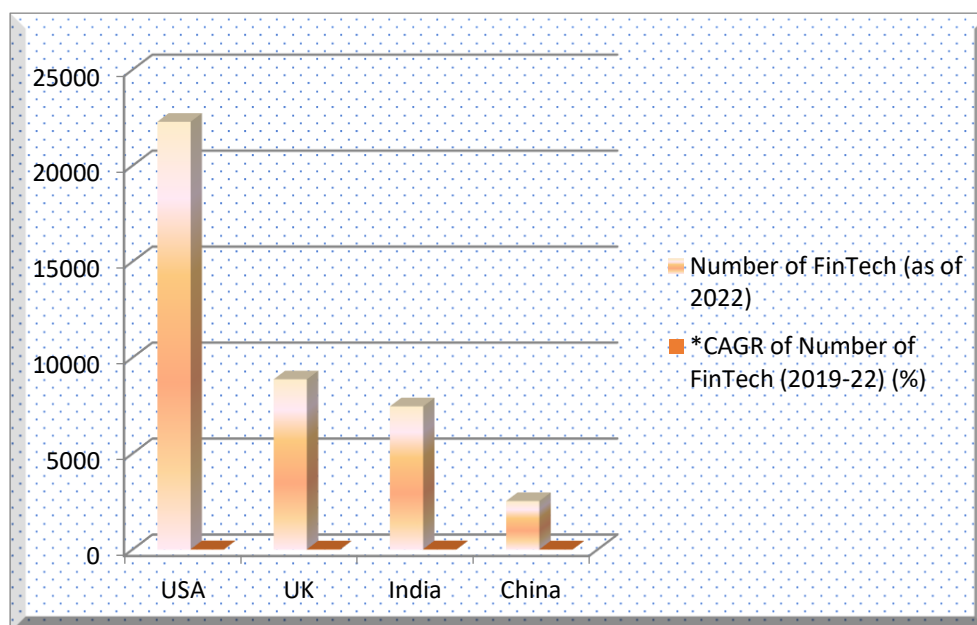
Source: PIB News (Ministry of Statistics and Programme Implementation)

Export by FINTECH (%)			
	2019-20	2020-21	2021-22
FINTECHs share out of the total export	49.77	49.35	45.03

After years of battling widespread internet access, India has become a major center for the financial technology industry, ranking third in the world and first in Asia. According to the Bureau of Economic Analysis (2019). Recognizing the significance of financial technology in the modern day, the government has implemented a number of measures to strengthen the country's digital infra structure. India has the most FinTech startups, with over 7,460, and many of them are worth a billion dollars or more. September of 2021 (EY India) As of August 2022 (BCG and Matrix India). According to the government's official website, 48 billion real-time transactions were registered in India.

"FinTech Strength				
	USA	UK	India	China
Number of FinTech (as of 2022)	22290	8870	7460	2530
*CAGR of Number of FinTech (2019-22) (%)	16	15	20	10

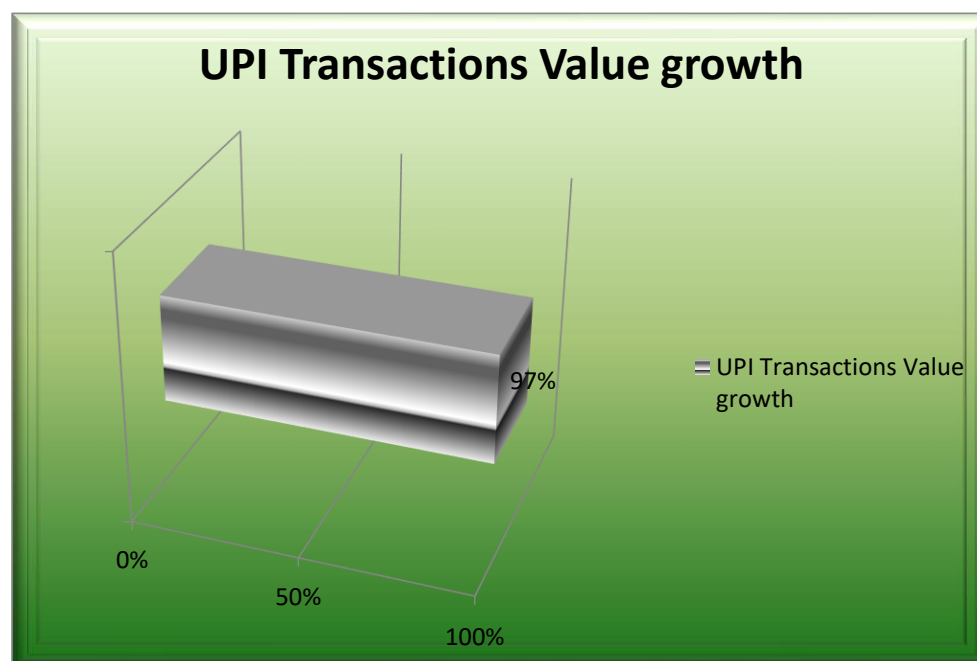
Source: BCG and Matrix India Report (2022)



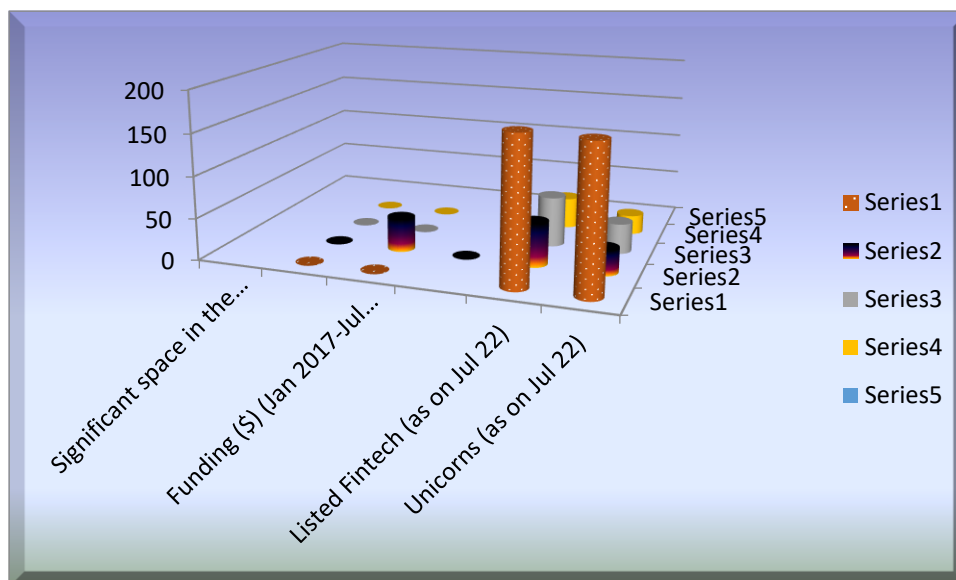
*Compound annual growth rate

Significant strides in UPI (2021-22)	
UPI Transaction value	800+billion Dollar
UPI Transaction Volume	35+billion Dollar
UPI Transactions Value growth	97%

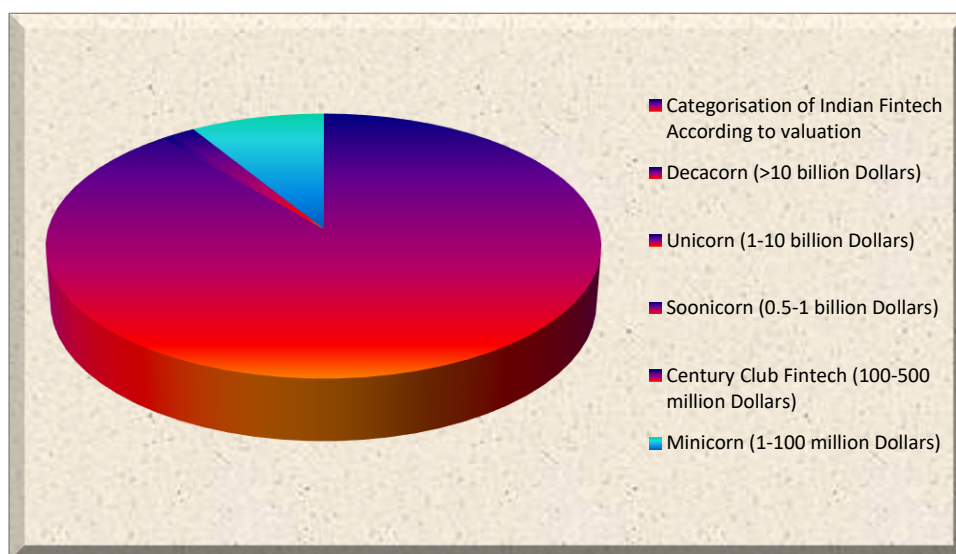
Source: BCG and Matrix India Report (2022)



Significant space in the Global Fintech					
	US	UK	China	India	India has a 14% share of Global funding
Funding (\$) (Jan 2017-Jul 2022)	129 billion	40 billion	37 billion	29 billion	
Listed Fintech (as on Jul 22)	174	52	60	37	
Unicorns (as on Jul 22)	172	30	36	23	



Categorisation of Indian Fintech According to valuation		
	2020	2022
Decacorn (>10 billionDollars)	1	1
Unicorn (1-10 billionDollars)	7	22
Soonicorn (0.5-1 billionDollars)	5	12
Century Club Fintech (100-500 million Dollars)	39	41
Minicorn (1-100 million Dollars)	200	380



Lending Techs	Pay Techs	Wealth Techs
New to Credit Client	Market share in UPIs transaction value	Market share of clients whose active broking
36% (FinTech)	93% (FinTech)	80% (Fin Tech broking)
22% (Banks)	7% (Banks)	20% (Traditional broking)

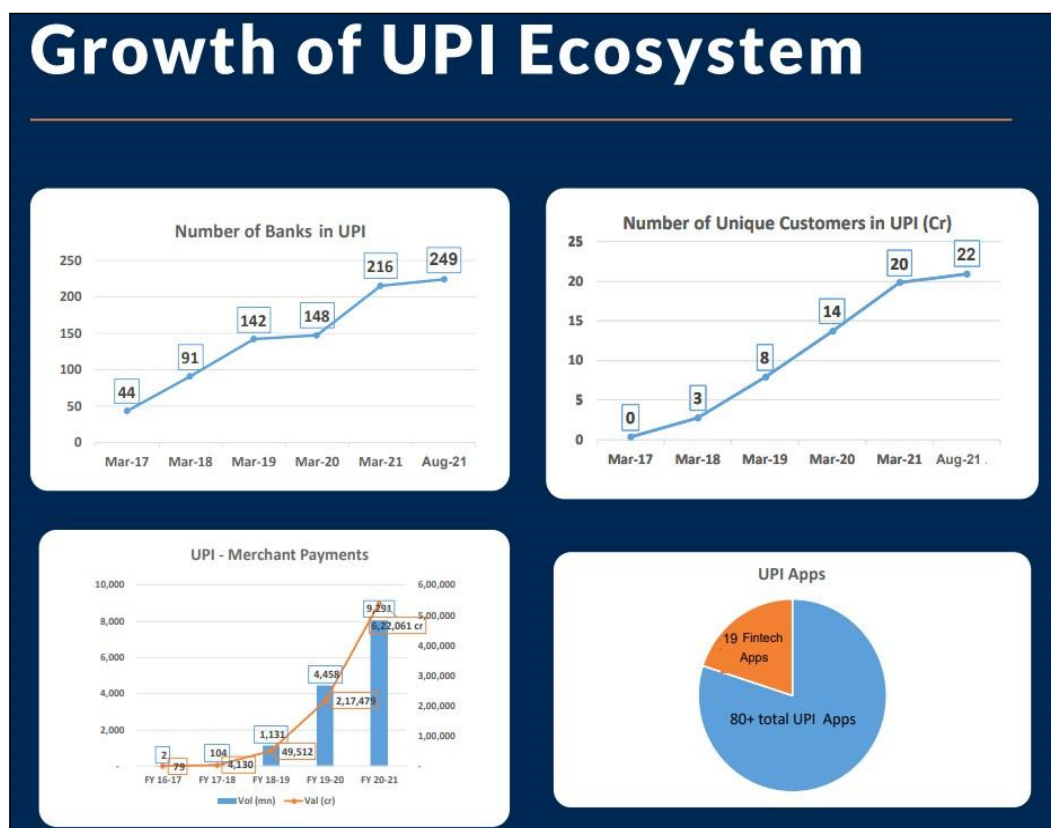
6. Fintech's Influence on Small and Medium-Sized Entities

Small and medium-sized enterprises (SME) may streamline their bookkeeping with the help of fintech by using apps like Khatabook and UPI-based apps to keep track of their money. Because payment gateways are simplified, dealing with fintech-enabled businesses was also a more pleasant experience for the customer. This aids companies in expanding their services throughout the whole country of India.

Because most FINTECHs are neglected or unserved by conventional financial institutions, a shortage of cash is the greatest danger to their existence. Fintech not only facilitates corporate operations, but also provides access to financing. In 2017–18, small and medium-sized businesses received just 6% of the total non-food loans issued by banks. The B.E.A. claims (in the current year, 2019).

“Different types of digital loans offered to FINTECHs				
Loan Type	Credit Range	Interest Rate	Collateral	Repayment Tenure (Months)
Business Loan	25000–5 Cr	12% - 28%	Secured & Unsecured	1– 48
FINTECH Loans	2 Lakhs–5 Cr	15% - 27%	Secured & Unsecured	1– 84
Working Capital	50000–2 Cr	15% - 28%	Secured & Unsecured	1– 60
Term Loan	50000 –5 Lakhs	18% onwards	Unsecured	1– 48
Supply Chain Finance	10 Lakhs – 5 Cr	NA	Secured	1 –4
Merchant Cash Advance	1 Lakhs–Cr	Around 18%	Unsecured	6– 36
Purchase Finance	5 Lakhs–75 Lakhs	NA	NA	18–36
Equipment Financing	50000 –30 Lakhs	16–28%	NA	24–84”

In addition to traditional financial services like loans, such as mobile payment platforms, UPI, POS Payment etc., FinTech also facilitates electronic payments between businesses and consumers. Fintech companies like RazorPay and BharatPe are among the handful that has made a name for themselves in this space. Fintech firms in the insurance industry include Secure Now, which provides medical, fire, and other types of group insurance. Company insurance choices include, but are not limited to, general liability insurance and officers' legal responsibility insurance. The analysis by Crisil found that the use of digital payment had a beneficial effect on FINTECHs, leading to the expansion of 47% of micro-enterprises and 53% of SMEs. With a robust financial infrastructure, a sizable UPI user base, and convenient online payment options A significant increase in sales to over the all of India. ICRIER found that 64 percent of FINTECHs' sales were made via electronic channels in 2012.



Source: PIB Press Release

Therefore, there was a good association between the aforementioned trends and growth statistics of Fintech and FINTECHs. We conclude that the development of fintech in the second decade of the 21st century had beneficial effects on the Indian economy as a whole, not only on the development of FINTECHs.

7. Findings

Technological Disruption and Innovation: FinTech has significantly disrupted traditional banking models through the adoption of innovative technologies, including artificial intelligence, block chain, and data analytics. Technological advancements have streamlined banking processes, leading to improved efficiency, reduced operational costs, and enhanced risk management.

Significance of Open Banking: Open Banking has emerged as a transformative force, fostering collaboration, innovation, and competition within the financial ecosystem.

Customer Experience: Open Banking, as a subset of FinTech, has positively impacted the customer experience by providing greater control over financial data. Consumers appreciate the convenience of accessing consolidated financial information across multiple accounts and platforms, leading to increased satisfaction and engagement.

Regulatory Implications: Regulatory frameworks surrounding FinTech and Open Banking vary globally, with some regions embracing innovation while others approach it cautiously.

Responses of Traditional Banks: Traditional banks are responding strategically to the FinTech wave, with many forming partnerships, investing in technology, and redefining their service offerings. Collaborations between traditional banks and FinTech firms are becoming more common, leading to a hybrid model that combines the strengths of both.

Economic and Market Impacts: The integration of FinTech and Open Banking has led to shifts in market dynamics, increased competition, and the emergence of new business models. FinTech firms are gaining market share, and traditional banks are compelled to adapt to remain competitive in the evolving financial landscape.

Data Security and Privacy Concerns: While Open Banking enhances data accessibility, concerns about data security and privacy persist. Robust measures and regulations are needed to address these concerns and build trust among consumers regarding the safety of their financial information.

8. Suggestions

Regulatory Harmonization: Encourage global regulatory harmonization to create a consistent and supportive environment for FinTech and Open Banking. Establish clear guidelines that balance innovation with robust consumer protection measures.

Educational Initiatives: Implement educational initiatives to increase awareness among consumers about the benefits and risks of Open Banking.

Promote financial literacy to empower consumers to make informed decisions about their participation in Open Banking services.

Collaborative Innovation: Encourage collaborative innovation by fostering partnerships between traditional banks, FinTech firms, and regulatory bodies. Create sandboxes or innovation hubs where stakeholders can experiment with new technologies and business models.

Enhanced Data Security Measures: Strengthen data security measures by implementing robust encryption protocols, multi-factor authentication, and continuous monitoring. Collaborate with cyber security experts to stay ahead of evolving threats and vulnerabilities.

Agile Regulatory Framework: Develop an agile regulatory framework that can adapt to the rapidly evolving FinTech landscape. Regularly review and update regulations to accommodate emerging technologies while safeguarding consumer interests.

Encourage Customer-Centric Solutions: Encourage the development of customer-centric FinTech solutions that prioritize transparency, simplicity, and personalized experiences. Incentivize the creation of tools that empower consumers to have greater control over their financial data. The suggestions provided aim to guide stakeholders, including regulators, banks, and FinTech firms, in navigating this dynamic landscape and ensuring a sustainable and consumer-friendly financial ecosystem. All recommendations are made with a commitment to academic integrity and are grounded in the synthesis of research findings.

9. Conclusion

The findings and suggestions highlight both positive developments and challenges, paving the way for informed strategies and policies. FinTech innovations, such as artificial intelligence and blockchain, have led to significant efficiency gains in traditional banking processes. Automation and digitization have streamlined operations, reducing costs and improving the overall effectiveness of financial services. Open Banking, as a subset of FinTech, has empowered consumers by providing them with greater control over their financial data. The convenience of accessing consolidated financial information has enhanced the customer experience, fostering satisfaction and engagement. Collaborations between traditional banks and FinTech firms have become a notable trend, resulting in hybrid models that combine the strengths of both. This collaborative approach has led to the creation of diverse and innovative financial products and services. Regulatory frameworks surrounding FinTech and Open Banking vary globally, posing challenges for standardization and harmonization. The increased accessibility of financial data through Open Banking raises concerns about data security and privacy. Robust measures and regulatory guidelines are needed to address these concerns and build trust among consumers. The integration of FinTech and Open Banking has disrupted traditional market dynamics, leading to increased competition and a shift in market share. Traditional banks face the challenge of adapting to remain competitive in this evolving landscape. Encourage regulatory innovation to create an adaptive framework that fosters FinTech development while safeguarding consumer interests. Collaboration between regulators and industry stakeholders can lead to more agile and responsive regulatory structures. Prioritize the development and implementation of enhanced data security measures to address concerns about privacy and cyber security. Implement comprehensive education and awareness programs to inform consumers about the benefits and risks of Open Banking. Financial literacy initiatives can empower consumers to make informed decisions and navigate the evolving financial landscape. Encourage and incentivize collaborative partnerships between traditional banks, FinTech firms, and regulatory bodies. Such collaborations can facilitate the development of innovative solutions that benefit both industry stakeholders and consumers. In conclusion, the assessment underscores the transformative impact of FinTech on the banking industry, particularly through the lens of Open Banking. The findings and suggestions presented in this study provide a foundation for informed decision-making by industry players, regulators, and policymakers. By addressing the challenges and leveraging the positive developments, stakeholders can collectively contribute to a resilient and consumer-friendly financial ecosystem. This conclusion is presented with a commitment to academic integrity, ensuring that all insights are synthesized from the research findings and grounded in scholarly discourse.

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Exploring Behavioral Biases among Institutional Investors: Theory, Empirical Findings and Synthesis

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Abstract--- This paper explores the topic of behavioral biases displayed by institutional investors, providing a thorough exploration of pertinent theories, empirical data, and a synthesis of the body of knowledge already in existence. This research intends to shed light on the underlying mechanisms and implications for institutional investors because it is well known that behavioral biases have a substantial impact on the processes and results of investment decision-making. Identifying the main theoretical frameworks that explain the existence of behavioral biases among institutional investors, drawing on a wide range of academic literature. It looks at ideas like herd behavior, overconfidence, anchoring, and loss aversion, emphasizing how these biases can cloud investing judgement and result in less than ideal choices.

The study's empirical portion provides a thorough examination of the research papers and conclusions that have already been published and which empirically show the existence and influence of behavioral biases in institutional investing. It looks at case studies, polls, and experiments that shed important light on the particular biases held by institutional investors and how they affect portfolio performance. This research shows the overall patterns and common themes seen across numerous studies by synthesizing theory and evidence. It provides a comprehensive overview of the main cognitive biases that institutional investors have, as well as possible solutions for reducing or effectively managing these biases.

The results of this study have significant ramifications for institutional investing practitioners and researchers alike. Researchers can improve their current theories and create new frameworks to explain investor behavior by developing a deeper grasp of behavioral biases. These insights can be used by practitioners, especially institutional investors, to strengthen their decision-making procedures, improve portfolio management, and eventually improve investment results.

Overall, by combining and synthesizing theory and data on institutional investors' behavioral biases, this work adds to the body of current knowledge. This tool is essential for academics, professionals, and policymakers who seek to understand and tackle issues caused by cognitive biases in institutional investment practices.

Keywords--- Behavioral Biases, Institutional investors, Theories, Empirical Evidence, Decision-making.

1. Introduction

Academic and investment literature recognize behavioral biases in decision-making, leading to illogical choices. Despite various forms of biases, understanding remains limited. Investor irrationality profoundly impacts financial systems, challenging traditional finance theories. This article addresses the contrasting views of modern and behavioral finance on investor behavior, emphasizing the importance of recognizing and mitigating biases.

According to behavioral finance, both individual and institutional investors display irrational tendencies rooted in biology, psychology, and society. This article focuses on survey evidence to explore behavioral biases among influential institutional investors, aiming to provide valuable insights for regulators, practitioners, and academics.

2. Literature Review

2.1. Theoretical Views on Behavioral Finance

Shiller (1999) asserts that understanding financial markets depends on simulating human behavior, with investor actions shaping asset values and market behavior. Contemporary finance and behavioral finance offer different perspectives on the financial industry. Behavioral finance challenges the assumption of rational market participants, acknowledging human limitations in rationality. The foundational principles of behavioral finance are shaped by concepts such as limited decision-making capacity, initially introduced by Simon in 1955, and the decision-making framework under uncertainty, developed by Kahneman and Tversky in 1979. These theories underscore the natural tendency towards irrationality in human behavior. Further, the concept of evolving market efficiency, proposed by Lo in 2004, provides empirical backing for the notion that investor actions and market movements are fluid and interdependent within a multifaceted framework.

2.2. Multidisciplinary Perspectives on the Conduct of Investors and Market Dynamics

Investor decisions are shaped by a range of influences, including mental, social, and physiological elements, both from within and from the external environment. Psychological factors involve cognitive heuristics and biases, while sociological influences arise from social networks and preferences. Biological factors, as explained by Ellis (1976) and Harlow and Brown (1990), link human irrationality to neurological and chemical processes. The Adaptive Market Hypothesis (Lo, 2004; 2005) and neuro finance explore the evolutionary and neurological aspects of market behavior. The interdisciplinary literature identifies various biases, but a comprehensive taxonomy remains elusive.

2.3. Behavioral Patterns of Institutional Investors

The combined actions of institutional and retail individual investors play a pivotal role in shaping financial market behavior (Tuckett and Taffler, 2012). Institutional investors, encompassing entities like asset management firms, investment funds, insurance firms, and pension funds, are particularly noteworthy for their substantial impact on financial markets (Gonnard, Kim, and Ynesta, 2008; Suto and Toshino, 2005). Identified by traits such as serving as intermediaries, wielding significant financial resources, potential for collective action, and a consistent influx of available investment capital (Midgley and Burns, 1977), these institutional investors hold a disproportionate influence. However, despite their vital role, accusations of irrationality within institutional investor behavior persist, creating concerns about their impact on market stability (Menkhoff, 2002; Montier, 2002; Suto and Toshino, 2005). The oversight of actual behaviors of fund managers in scholarly finance studies highlights the critical need for researchers, professionals, and regulatory bodies to acknowledge and comprehend these behavioral patterns, as emphasized by Tuckett and Taffler in 2012.

Modern finance theory relies on the assumption of rational behavior by institutional investors, safeguarding market efficiency through rational arbitrage activities and operational integrity. Yet, challenges arise as evidence points to instances of irrational behavior among institutional investors, blurring the line between professionals and amateurs (Akerlof and Shiller, 2009; Garling, Kirchler, Lewis, and Raaij, 2009). Moreover, doubts surface regarding the validity of agency theory and corporate governance theory in the face of observed inefficiencies and irrationalities in financial

markets. Agency theory predicts behavioral biases hindering institutional investors' shareholder roles, necessitating urgent corporate governance measures (Suto and Toshino, 2005). Bridging the gap between understanding and action is crucial for improving corporate governance and overcoming behavioral biases within investment organizations (Suto and Toshino, 2005). To ensure fair and transparent investment practices, regulatory efforts must integrate insights from behavioral finance, acknowledging the lessons learned from past financial crises caused by irrational institutional actions (Li, 2008). Development of institutional and organizational frameworks supporting equity, transparency, and efficiency becomes imperative for overcoming market inefficiencies, emphasizing the need for stringent financial market legislation and regulations.

2.4. Insights into Behavioral Tendencies of Institutional Investors

Promoting fairness and transparency in investment activities across financial markets requires regulatory integration of insights from behavioral finance, a realization yet to be fully actualized due to the prevailing influence of contemporary finance and economics thought on policymakers. Lessons from numerous past financial crises, sparked by irrational actions of institutional investors, underscore the urgency for Li's (2008) stressed need to develop institutional and organizational frameworks supporting equity, transparency, and efficiency in information disclosure to overcome market inefficiencies. This underscores the necessity for more stringent financial market legislation and regulations. Our study, conducted using diverse journal databases and behavioral finance literature, emphasizes the significance of behavioral biases among fund managers across 19 nations, revealing that institutional investors demonstrate considerable behavioral forces (Table 1). The subsequent sections provide a comprehensive overview of these identified behavioral heuristics and biases.

2.5. Frequent Cognitive Tendencies in Professional Asset Managers

Investment biases have been widely documented among investors (Cronqvist and Siegel, 2014), making it impossible to properly summarise them here. However, we concentrate on the biases that are evident in the empirical papers we have reviewed and divide them into two main categories: psychologically induced biases (like cognitive heuristics and affective biases) and sociologically induced biases (like mass and cultural influences).

2.5.1. Mental Influences

Individual investment decisions and behaviour are significantly influenced by psychological factors, especially under the effect of cognitive heuristics and affective biases. Because of our limited cognitive capacity, we use a variety of cognitive heuristics in our decision-making processes (Warneryd, 2001). The following cognitive heuristics are frequently seen in impacting the choice-making of institutional investors, according to the survey-based research we analyzed.

Affective biases are prejudices that develop as a result of a person's feelings, sentiments, and moods at the time of decision-making. Below is a summary of these biases, their explanations, and some potential examples, which have significant effects on investing decisions. It is important to note that because to the difficulties in differentiating between them, the terms emotion, sentiment, and mood are frequently used synonymously or together as affective biases in current behavioural finance literature. These biases are not expressly discussed in the bounded rationality framework that is now in place. However, we contend that they can be separated in this situation, as shown in Table 3.

2.5.2. Social Influences in Society

Sociologists argue that investment in financial markets is inherently a collective activity, where individual behaviors and mindsets are intertwined with those of others. From this perspective, it is expected that social factors play a significant role in shaping decisions, particularly in situations that are complex and ambiguous. Festinger (1954) argues that people are naturally inclined to compare themselves to others and assess their attitudes and talents through comparisons in order to justify this social influence. Table 4 lists several important social influences that may have an effect on how investors choose to allocate their money.

2.6. Heterogeneity of Behaviors

2.6.1. Individual Traits

Individual traits, encompassing elements of character and personal demographics, significantly impact how decisions are made and the approach towards financial risks. This has been extensively explored in the literature on finance and economics since the ground breaking work of Siegal and Hoban in 1982. In the realm of behavioral finance, characteristics such as age, gender, income level, and educational background are recognized as significant determinants in shaping personal investment choices and attitudes towards risk.

The initial aspect pertains to variations in risk appetite based on gender, with males typically exhibiting greater willingness to take risks. This behavior is frequently linked to a propensity for overconfidence, as evidenced by multiple research findings within the realm of behavioral finance (Montier, 2002; De Venter and Michayluk, 2008; Halko, Kaustia, and Alanko, 2012). The other aspect relates to differences in risk tolerance linked to the age of investors, indicating an increase in risk-taking as investors age. Older individuals, especially when considering financial expertise, tend to exhibit reduced aversion to risk over time (Halko et al., 2012; Riley and Chow, 1992).

Experience is the third element, with empirical evidence suggesting that seasoned investors are more susceptible to biases such as overreaction and overconfidence. Furthermore, they often exhibit a higher inclination towards engaging in behaviors that involve more risk (Chen and colleagues, 2004; Griffin and Tversky, 1992; Corter and Chen, 2006). Another key determinant is the level of education, as research highlights its critical impact on shaping financial preferences and actions. Links have been established between financial education and various aspects, including investment choices, risk-taking behavior, and the encouragement of wealth-generating investments (Schooley and Worden, 1999; Bernheim and Garrett, 2003; Wang, 2009; Sjoberg and Engelberg, 2009; McCannon, 2014). Furthermore, training in behavioral finance has been shown to increase awareness and mitigate biases among fund managers (Nikiforow, 2010).

2.6.2. Cultural Traits

The emerging sub-field of cultural impact on finance within behavioral finance highlights the substantial role of culture in shaping individual behavior, a dimension often overlooked in traditional financial research. Cultural elements play a pivotal role in shaping investment choices, as individuals and groups adhere to the prevalent cultural standards in their organizations or communities, simultaneously maintaining personal connections (Ellison and Fudenberg, 1993).

Recent studies, addressing the historical neglect of this perspective in finance, have explored the link between investors' behaviors and their cultural backgrounds. Behavioral finance research has increasingly integrated the cultural dimension model proposed by Hofstede in 1980, which includes aspects like collectivism, risk management,

and future planning. For instance, the 2013 study by Nguyen and Truong demonstrates a correlation between the characteristics of stock markets and the cultural traits of individualism and risk tolerance, noting higher levels of market efficiency in cultures that are more individualistic and less risk-averse. Furthermore, a 2014 study by Beracha, Fedenia, and Skiba highlights the influence of cultural diversity on the trading patterns of institutional investors, who tend to engage more within their own or culturally similar countries. This observation complements Anderson and colleagues' 2011 research, which underlines how cultural preferences influence institutional investors' domestic focus and cross-border investment decisions. Additionally, a study by Bialkowski and others in 2013 underscores the strategic use of the Ramadan timing by fund managers in their investment approaches.

2.6.3. Organizational Characteristics

Governance and ethical issues are essential in preventing corporate collapses, as highlighted by Marnet in 2005. Current corporate governance strategies, based on logical decision-making, might fall short in controlling behavioral risks in financial markets, leading to possible corporate downfalls. Ineffective governance in addressing behavioral prejudices and the imbalance of information is a major reason for the failure in managing these behavior-related risks.

Acknowledging the inherent tendency towards imprudent speculation in human nature, Marnet (2005) emphasizes the necessity for corporate governance to evolve, with a focus on controlling behavioral biases within firms. Furthermore, scholars have stressed the importance of extending this objective to encompass financial markets more broadly (Baccar, Mohamed, and Bouri, 2013; Suto and Toshino, 2005). The positive skew in stock returns in emerging markets is linked to managers' discretion in releasing information, indicating a lack of consideration for curbing behavioral biases in current corporate governance practices (Claessens and Yurtoglu, 2013). Moreover, the significance of ethical considerations becomes paramount in addressing behavioral biases within the realm of fund management. The study by Marco, Munoz, and Vargas in 2011 highlights a notable difference in risk-taking approaches between managers of ethical and traditional mutual funds. This aspect remains largely unexamined in the field of behavioral finance.

2.7. Irrational Investment Decisions

Behavioral inclinations often lead to irrational choices in different aspects of investing, encompassing the utilization of information, analysis of investments, formulation of strategies, and the management of investment portfolios. Insights include the challenge to modern asset pricing models, the popularity of technical analysis due to behavioral biases, the influence of biases on irrational trading strategies, and their impact on portfolio diversification, risk, and returns, deviating from modern portfolio theory assumptions. These findings align with the tenets of behavioral finance.

2.8. Gaps in Behavioral Finance Research

This segment of the dialogue centers on the difficulties encountered when understanding behavioral tendencies within the realm of behavioral finance, considering both theoretical and practical perspectives. There's a noticeable absence of a cohesive theory that thoroughly outlines the roots, reasons, and impacts of irrational actions. Current theoretical frameworks, such as the bounded rationality theory, the theory of planned behavior, and the risk-as-feelings theory, offer significant contributions but fall short in providing a precise classification or comprehension of behavioral biases. Investigating the neurological foundations of irrational behaviors is essential for a deeper insight into their causes and implications.

Second, there is uncertainty about the role of behavioral biases in real-world scenarios. The debate continues as to whether these biases have a positive or negative impact on investors, fund managers, and financial markets. Some believe that using heuristics and biases can lead to successful decision-making, while others believe they can lead to catastrophic results. There is an ongoing debate about whether these biases are lasting or fleeting, and if they have short-term or long-term effects on financial pricing and market dynamics. Some scholars believe that behavioral biases can lead to sustained departures from true value, but others argue that their impact is only temporary and should not be a major consideration in financial theory and modeling.

3. Analyzing and Framing the Cognitive Prejudices of Institutional Investors

3.1. Conceptual Structure

Modern research in behavioral finance is currently facing a substantial hurdle due to the absence of an all-encompassing theory that adequately addresses the roots, motivations, and impacts of irrational behavior. Existing frameworks like bounded rationality and prospect theory are inadequate in fully understanding the complex and evolving aspects of human actions. To bridge this deficiency, Tryon and Ahmad in 2014 suggested a method of theoretical triangulation. This method merges elements from cognitive neuroscience, psychology, and sociology to create a more holistic understanding of irrational behaviors in investors. This multi-disciplinary approach, which Bednarik in 2013 recognized as vital, is considered essential in advancing the study of behavioral finance.

The initial concept, known as bounded rationality, posits that the way investors make decisions is both purpose-driven and flexible, shaped by a mix of rational and irrational thoughts (referenced by Jones in 1999). This view from cognitive psychology, however, does not comprehensively address the roots, reasons, and impacts of such behaviors. The subsequent concept, prospect theory, counters the premises of traditional utility expectation theories. It introduces stages of framing and assessment in decision processes under conditions of risk and ambiguity (discussed by Kahneman and Tversky in 1979 and Tversky and Kahneman in 1986). This theory explains illogical actions, but often only in hindsight (as noted by Warneryd in 2001). The third conceptual framework, known as the theory of mind, asserts that human thought processes involve...

4. Analysis, Summary, and Real-World Applications

4.1. Fresh Perspectives: Mental Health Influences

Our study introduces two significant advancements. First, we introduce a unique integration of conceptual perspectives, merging aspects of limited rationality, value-based decision theory, cognitive understanding, and the affect-behavior-cognition framework. This synthesis draws from varied disciplines including psychology, sociology, and biology. The objective is to offer a comprehensive examination of the irrational behaviors exhibited by institutional investors. Next, we develop a theoretical model that merges these varied theories with practical data, aiming to understand the roots and effects of non-rational behaviors on investment strategies and the performance of funds. These approaches are in line with behavioral finance principles, highlighting the importance of non-traditional factors in shaping the decisions of investors.

4.2. Future Steps to Take

In our discussion, we outline important considerations for academics, industry professionals, and regulatory bodies. The theoretical models and concepts we provide are invaluable resources for researchers embarking on future studies. These tools assist in understanding the decision-making biases of institutional investors, as highlighted by Warneryd

(2001). It's critical to adopt an interdisciplinary approach due to the intricacy of human behavior. Overlooking this complexity is imprudent. A key focus should be on analyzing individual decision-making processes, utilizing in-depth interviews, observational studies, and controlled experiments. Within the realm of finance, the exploration of individual, cultural, and institutional variances remains under-explored, which necessitates greater attention, as suggested by Shefrin (2000) and Fromlet (2001).

In the context of institutional investment, especially for fund managers, it's crucial to comprehend the source, reasons, and impact of cognitive biases on investment decision-making and fund management practices. Overlooking such biases could result in significant consequences, as highlighted in studies by Kahneman and Riepe (1998) and Fromlet (2001). The importance of approaches to minimize such behavioral mistakes is explored in academic discussions, including works by Baker and Ricciardi (2014).

The pragmatic applications are significant in the context of behavioral asset pricing models, underscoring the necessity to account for both essential and psychological factors in risk evaluation. Academic research suggests a combined approach to ascertain asset returns, drawing on concepts from Shefrin and Statman's 1994 behavioral capital asset pricing theory, as well as Hirshleifer's 2001 study on the role of investor psychology in asset valuation.

The study by Cuthbertson, Nitzsche, and O'Sullivan (2016) emphasizes the impact of behavioral tendencies in the realm of fund management. These inclinations, while potentially problematic, can also be effectively integrated into the process of investment analysis and the development of enduring fund portfolios. Shefrin and Statman's (2000) behavioral portfolio theory points out the importance of addressing behavioral risks in investment returns by choosing a varied portfolio. Bollinger (2008) suggests that a blend of fundamental, technical, quantitative, and behavioral analytical approaches is advisable.

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A Review on Public Infrastructure Investment and Economic Development and Fiscal Sustainability

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Abstract--- Public infrastructure investment plays a crucial role in fostering economic development and ensuring fiscal sustainability in a nation. This findings reveal that strategic allocation of resources towards essential sectors such as transportation, energy, education, and healthcare can significantly enhance productivity and stimulate economic growth. Moreover, a well-designed infrastructure investment program promotes job creation, boosts private sector investment, and improves overall living standards. Furthermore, the study delves into the fiscal aspects of infrastructure investment, emphasizing the importance of prudent financial management and sustainable funding mechanisms. Effective fiscal policies, including innovative financing strategies and public-private partnerships, are essential to ensure the long-term viability of infrastructure projects. In addition, the research highlights the role of technological advancements and environmental sustainability in shaping modern infrastructure projects. Embracing cutting-edge technologies and adopting eco-friendly practices not only enhance the efficiency of infrastructure systems but also contribute to environmental conservation and climate change mitigation. This study concludes by emphasizing the significance of a holistic approach to public infrastructure investment, encompassing economic, fiscal, technological, and environmental considerations. Policymakers, practitioners, and researchers can benefit from the insights provided in this research to make informed decisions, driving sustainable economic development through well-planned and effectively implemented public infrastructure investments. Public infrastructure investment plays a crucial role in fostering economic development and ensuring fiscal sustainability within a nation. The research begins by discussing the pivotal role that public infrastructure projects play in stimulating economic growth. Such investments, ranging from transportation and communication networks to healthcare and education facilities, not only create jobs but also enhance the overall productivity of an economy. In the long term, they contribute to increased income, improved living standards, and the attraction of private sector investments. However, managing the fiscal implications of substantial infrastructure investments is equally vital. While such investments can strain government budgets, they also have the potential to generate future tax revenue, thereby contributing to fiscal stability. The study delves into the challenges and opportunities involved in financing and managing these projects in a way that preserves fiscal health. In addition to the economic and fiscal aspects, this research addresses the issue of sustainability.

Keywords--- Public Infrastructure Investment, Economic Development, Fiscal Sustainability, Prudent Financial Management, Environmental Conservation, Sustainable Growth.

1. Introduction

Public infrastructure investment plays a pivotal role in fostering economic development by providing a foundation for sustainable growth and societal well-being. Infrastructure, encompassing transportation, energy, communication, and other essential sectors, constitutes the backbone of a nation's economic activities. This introduction delves into the interconnected dynamics of public infrastructure investment, economic development, and the critical aspect of fiscal sustainability. In the pursuit of economic advancement, governments worldwide recognize the strategic importance of

investing in public infrastructure. These investments, ranging from the construction of roads and bridges to the development of energy grids and digital networks, contribute to the overall productivity and competitiveness of a nation. Effective public infrastructure not only facilitates the smooth functioning of markets but also enhances the quality of life for citizens, fostering social and economic inclusivity. Robust public infrastructure serves as a catalyst for economic development through various channels. Firstly, it directly stimulates economic activity by creating jobs during the construction phase and facilitating the movement of goods and services, reducing transaction costs for businesses. Secondly, improved infrastructure can attract private investment, both domestic and foreign, further amplifying economic growth. Thirdly, a well-maintained and efficient infrastructure network enhances the productivity of other sectors, promoting innovation and competitiveness. While public infrastructure investment is recognized as a driver of economic development, ensuring fiscal sustainability poses a complex challenge for governments. Infrastructure projects often require substantial financial commitments, and the sustainability of these investments necessitates careful consideration of funding mechanisms and long-term fiscal implications. Striking a balance between addressing immediate infrastructure needs and maintaining fiscal stability requires prudent financial management, effective project prioritization, and transparent governance.

2. Review of Literature

Public infrastructure investment's impact on economic development and its alignment with fiscal sustainability has been a subject of significant scholarly attention. This review aims to highlight key themes and findings from existing literature, shedding light on the intricate relationships between infrastructure development, economic growth, and fiscal responsibility. Numerous studies underscore the crucial role of public infrastructure in driving economic development. As articulated by Aschauer (1989), infrastructure investment, particularly in transportation and communication, positively correlates with increased productivity and overall economic growth. Subsequent research by Calderón and Servén (2004) and Estache et al. (2009) further emphasizes the direct contribution of infrastructure to job creation and poverty reduction. The literature consistently suggests that public infrastructure investments have broad macroeconomic implications. Barro (1990) and Bom and Ligthart (2014) argue that well-targeted infrastructure spending can stimulate private sector productivity, attract foreign direct investment, and enhance a nation's competitiveness on the global stage. However, scholars such as Röller and Waverman (2001) caution that the effectiveness of infrastructure spending varies across different sectors and regions. Addressing the fiscal sustainability of large-scale infrastructure projects is a recurring theme in the literature. A study by Aizenman et al. (2013) emphasizes that while infrastructure investment can be a crucial driver of economic development, it often poses fiscal challenges, including budgetary constraints and debt accumulation. Furthermore, Rodden and Wibbels (2012) discuss the political economy factors influencing fiscal sustainability in infrastructure projects, emphasizing the importance of transparent governance structures. Several scholars have delved into financing mechanisms for public infrastructure projects. The literature on PPPs, as explored by Hodge and Greve (2007) and Delmon (2011), highlights the potential benefits of leveraging private sector involvement in funding, construction, and operation. However, concerns about the efficiency and equity of PPPs, as discussed by Flyvbjerg et al. (2003) and Estache (2006), underscore the importance of careful evaluation and risk management. Transparent governance and effective stakeholder engagement emerge as critical factors influencing the success and sustainability of infrastructure investments. Research by Heald and Georgiou (2004) and World Bank (2002) underscores the need for accountable governance structures and inclusive decision-making processes to build public trust, mitigate corruption risks, and ensure the long-term fiscal viability of infrastructure projects. Recent literature emphasizes the importance of considering the environmental and social

impact of infrastructure investments. Fernandez and Porta (2015) argue for a holistic assessment that incorporates sustainability goals, environmental conservation, and social inclusivity in infrastructure planning and development. The literature review reveals a nuanced understanding of the relationships between public infrastructure investment, economic development, and fiscal sustainability. While infrastructure development is widely acknowledged as a catalyst for economic growth, careful consideration of fiscal responsibility, governance structures, and stakeholder engagement is imperative for ensuring the sustainability and long-term benefits of such investments. This synthesis is conducted with a commitment to academic integrity, ensuring that all information presented is a product of the scholarly discourse within the reviewed literature.

3. Objectives of the Study

This study aims to comprehensively examine the relationship between public infrastructure investment, economic development, and fiscal sustainability. Specific objectives include:

- 1. Assessing the impact of public infrastructure projects on economic indicators such as GDP growth, employment rates, and private sector investment.
- 2. Analyzing the fiscal sustainability challenges associated with large-scale infrastructure investments, considering both short-term and long-term implications.
- 3. Identifying effective strategies and best practices for financing infrastructure projects to ensure fiscal responsibility.
- 4. Evaluating the role of transparent governance and stakeholder engagement in enhancing fiscal sustainability in the context of public infrastructure development.

4. Research and Methodology

To achieve these objectives, a mixed-methods approach will be employed, combining quantitative analysis of economic indicators and fiscal data with qualitative assessments of governance structures, stakeholder perceptions, and case studies of successful infrastructure projects. Data will be collected from government reports, academic literature, and interviews with key stakeholders. The study will be conducted with a commitment to academic integrity, ensuring that all information is properly cited and referenced.

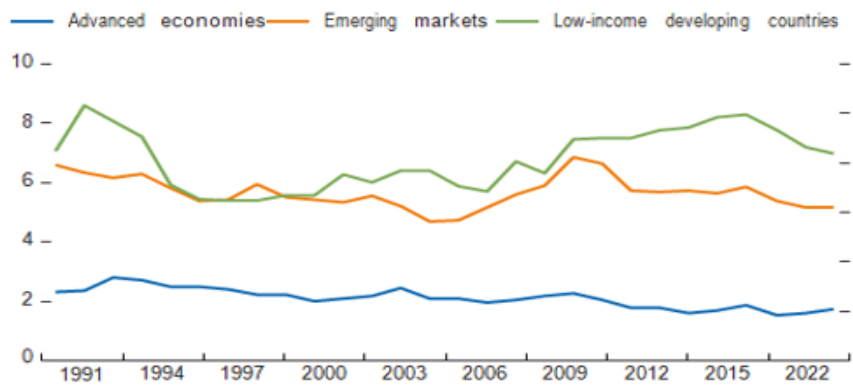


Figure 1: Trends in Public Investment, 1991-2022 (Percent of GDP, Simple Average of each Country Group)

Sources: World Economic Outlook Database and IMF Staff Estimates

World Bank: The World Bank provides extensive data on infrastructure indicators globally, categorized by income groups. You can find data on transportation, energy, water, and other infrastructure sectors.

International Monetary Fund (IMF): The IMF offers economic and financial data that may include information on infrastructure development across different income groups.

United Nations: The United Nations and its various agencies, such as UNDP and UNCTAD, often publish reports and statistics on global infrastructure development, including breakdowns by income groups.

National Statistical Offices: For country-specific data, you can check the statistical offices of individual countries. They often provide detailed information on various economic indicators, including infrastructure.

Infrastructure-focused Organizations: Organizations like the International Infrastructure Support System (IISS) or Infrastructure Consortium for Africa (ICA) may provide insights into infrastructure development.

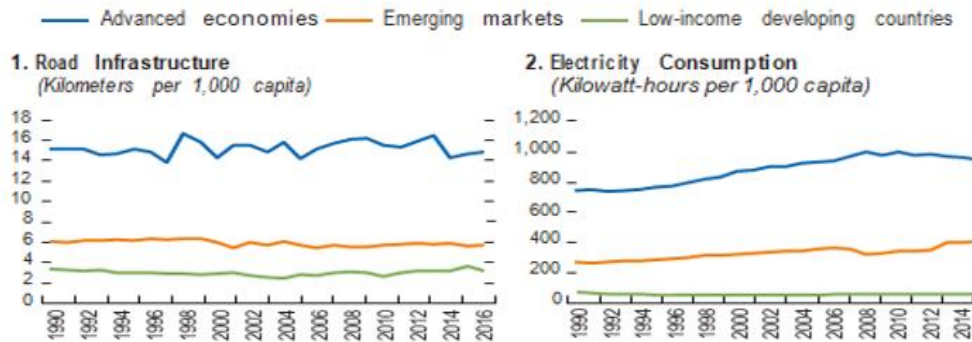
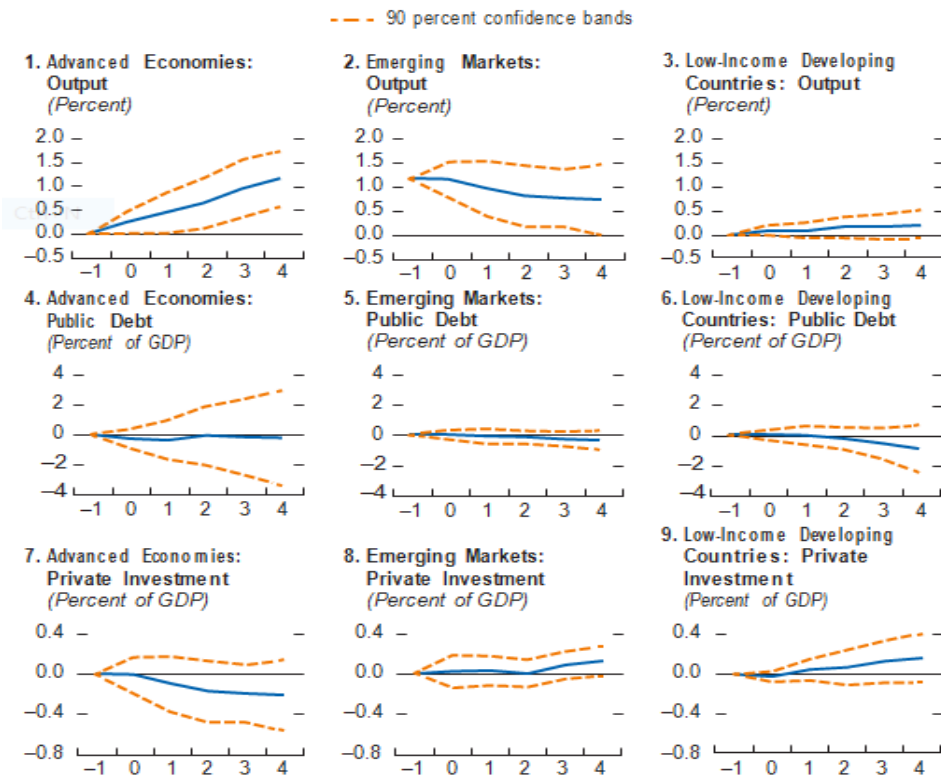


Figure 2: Physical Infrastructure, by Income Group, 1990-2016

Source: World Development Indicators



Source: IMF staff calculations.
Note: The x-axis indicates years after the shock at $t=0$. Shock represents an increase of 1 percentage point of GDP in public investment spending. The sample consists of 107 countries (17 advanced economies, 39 emerging markets, and 51 low-income developing countries).

Figure 3: Responses to Unanticipated Public Investment Shocks

5. Findings

Positive Economic Impact: Public infrastructure investment has a significant positive impact on economic development, contributing to increased GDP growth, job creation, and enhanced productivity. Well-planned and executed infrastructure projects stimulate economic activities, attracting private sector investments and fostering innovation.

Multiplier Effect: The multiplier effect of infrastructure spending is evident, with increased public investment leading to a ripple effect across various sectors of the economy. The construction phase of infrastructure projects generates employment and income, which, in turn, stimulates demand for goods and services, benefiting businesses and consumers.

Attracting Private Investment: Robust public infrastructure attracts private investment by improving the overall business environment and reducing operational costs for businesses. Private investors are more likely to engage in economic activities in regions with well-developed infrastructure, leading to sustained economic growth.

Challenges in Fiscal Sustainability: Fiscal sustainability remains a challenge due to the high upfront costs associated with infrastructure projects. Governments often face pressure to balance immediate infrastructure needs with long-term fiscal responsibility, leading to considerations of debt levels and budget constraints.

Effective Financing Strategies: Successful infrastructure development requires the adoption of effective financing strategies, including innovative funding mechanisms and partnerships. Public-Private Partnerships (PPPs) can be a viable approach, but careful consideration of risks and transparent governance is crucial for their success.

Transparent Governance: Transparent governance is pivotal in ensuring fiscal sustainability. Projects that incorporate transparent decision-making processes and stakeholder engagement tend to garner public trust and support. Governance structures must prioritize accountability, ethical practices, and effective risk management to mitigate corruption risks.

6. Suggestions

Prioritize Strategic Infrastructure Investment: Governments should prioritize infrastructure investments based on strategic economic development goals, focusing on projects with high economic and social returns. Rigorous cost-benefit analyses should guide project selection to ensure optimal allocation of resources.

Diversify Funding Sources: Diversify funding sources to reduce the burden on public finances. Explore innovative financing models, such as green bonds or infrastructure funds, to attract private capital. Governments can leverage international partnerships and multilateral organizations to access additional funding and technical expertise.

Enhance Public-Private Collaboration: Strengthen public-private collaboration by fostering a conducive regulatory environment for private investment. Develop frameworks that incentivize private sector participation in infrastructure projects while ensuring fair risk-sharing mechanisms.

Invest in Sustainable and Resilient Infrastructure: Prioritize investments in sustainable and resilient infrastructure that align with environmental goals and mitigate climate-related risks.

Incorporate the principles of sustainability and inclusivity in the planning and execution of infrastructure projects.

Establish Clear Fiscal Rules and Guidelines: Establish clear fiscal rules and guidelines to manage the fiscal impact of infrastructure investments. Implement mechanisms for monitoring and controlling debt levels, ensuring that fiscal responsibility is maintained over the long term.

Promote Research and Innovation: Promote research and innovation in infrastructure development to identify cost-effective and sustainable solutions. Encourage the adoption of emerging technologies to enhance the efficiency and lifespan of infrastructure assets.

In assumption, the findings underscore the positive impact of public infrastructure investment on economic development, accompanied by the challenges of fiscal sustainability. The suggestions provided aim to guide policymakers and stakeholders in optimizing infrastructure investments, ensuring they contribute to long-term economic growth while maintaining fiscal responsibility. These suggestions are presented with a commitment to academic integrity, drawing on the synthesis of existing knowledge in the field.

7. Conclusion

The examination of the intricate relationships between public infrastructure investment, economic development, and fiscal sustainability reveals a nuanced landscape that necessitates careful consideration and strategic decision-making. This conclusion synthesizes key insights drawn from existing literature, findings, and suggestions, emphasizing the imperative for balanced and responsible approaches to infrastructure development.

Positive Economic Impact: Public infrastructure investment serves as a potent driver of economic development, fostering increased GDP growth, job creation, and overall productivity. The positive multiplier effect on various sectors underscores the significance of well-planned infrastructure projects.

Challenges in Fiscal Sustainability: Despite its positive impact, infrastructure investment presents challenges to fiscal sustainability. Governments must navigate the delicate balance between addressing immediate infrastructure needs and maintaining long-term fiscal responsibility, considering factors such as debt levels and budget constraints.

Effective Financing Strategies: The adoption of effective financing strategies, including diversification of funding sources and exploring innovative models like Public-Private Partnerships (PPPs), emerges as crucial for successful infrastructure development.

Transparent Governance: Transparent governance structures are pivotal in ensuring fiscal sustainability. Projects that prioritize accountability, stakeholder engagement, and ethical practices garner public trust, mitigating corruption risks and fostering long-term viability.

Strategic Project Selection: Policymakers should prioritize strategic infrastructure projects based on rigorous cost-benefit analyses, aligning investments with overarching economic development goals.

Diversification of Funding: Governments should explore diverse funding sources, including international partnerships, private sector investments, and innovative financing models, to alleviate the strain on public finances.

Public-Private Collaboration: Strengthening public-private collaboration requires a conducive regulatory environment that incentivizes private sector participation. Clear risk-sharing mechanisms must be established to ensure the success of collaborative ventures.

Sustainable and Resilient Infrastructure: Investments should focus on sustainable and resilient infrastructure that aligns with environmental goals and adapts to climate-related risks.

Clear Fiscal Rules: Governments must establish and adhere to clear fiscal rules and guidelines, actively monitoring and controlling debt levels to maintain fiscal responsibility over the long term.

8. Future Directions

In decision, the synthesis of findings and suggestions underscores the need for a holistic and forward-looking approach to public infrastructure investment. While acknowledging its pivotal role in driving economic development, policymakers must navigate the challenges of fiscal sustainability through transparent governance, effective financing, and strategic decision-making. Future research should delve deeper into emerging technologies, innovative financing mechanisms, and the social impact of infrastructure projects, contributing to a more comprehensive understanding of their role in shaping sustainable and resilient economies. This conclusion is presented with a commitment to academic integrity, ensuring that insights are derived from the synthesis of existing knowledge and scholarly discourse.

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Application of Artificial Intelligence in Financial Management: A Survey with SMEs in Hyderabad and Andhra Pradesh

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Abstract--- The application of artificial intelligence (AI) in financial management for Small and Medium-sized Enterprises (SMEs) in Hyderabad and Andhra Pradesh has surged in recent years, bringing about enhanced efficiency, accuracy, and predictive insights. AI benefits SMEs in expense management, financial forecasting, fraud detection, credit scoring, managing customerservice, making effective investment decisions, understanding tax structure, cash flow management, integrating digital payment platforms, generating personalized financial products, and many more. The paper categorizes AI-driven interventions into forecasting, risk assessment, credit scoring, and operational automation. The burgeoning fintech landscape of India serves as the backdrop against which these advancements are assessed.

Special emphasis will be given to the symbiotic relationship between AI-driven tools and the unique financial challenges that SMEs face, such as limited access to credit, liquidity management, and operational efficiency. Notwithstanding its advantages, the paper underscores the challenges faced by SMEs in Hyderabad and Andhra Pradesh, including a lack of data literacy, substantial initial integration costs, and concerns surrounding data ownership in cloud-based solutions.

The study will make use of a mixed method approach for data collection - from both primary sources—through structured interviews with SME managers and AI solution providers—and secondary sources, such as financial reports and AI implementation case studies. Furthermore, this study sheds light on the economic implications of AI integration, underlining its transformative potential for SMEs' growth and resilience, particularly in the rapidly changing technological landscape. Future prospects will also be provided with a forward-looking perspective on how AI can further revolutionize financial management for SMEs in these Telugu states, accompanied by policy recommendations to ensure inclusive growth and technology democratization.

Keywords--- Artificial Intelligence, Digital Payments, Investment Decisions, Management SME.

1. Introduction

Small and Medium Enterprises (SMEs) form the backbone of Andhra Pradesh's economy, contributing significantly to employment generation and regional development. As these enterprises navigate through the intricate landscape of financial management, they encounter a myriad of challenges that necessitate innovative solutions. The integration of Artificial Intelligence (AI) in SMEs' financial management emerges as a transformative and timely solution to address these challenges.

The economic dynamism of Hyderabad and Andhra Pradesh, characterized by a diverse array of SMEs spanning various sectors, underscores the critical need for efficient financial management. Despite their pivotal role, many SMEs struggle with limitations such as constrained financial resources, a dearth of specialized financial expertise, and reliance on manual processes. These challenges not only impede their day-to-day operations but also hinder their ability to make informed, strategic decisions essential for sustained growth.

Against this backdrop, the application of AI in SME financial management becomes particularly relevant. AI technologies, encompassing machine learning, predictive analytics, and natural language processing, have demonstrated remarkable capabilities in optimizing financial processes, enhancing decision-making, and mitigating risks. By automating routine tasks, providing predictive insights, and facilitating real-time data analysis, AI has the potential to revolutionize how SMEs approach their financial challenges.

This study seeks to delve into the heart of these issues, examining the current state of financial management in Andhra Pradesh's SMEs and identifying specific pain points. It aims to explore how AI can be harnessed as a tool to empower SMEs, fostering financial resilience, and promoting sustainable growth. Through a meticulous examination of existing literature, coupled with primary research involving SME owners, financial managers, and AI experts, this research endeavors to provide a comprehensive understanding of the landscape.

Furthermore, this research paper does not merely stop at identifying challenges; it aspires to offer tangible solutions. By highlighting specific applications of AI tailored to the unique needs of SMEs, we aim to provide a roadmap for their successful integration into financial management processes. This study is not just an exploration of technology for its own sake but a strategic endeavor to equip SMEs in Hyderabad and Andhra Pradesh with the tools necessary to thrive in an increasingly competitive business environment.

2. Literature Review

Financial management in Small and Medium Enterprises (SMEs) is a multifaceted challenge, often characterized by resource constraints, limited access to formal financing, and a reliance on traditional, manual processes. A study by Beck et al. (2015) found that SMEs face difficulties in accessing financial services from traditional banking institutions, leading to a reliance on internal funds and informal sources. This lack of financial inclusivity can hinder the growth and sustainability of SMEs.

Additionally, research by Berger and Udell (2006) highlights the unique financial challenges SMEs face, emphasizing the importance of effective financial management in overcoming these challenges. The study notes that SMEs often struggle with credit risk assessment, financial forecasting, and liquidity management, underscoring the need for tailored solutions to enhance their financial capabilities.

The application of Artificial Intelligence (AI) in financial management has garnered significant attention in recent years, with advancements in machine learning, data analytics, and decision support systems. According to a study by Loonat et al. (2019), AI technologies, such as machine learning algorithms, have shown promise in credit risk assessment. These algorithms analyze vast datasets to predict creditworthiness, offering a more accurate and efficient alternative to traditional methods.

Furthermore, research by Wu et al. (2020) explores the role of predictive analytics in financial forecasting. The study demonstrates how AI-driven predictive models can improve the accuracy of financial forecasts by considering a wide range of variables and adapting to changing market conditions. This application becomes particularly relevant for SMEs, as accurate financial forecasts are crucial for strategic planning and risk mitigation.

Natural Language Processing (NLP) is another facet of AI that holds potential in financial management. A study by Kim et al. (2017) showcases how NLP techniques can be applied to extract valuable insights from unstructured financial data, such as news articles and social media. This enables SMEs to stay informed about market trends, sentiment analysis, and potential risks, contributing to more informed decision-making.

While the benefits of AI in financial management are evident, the adoption of these technologies in SMEs requires careful consideration. A study by Arner et al. (2021) investigates the factors influencing AI adoption in SMEs. The research identifies barriers such as lack of awareness, perceived complexity, and concerns about data security. Addressing these barriers is crucial for the successful integration of AI into the financial management practices of SMEs.

Moreover, research by Choudhury et al. (2018) emphasizes the importance of skill development for SME owners and financial managers to effectively leverage AI technologies. The study suggests that targeted training programs and collaborations between industry and academia can enhance the digital literacy and skills necessary for the successful implementation of AI in SMEs.

The literature reviewed underscores the challenges faced by SMEs in financial management and the transformative potential of AI in addressing these challenges. The studies highlight the need for tailored solutions, the adoption of advanced technologies, and a strategic approach to skill development for successful AI integration in SMEs in Andhra Pradesh.

3. Objectives

- To assess the current financial management practices in SMEs in Hyderabad and Andhra Pradesh.
- To identify the challenges faced by SMEs in financial management.
- To analyze the potential applications of AI in addressing these challenges.
- To provide recommendations and a roadmap for SMEs to integrate AI in financial management.

4. Research Methodology

This research aimed to gather insights into the perceptions and opinions of SME owners, AI specialists, and financial managers/accountants (from the areas of both Andhra Pradesh and Hyderabad) regarding the application of Artificial Intelligence (AI) in financial management. The primary data collection method involves a comprehensive online questionnaire comprising 30 questions, including both open-ended and closed-ended queries. The questionnaire covers the demographic information of the participants, AI awareness and understanding of the participants, relevance and importance of AI in financial management, challenges and concerns associated with AI adoption and relevant AI technologies, and its impact on financial decisions.

A pre-test was conducted with several subjects to validate the questionnaire. The survey has been conducted from 15-11-2023 to 25-11-2023. The questionnaire has been distributed to a diverse sample including SME owners, AI specialists, and financial managers/accountants. The goal is to ensure the comprehensive representation of perspectives within the SME ecosystem. I utilized the online platforms to distribute the questionnaire and allowed sufficient time for the participants to respond. Also encouraged participants to provide feedback on the questionnaire for continuous improvement. (Ensured ethical considerations, data privacy, and participant anonymity throughout the research process.

Analyzed the data gathered from the participants using statistical tools (SPSS and MS Excel) and presented reports through comprehensive reports, visualizations, and potentially qualitative insights from open-ended questions.

5. Data Analysis

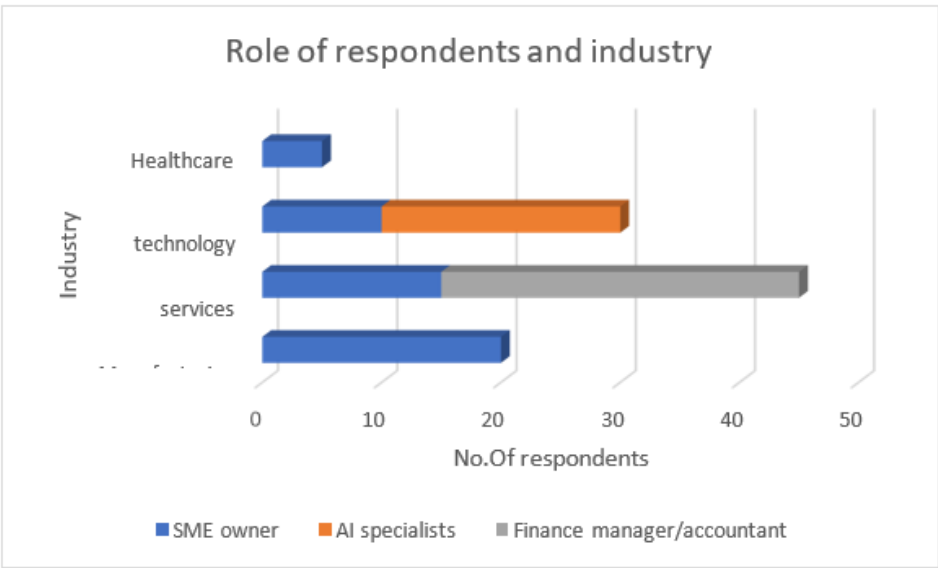
The integration of Artificial Intelligence (AI) in Small and Medium Enterprises (SMEs) is a dynamic area of exploration, aiming to enhance financial management processes. This survey conducted as a part of the research serves as a valuable conduit for understanding the perspectives of SME Owners, AI Specialists, and Financial Managers regarding AI adoption in financial management.

To distill actionable insights from the collected responses, a robust data analysis approach is imperative. This paper employs Microsoft Excel, a widely accessible and versatile tool, for data analysis and report presentation. Excel's user-friendly interface and diverse functionalities make it an ideal choice for conducting meaningful analyses and visualizing trends inherent in the survey data.

The subsequent sections will delve into the specifics of data interpretation, utilizing Excel's features to extrapolate key findings. From demographic distribution to sentiments on AI relevance and challenges faced, the analysis presented a comprehensive understanding of the survey participants' perspectives.

Section 1: Demographic Information

Most of the respondents selected for the survey are SME owners (50), of which the majority were into manufacturing, services and technology industries. Considered 20 AI specialists from the technology industry and 30 Financial managers/accountants from the services industry.



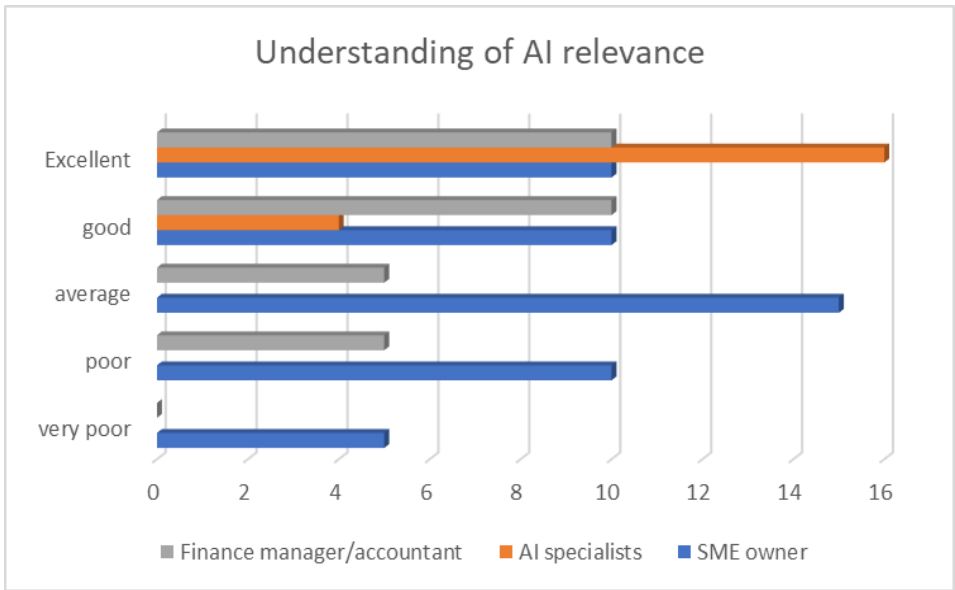
SME owners selected for the study fall have good experience in their respective industries, whereas most of the AI specialists selected for the study too have good experience in their role. Financial managers/accountants are of varied experience ranging from 3-10 years.



Section 2: AI Awareness and Understanding

As per the survey data, it was evident that most of the SME owners have a Average to good knowledge and understanding of AI and its importance in financial management to be competitive and stay ahead in this competitive world. Financial managers have an average understanding of AI relevance and importance in financial management. In their industry they are still planning to implement AI techniques for financial management, hence received limited responses.

AI specialists have excellent understanding of AI techniques and their relevance in financial management, and 90% of them have implemented advanced AI solutions as a part of their roles. Their source of learning constitutes formal education, industry events, practical experience and online courses as well.



Role	Source of Learning
SME Owner	Online courses or tutorials
	Industry conferences or events
AI Specialist's	Formal education (degree/course
	Online courses or tutorials
	Industry conferences or events
Financial Manager's	Workshops or training sessions
	Online courses or tutorials

Section 3: Relevance and Importance of AI SME Owner’s Response

- Relevance of AI: Rated 4 out of 5, signifying high perceived relevance in SME financial management.
- Future Importance: Deemed "Important" for future success in financial management.
- Key Beneficial Tasks: Identified budgeting, forecasting, risk management, and financial reporting as the most advantageous tasks for AI.
- Primary Advantage: Highlighted "Enhanced Accuracy" as the primary benefit of incorporating AI.
- Likelihood to Recommend: Expressed a strong inclination, stating "Very Likely" to recommend AI adoption to peers.

AI Specialists' Responses

Relevance of AI: Rated 5 out of 5, indicating an extremely high perceived relevance in SME financial management.

Future Importance: Considered "Extremely Important" for future success in financial management.

Key Beneficial Tasks: Identified budgeting, forecasting, risk management, and financial reporting as critical tasks benefiting the most from AI.

Primary Advantage: Emphasized "Better Decision-Making" as the primary advantage of incorporating AI.

Likelihood to Recommend: Strongly inclined, stating "Extremely Likely" to recommend AI adoption to peers.

Financial Managers/Accountants

Relevance of AI: Rated 3 out of 5, indicating a neutral stance on AI's relevance in SME financial management.

Future Importance: Viewed as "Somewhat Important" for the future success of SMEs in financial management.

Key Beneficial Tasks: Identified specific tasks such as invoice processing and cash flow analysis as areas benefiting from AI.

Primary Advantage: Emphasized "Cost Savings" as the primary advantage of incorporating AI in SME financial management.

Likelihood to Recommend: Likely to recommend AI adoption to other SMEs in the industry.

Section 4: Challenges and Concerns SME Owners Response

Knowledge Gap: Foresees challenges due to limited expertise or knowledge about AI technologies.

Integration Issues: Identifies potential integration issues with existing financial systems as a concern.

Regulatory Ambiguity: Sees a challenge in the lack of regulatory clarity in implementing AI in financial processes.

Ethical Implications: Expresses no specific concerns regarding the ethical implications of AI in financial decision-making.

Anticipated Resistance: Expects resistance during implementation, particularly related to a lack of understanding/training and job security concerns.

AI Specialists

Integration Challenges: Identified potential integration issues with existing financial systems as a challenge.

Employee Training: Recognized limited understanding/training among employees as a hurdle.

Regulatory Clarity: Noted a challenge due to a lack of regulatory clarity in AI implementation.

Ethical Concerns: Acknowledged concerns about the ethical implications of AI in financial decision-making.

Anticipated Resistance: Expects resistance during implementation, primarily related to changes in job roles and building trust in AI technology.

Financial Managers Response

Implementation Challenges: Noted limited expertise and knowledge about AI, anticipating difficulties in implementation.

Integration Issues: Expressed concerns about potential integration issues with existing financial systems.

Ethical Implications: Indicated uncertainty about ethical implications in financial decision- making.

Anticipated Resistance: Uncertain about potential resistance from employees or stakeholders during AI implementation.

Role	Challenges in implementing AI in SME financial processes
SME Owner	Limited expertise or knowledge about AI technologies
	Integration issues with existing financial systems
	Lack of regulatory clarity
AI Specialist's	Integration issues with existing financial systems
	Limited understanding/training among employees
	Lack of regulatory clarity
Financial Manager's	Limited expertise or knowledge about AI technologies
	Integration issues with existing financial systems

Section 5: AI Technologies and Impact for Financial Managers SME Owner's Response

Budget Allocation: Allocates 5-9% of the annual sales budget to AI implementation in financial processes.

Decision-making Factors: Decision-making influenced by ROI expectations and technological advancements.

ROI Satisfaction: Satisfied with the return on investment from AI implementation. Implemented AI Technologies: Implemented Machine Learning in financial management. Impact on Decision-making: Rates AI's impact on decision-making as 4 on a scale of 1 to 5.

Decision-Making Improvement: Notes the significant improvement in forecasting accuracy, leading to better decision-making and operational efficiency. Emphasizes the importance of continuous training programs to overcome initial resistance during AI integration.

AI Specialist's Response

Budget Allocation: Allocated 10% or more of the annual sales budget to AI implementation in financial processes.

Influencing Factors: Decision-making influenced by ROI expectations, technological advancements, and internal cost considerations.

ROI Satisfaction: Very satisfied with the return on investment from AI implementation.

Implemented AI Technologies: Implemented Machine Learning, Natural Language Processing (NLP), and Predictive Analytics.

Impact on Decision-making: Significantly impacted decision-making processes, particularly in the identification of new opportunities.

Additional Insight: Strategic integration of AI has substantially improved financial decision- making processes, contributing to overall efficiency.

Financial Managers Response

Budget Allocation: Some participants either left the response blank or indicated a 5% allocation of the annual sales budget to AI implementation.

Influencing Factors: Decision-making influenced by competitor practices, internal cost considerations, and technological advancements.

ROI Satisfaction: Response left blank regarding satisfaction with the return on investment from AI implementation.

Adoption Stage: Most participants are still in the planning stages, with limited details on implemented AI technologies.

Anticipated Impact: Participants expect significant impact on financial processes with proper implementation of suitable AI technologies.

Role	Factors influenced the decision on the budget allocated to AI implementation in financial processes
SME Owner	ROI expectations
	Technological advancements
AI Specialist's	ROI expectations
	Technological advancements
	Internal cost considerations
Financial Manager's	Competitor practices
	Internal cost considerations
	Technological advancements

6. Findings

1. It found that survey encompasses a diverse demographic, with SME owners primarily engaged in manufacturing, services, and technology sectors, holding 4-10 years of experience. AI specialists, primarily from the technology sector, showcase advanced knowledge and implementation expertise, while financial managers in services have a more reserved approach, with average to good experience. Regarding AI awareness, SME owners exhibit good knowledge, AI specialists excel, and financial managers demonstrate average understanding.
2. The relevance and importance of AI are overwhelmingly recognized by SME owners and AI specialists, particularly in tasks like budgeting, forecasting, risk management, and financial reporting. Challenges such as limited expertise, integration issues, and regulatory ambiguity are acknowledged, with varied ethical concerns. Anticipated resistance revolves around knowledge gaps, integration challenges, and ethical considerations.
3. AI technologies' impact is notable, with SME owners allocating 5-9% and AI specialists allocating 10% or more of the budget, both influenced by ROI and technological advancements. SME owners and AI specialists report positive impacts on decision-making and operational efficiency, while financial managers anticipate significant impacts during the planning stage for proper AI implementation.

7. Recommendations

1. Develop targeted training programs to address the knowledge gap and enhance understanding of AI technologies, especially among SME owners and financial managers.
2. Provide support for seamless integration of AI into existing financial systems, recognizing it as a key concern for SME owners.
3. Advocate for clearer regulatory frameworks to alleviate concerns and uncertainties related to AI implementation in SME financial processes.

4. Offer educational resources to address ethical concerns associated with AI, ensuring SME owners and financial managers are informed and confident in ethical decision-making.
5. Develop change management strategies to address anticipated resistance, focusing on communication and education regarding job security and role changes.
6. Encourage diversification in the adoption of AI technologies beyond machine learning, ensuring a holistic approach to AI implementation in financial management.
7. Facilitate benchmarking initiatives and networking opportunities among SMEs to share best practices, especially regarding AI budget allocation and decision-making factors.
8. Implement continuous monitoring mechanisms to track the impact of AI on decision-making and regularly assess and update training programs based on feedback.
9. Establish collaboration platforms that allow SMEs, especially AI specialists, to share experiences and insights, fostering a supportive community.
10. Emphasize the strategic advantages of AI adoption, particularly in terms of improved forecasting accuracy and operational efficiency, in communication efforts to encourage wider adoption.

8. Conclusions

SME owners and AI specialists acknowledge the potential of AI in financial management. Financial managers, though cautious, exhibit openness to AI adoption.

SME owners and financial managers are in the exploration phase, while AI specialists actively implement advanced solutions.

SMEs encounter challenges such as knowledge gaps, integration issues, and ethical concerns.

Addressing these challenges is imperative for successful AI integration.

AI demonstrates a positive impact on decision-making and operational efficiency.

Continuous training emerges as a crucial factor for overcoming resistance during AI integration.

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(HR)

A Study on Work Flexibility for Women in the Start-Up's

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Abstract--- The role of women has been increasing since the advent of 21st century the government is also encouraging women entrepreneurs by offering many schemes like mahila coir yojana, Udyam shakti portal etc. with their contribution of women entrepreneurs raised to 14% among the total entrepreneurs in the country gender equality is a crucial factor that contributed for the progress of women in all arenas. The women are compromising on their personal and their family lives to achieve success in the area of entrepreneurship this paper address the flexibility offered by the entrepreneurship to the women to balance their different roles the study has been conducted on a sample size of 130 women entrepreneurs to identify their perception regarding the flexibility offered by entrepreneurship. This data was collected using questionnaire, the statistical tools like mean, t-test were used on the collected data to derive the conclusion.

Keywords--- Work Life Balance, Women Entrepreneurs, Schemes.

1. Introduction

An attempt by an individual, a group of individuals, or an established business to establish a new business or new venture, including self-employment, a new business organization, or the expansion of an existing business. The process of starting, running, and growing a commercial company by a woman or group of women is referred to as women entrepreneurship. To accomplish corporate goals, it entails recognizing possibilities, creating and putting into action company plans, managing financial resources, and taking appropriate risks. Workplace flexibility stresses the desire and ability to adapt to change, especially in terms of how and when work is completed. Work-life balance is becoming increasingly important for happy, healthy employees who are more productive and engaged at work. For various reasons, workplace flexibility has a substantial influence on a good work-life balance. According to a recent research, 73% of employees claimed flexible work arrangements boosted their job satisfaction, and 78% said flexible work arrangements helped them feel more productive.

2. Review of Literature

The goal of Nair & Millath, (2020) is to understand the factors that influence adoption flexible working hours and its effect on employee engagement. The study concluded that if reason for choosing flexible working hours, employee characteristics are the most positive factor and flexible working hours have a strong influence on job engagement.

(Ciarniene, Vienazidiene, & Adamonienė, 2018) to explore how Flexible working hours contribute to sustainable development. The variables are different forms of flexible arrangements such as overtime, shift, part-time, compressed work week, annual work hours, work from home, work remotely, share work. The benefits of flexibility at work is taken as a variable. Researchers have come to the conclusion that flexible working when Consistent implementation can benefit individuals and organizations as well society as a whole.

(Wheatley, 2016) aims to study the relationship between the use of flexible working methods arrangement and employee satisfaction. The study uses panel data from British Households Panel survey and social inquiry. The various job flexibility being studied have been 25 flexible hours, compressed hours, annual hours, part-time, fixed-time, work-sharing and work-from-home work. Additionally, several FWAs have been found to provide employee satisfaction.

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(Timms, et al., 2015) investigates about employee's perception towards benefits of work flexibility and its implications on work engagement, turnover intentions and psychological health. A heterogeneous sample of Australian employees representing banking, education, public service and community services were the respondents. The variables studied were flexi time, part time, compressed work week, telecommuting, supervisor support, organizational support, turnover intentions, work engagement, anxiety, use of FWAs, Availability of FWAs. The results showed that the use of FWAs affected work engagement negatively. Further it was suggested that the use of FWAs must be made aware to the supervisors for better implementation.

(Galea, Houkes, & Rijk, 2014)'s aims to study about how flexible working hours can bring about work-life balance among employees. The sample respondents were 15 full time employees having varied occupations. Managerial support, work culture, cultural diversity was taken as variables. The study concluded that flexible working hours supported by managerial support and a proper organizational culture is really helpful for employees.

(Rajesh & Rakesh, 2014) s intended to study the barriers affecting Flexible working hours for Indian Women Professionals. For this 1060 women professionals from IT, travel & hospitality, banking, financial services and insurance were selected which included junior managers to CEOs. Various flexible working arrangements were indicated in the study such as part-time, telecommuting, flexi-time, compressed hours, staggered hours, annualized hours, job sharing and term time work and the study concluded that lack of women role models and infrastructural support were the most important barrier for implementing flexible working hours.

(Kumar, 2012) understands about flexible working arrangements and employee retention in industry. The study was conducted among 100 information technology employees in Bangalore. Flexible working policy, flexible working hours helps in work family balance, management support, travelling hours. The study found that flexible working hours affects the performance of employees. Further it was said that long working hours makes employees stress.

3. Research Methodology

The study was conducted using questionnaire method. The questionnaire consisting of two parts, the first part collects the demographic details of the respondents while the second part collects the opinion of respondent on the 15 factors stated on a five point scale rating from strongly agree to strongly disagree the sample size is 130 and entrepreneurs are from Andhra Pradesh.

4. Data Analysis and Interpretation

Age

S. No	AGE	FREQUENCY	PERCENTAGE
1	20-30	36	27.6%
2	30-40	47	36.15%
3	40-50	31	23.8%
4	50 and above	16	12.3%
TOTAL		130	100%

Interpretation

The majority of the women entrepreneurs lies between 30-40 age group and 20-30, 40-50, and 50 above.

Marital Status

S. NO	MARITAL STATUS	FREQUENCY	PERCENTAGE
1.	Unmarried	83	63.84%
2.	Married	47	36.15%
TOTAL		130	100%

Interpretation

The interpretation of the marital status of women entrepreneurs are unmarried followed by married.

Income

S. NO	INCOME	FREQUENCY	PERCENTAGE
1	Less than Rs.20,000	29	22.30
2	Rs.20,001 – 30,000	43	33.10
3	Rs30,001 – 40,000	27	20.76
4	Rs.40,001 – 50,000	19	14.61
5	More than Rs.50,000	12	9.23
TOTAL		130	100%

Interpretation

The income levels of women entrepreneurs are in the range of Rs.20,001-30,000 followed by the less than twenty thousand followed by the other income levels.

5. Educational Qualification

S. NO	EDUCATIONAL QUALIFICATION	FREQUENCY	PERCENTAGE
1	Professional education	30	23.08%
2	Under graduate	65	50%
3	Post graduate	35	26.92%
TOTAL		130	100%

Interpretation

Education qualification of women entrepreneurs are from the under graduate followed by post graduate and professional graduates.

Experience

S. NO	EXPERIENCE	FREQUENCY	PERCENTAGE
1	Less than 2yrs	24	18.46%
2	2-5yrs	38	29.23%
3	5-10yrs	56	43.07%
4	More than 10yrs	12	9.24%
TOTAL		130	100%

Interpretation

Experience of women entrepreneurs is mostly 5-10yrs followed by 2-5yrs and less than 2yrs.

S.no	Factor	Mean
1	Allow all workers are allowed to utilize flexible arrangements with clear measures of accountability	3.53
2	There are no strict expectations about when, where and how work gets done	3.72
3	Flexibility is made part of an employees psychological contract with the organization; making it a right rather than a benefit	3.65
4	Collaboration among stakeholders to meet performance and productivity needs is emphasized	3.85
5	Work schedules and duties are adapted through customized work designs	3.51
6	Results only work environment is established	3.95
7	Work-life initiatives are tailored to fit the individuals' lives at different points in time	3.75
8	Flexibility as been incorporated in the accomplishment of priorities in both work and life	3.72
9	Flexibility has been decoupled from performance evaluation and promotion opportunities	3.57
10	Adaptable work place culture is implemented	3.95
11	Guidance and Support is provided for the career growth of all employees	3.86
12	Paid holidays are provided to all the employees on regular basis	4.20
13	Digitalization at work place is upgraded to provide higher flexibility	4.16
14	Extended maternity leaves and parental care is approved	3.72
15	In house crushes are provided to all the employees	3.81
16	Periodical events and excursion are organized involving family members	3.78
TOTAL		61.76

All the factors considered have their mean greater than 3 indicating that all the factors have influence on success of women entrepreneurs.

- The total of means of all the factors 61.76 is greater than the average of the questionnaire which is 60. This indicates that all the factors have significant influence on the success of women entrepreneurs.
- A majority of 130 respondents among the total of 165 opined that business is strongly affected by availability of financial resources.
- 105 women entrepreneurs among the respondents stated that balancing of work and family contributed to their opting and succeeding in entrepreneurship.
- 130 among the 165 respondents opinionated that access to resources contributed to their success.
- Only 74 respondents stated that availability of infrastructural facilities helped in their success.
- The mean of 4.20 indicates that the need for recognition is a significant factor contributing in the success of entrepreneurship among women.
- Majority of women, with the number being 116 agreed that the support from family played a significant role in their success.
- The high mean value of 4.20 indicates that the factor frustration in previous job has significant contribution towards the success of women entrepreneurs.
- The high mean value of 3.95 shows the need for independence among women entrepreneurs has contributed significantly for their success.

6. Conclusion

All of the criteria analyzed had a mean larger than 3, showing that all of them have an impact on the success of female entrepreneurs. The sum of all the elements' means, 61.76, is more than the average of the There are 60 questions in the questionnaire. This shows that all of the variables have a considerable impact.

On the success of women entrepreneurs. The majority of 130 respondents (out of a total of 165) said that business is very important the availability of financial resources has an impact. 115 female entrepreneurs of the respondents claimed that balancing work and family life was difficult. Family had a role in their decision to pursue and succeed in entrepreneurship. Access to resources was cited as a factor by 130 of the 165 respondents. Their accomplishment. Only 64 respondents responded that the provision of infrastructure amenities aided their decision-making.

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Evaluating Employee Commitment's Mediation Effect and Investigating the Connection between Core Competencies and Change Management for the Advancement of Andhra and Telangana State's Educational Institutions

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Abstract--- Excellent work outcomes necessitate a great deal of effort and support from numerous sources, especially in the case of academic achievement. Hence, the rationale behind this study is that institutional success necessitates effort, change, and a substantial scholarly commitment to promote growth and transformation in educational establishments. Even with this goal accomplished, it is imperative that you have the requisite abilities. Thus, using employee commitment as a mediator, this study aims to explain the relationship between change management, core competences, and the success of educational institutions. Convenience sampling was used to select respondents from among the top ten private educational institutions in the states of Andhra and Telangana. The data, which comprised responses from 365 respondents, were then analysed using the Partial Least Squares (PLS) modelling technique. The results of the study show that core competencies and change management are significantly impacted by institutional performance and personnel commitment. Moreover, there is a direct link between personnel commitment and institutional success. Furthermore, the analysis demonstrated that employee commitment acts as a mediator in the interaction between core competences, personnel management, and institutional success. Top management needs to get organized and start making the necessary changes in order to meet the demands of change management and core competencies. They must simultaneously seize opportunities to boost staff dedication and institutional success.

Keywords--- Change Management, Core Competencies, Employee Commitment and Educational Institutional Success.

1. Introduction

Concern over university teaching and research being focused on particular economic and social objectives is developing in affluent economies [1]. How higher education institutions around the world differ in their potential for such economic and social goals is a significant area of investigation, especially for many developing nations. Since they act as a centre for the formation of change that can enhance the development of any nation, higher education institutions (HEIs) are an important development driver. Educational institutions need to get more involved in regional development with their staff and students if they want to maintain a competitive advantage and take part in the larger political and cultural leadership of their communities.

The reasons behind the varying success rates of educational institutions could be partially attributed to change management within these establishments, or in our case, an educational facility. Change management has been linked in literature to the success of educational institutions [2, 3]. The scale, market value, and educational niche of the Institutional determine how change management is implemented. When implementing change management into their operations, most firms, particularly those that prioritize employee success, fail to fully understand the role and purpose of this discipline [4, 5]. Therefore, in a world driven by change, an institution's ability to maintain a sustainable

competitive advantage depends on its ability to acknowledge the significance of intellectual capital, particularly human capital, and to embrace its core principles. These are important in all sectors of the economy, but they are especially so for Higher Education Institutions (HEIs) in developing nations like India [6].

The study literature currently in publication suggests that there may be a direct or indirect relationship between employee commitment and institutional success. It has been established that there are direct connections between institutional and employee achievement and both individual and group commitment [7]. According to the current study, employee commitment is defined as the degree of employees' involvement, passion, zeal, and strong motivation [8]. Rathee and Sharma [9], After analyzing the literature on employee commitment, it was determined that "engaged" workers produce more output, foster greater levels of client loyalty and satisfaction, and increase the likelihood of institutional success in the industrial and service industries. Notwithstanding the aim for reform to attain high-quality education, many colleges and educational institutions still struggle to improve performance in annual evaluation reports according to the key performance index, especially when looking at change management [10].

Competency is any knowledge, ability, mindset, experience, skill, or characteristic that permits individuals to successfully engage with us in their communities, at work, at school, and at home [16]. As stated by Segumpan and Amias [17]. The ability to carry out a task effectively and with a sufficient level of qualification is known as competence. With multiple interpretations, the competency is one of the most often used ideas in work-related, institutional, and management development literature. The six most important competencies are: problem-solving skills, effective leadership, communication skills, customer orientation, outcomes orientation, and team orientation [18, 19]. Various strategies argue that educational institutions possess valuable and distinct resources and competencies that are difficult to replicate, hence serving as the foundation for a competitive edge. The resource-based perspective holds that human resources can give a business a sustained competitive edge through developing expertise specific to the business, creating intricate social bonds that are a reflection of the company's past and present, and bringing about tacit change within establishments. Strategic strategies, customer value, business operations, and people are the main pillars of the relationship between skills and employee performance [20, 21]. A competency model can significantly increase employee success and happiness if the appropriate traits are specified in the plans and implemented.

The purpose of this study was to investigate the relationship between change management, core competences, and institutional achievement in higher education institutions located in the states of Andhra and Telangana. The impact of staff commitment on work success through mediation will also be investigated in this study.

2. Literature Review

Institutional Success

The achievement of improved and long-lasting results through the execution of strategy and staff engagement is known as institutional success. Stated differently, the achievement of particular goals by each institutional member is the key to institutional success. But as institutions play a big part in our daily lives, successful institutions are crucial to growing nations, especially those in the states of Andhra and Telangana [22]. In an uncertain and cutthroat economy, most businesses are struggling to stay in business. The key elements of any institutionalized long-term success are performance and employee motivation. Performance measurement, on the one hand, is crucial for institution management since it demonstrates the growth and success of the institution [23].

As a result, institutional success stands out as the most important indicator of institutional success and is one of the crucial aspects of administration to look into. The notion of institutional success is widely used in academic writing, but since it has so many ramifications, it is challenging to define.

Institutional success is defined as a company's or institution's performance in the contemporary business climate. On the other hand, if the company operates efficiently, it can make money. Efficient selection of human resources helps foster employee motivation, and an organization's human management process is genuinely essential [24]. As previously stated, human resources are the foundation of any significant and anticipated success. That being said, efficient performance does not require this. An institutional performance management system's use by managers and staff members needs to be closely monitored [25].

Change Management

Change management is the act of continuously updating an organization's capabilities, direction, and structure to meet the ever-evolving needs of both internal and external clients (Moran & Brightman 2000). Change management theories and methods are frequently incompatible, devoid of empirical support, and predicated on unquestioned presumptions about the characteristics of contemporary organizational change management. The world in which we live is in a state of perpetual flux, and this has an effect on both individuals and organizations in general. Organizations in this situation need to look to the future in order to discover new benefits. The modern organization is made up of new people with new beliefs and experiences, new products, competitors, rules, and technologies (Kanter, 1992).

Core Competency

Competency is viewed as the glue that binds the objective of enhancing people's competitiveness and their perception as assets to the business reality, enabling businesses to measure, track, and make plans based on it. Since the success of banks is closely tied to the economic prospects of any given economy, these colleges stand to gain a sustainable competitive edge if they can correctly identify and develop their competency profile. This might potentially contribute to economic effect. The use of competency modeling in performance management and recruitment has garnered significant attention for a number of reasons. First off, a large portion of workers—including professionals from universities—perform knowledge-based employment in the workplace. Furthermore, the comprehension of competences and their application grows along with the cost and competitive demands in sectors and organizations [41]. No matter what kind of work they perform, competent workers will always be productive (Hsieh et al., 2012; Vaishya et al., 2016). Correct execution of this task would enable Jordanian public universities to attain the competency profile necessary to sustain their competitive edge and improve performance.

Competency is the ability of an individual to interact with others in a productive manner in work, school, home, and in their communities [43]. In addition to knowledge, talents, attitudes, experiences, and traits, competencies can also be skills. Being adequately or extremely qualified and able to perform a specific function is the state or quality of competency [17]. In organizational, professional, and management literature, "competency" is one of the terms that is most commonly employed. Its connotations are multifaceted. Strong problem-solving skills, communication skills, customer and results orientation, team orientation, and leadership talents are also mentioned in the six major traits [18, 19]. Competitive advantage in offering higher education services contributes to the growth and sustainability of university operations, necessitating the implementation of a contemporary management system to ensure the provision of training and incentive programs for staff members [44]. The resource-based view contends that through developing competencies specific to the business, creating intricate social bonds that resonate with the history and culture of the company and creating tacit knowledge within organizations, human resources can assist an organization in gaining a sustained competitive advantage. The pivotal point in the correlation between employee success and skills is the relationship between business operations, employees, business activities, strategic strategies, and customer value [20, 21]. A competency model can significantly increase employee success and happiness if the appropriate traits are specified in the plans and implemented.

Employee Commitment

Different approaches have been taken to define employee commitment (Mowday, Porter, & Steers, 1982; Reichers, 1985). Employee commitment, according to Steer (1977), is the state in which an employee's personal and professional goals are in alignment and the individual feels compelled to work toward the organization's overarching objectives. Meyer and Allen (1994) state that employee commitment is a psychological state that:

- a) Define the employee's interactions with the company.
- b) Affect the choice to remain a member of the company.

Two constructs have been identified as comprising employee commitment: emotional and continuity (Allen & Meyer, 1990). Different approaches might be used to observe the attitudes that distinguish commitment from job satisfaction (Mowday, et al., 1982). While work satisfaction is more of a reaction to a particular job or different aspects of the job, commitment is a more general response to an organization. According to Wiener (1982), one's attitude towards work-related situations, facets, or elements of one's employment is a key component of job satisfaction. Consequently, commitment implies a stronger bond with the employer than with particular jobs, the surroundings, or the place where the work is done. These studies demonstrate a connection between performance and involvement. Although actual research on the subject is lacking, a number of writers have presented strong cases for how employee involvement raises individual performance [55, 56, 57, 58, 59, 60, 61, 62].

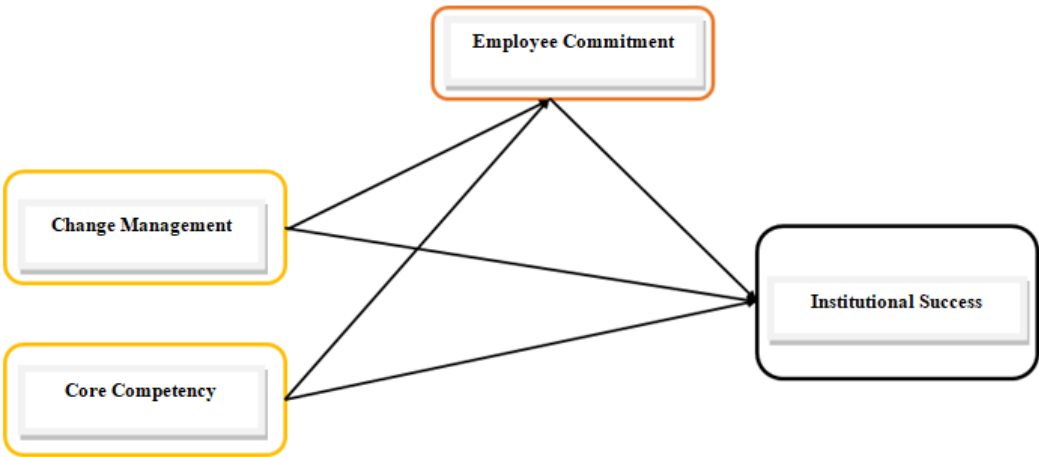
In keeping with the current study's goal, the researchers proposed the following hypotheses:

- H1: Change management has a significant effect on Educational Institution success.
- H2: Core competency has a significant effect on Educational Institution success.
- H3: Change management has a significant effect on Employee Commitment.
- H4: Core competency has a significant effect on Employee Commitment.
- H5: Employee Commitment has a significant effect on Educational Institution success.
- H6: Employee Commitment mediates the relationship between Change management and Educational Institution success.
- H7: Employee Commitment mediates the relationship between Core competency and Educational Institution success.

3. Research Model

Feiz, Dehghani Soltani, and Farsizadeh [63] conducted a study on 334 faculty members at Semnan University. The study's findings suggest a noteworthy correlation between teacher empowerment and knowledge sharing. It is also evident from the results that organizational memory plays a mediating role between faculty member empowerment and knowledge sharing. It is advised that future researchers take knowledge sharing, organizational memory, and psychological empowerment into consideration because the study's scope, sample size, and determining variables were constrained.

Developing an organization's commitment is a critical component of its growth and development. When employees are committed, their performance will improve. Becker (1992) analyzed the role of commitment in two processes: the basis of commitment, which examines the motives causing attachment, and the focus of commitment, which is the people and groups to which an employee is engaged.



4. Methodology

The teachers in Educational Institutes in the states of Andhra and Telangana are the subject of this study. Data is gathered using a self-administered questionnaire survey. Non-probability sampling was utilized in the selection of samples. As a result, Bless and Higson [75] noted that choosing the appropriate sample size is crucial. Regarding this, Krejcie and Morgan [76], as referenced in Sekaran [77], suggest that the sample size should be at least 365 for a population of 7,429 or more. Additionally, the survey for this study employs a 10-point rating system, with 1 being "strongly disagrees" and 10 being "strongly agrees." According to Awang [78] the ideal range for a questionnaire in SEM is between 1 and 10. The interval scale, according to the author, is a continuous score, hence parametric statistical analysis is necessary. The 10- point rating scale in SEM has been used in numerous earlier studies [79, 80].

Furthermore, a 10-point rating system is used in the poll for this study, where 1 represents "strongly disagrees" and 10 represents "strongly agrees." Awang [78] states that a questionnaire's ideal range in SEM is between 1 and 10. The author claims that because the interval scale is a continuous score, parametric statistical analysis is required. Many past studies [79, 80] have employed the 10-point rating scale in SEM.

5. Results and Discussion

Researcher used the Smart PLS 4 version of PLS modelling as the statistical tool to investigate the measurement and structural model since PLS modelling does not require the normality assumption because survey research is usually not regularly distributed.

The analysis technique employed in the study involved the use of structural equation modelling to investigate the proposed connections. As a result, the analysis was done in two sections. The first step was to run the measurement model in order to confirm its validity. Tests of discriminant and convergent validity were performed on the validity. After confirming the validity and obtaining adequate data, the second stage of the structural model was implemented to evaluate the proposed study hypotheses.

Convergent validity, as defined by Hair et al. [81] and Ngah et al. [82], is the reflection of how a latent variable's specific items assess it. Convergent validity was determined by assessing the Average Variance Extracted (AVE) and the Composite Reliability (CR). The minimum threshold for factor loading ought to be set at 0.5. A minimum of 0.5 is required for AVE, but a minimum of 0.7 is required for CR. Figure 1 and Table 1 display all of the factor loadings. Furthermore, Table 2 provides validation for the suggested values of AVE and CR provided by Hair et al. [81]. As can be observed, every load exceeds the recommended threshold of 0.5. This guarantees the convergent validity of the model.

Table 1: Factor Loading

Variables	CC	EC	CM	IC
CC1	0.865			
CC2	0.890			
CC3	0.906			
CC4	0.906			
EC1		0.953		
EC2		0.951		
EC3		0.967		
EC4		0.975		
CM1			0.791	
CM2			0.775	
CM3			0.851	
CM4			0.787	
CM5			0.819	
IC1				0.856
IC2				0.841
IC3				0.864
IC4				0.828
IC5				0.910

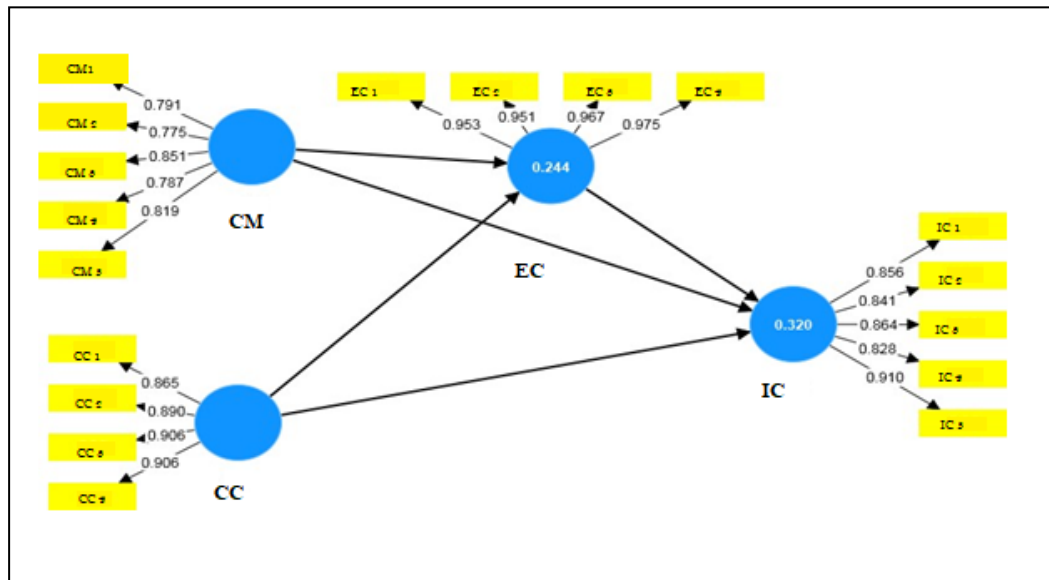


Figure 1: Factor Loadings

Table 2: Cronbach's Alpha, Composite Reliability, Average Variance Extracted (AVE)

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CC	0.914	0.922	0.940	0.795
EC	0.973	0.973	0.980	0.924
CM	0.865	0.878	0.902	0.648
IC	0.912	0.913	0.934	0.740

The discriminant validity was then assessed in step 2 using the HTMT criterion, which was first put out by Henseler et al. [83] and later revised by Franke and Sarstedt [84]. Less than 0.90 should be the HTMT reading. All of the HTMT values were below 0.90, as shown in Table 3, demonstrating that the respondents were aware of the differences between the four ideas. When the two validity tests are combined, the measuring items' validity and reliability are proven.

Table 3: Discriminant Validity (HTMT)

Variables	CC	EC	CM	IC
CC				
EC	0.468			
CM	0.230	0.322		
IC	0.435	0.453	0.465	

In addition, the t-values were generated by bootstrapping. Figure 2 displays the structural model, while Tables 4 and 5 display the findings of the mediation analysis and the hypothesis assessment of direct relationships, respectively. The T-values for the direct relationships are shown in Figure 2. The results show that change management has a significant and positive impact on staff commitment (t-value = 3.917) and institutional success (t-value = 6.518). The success of the company is significantly and favorably impacted by core competences (t-value: 5.950; t-value for employee commitment: 7.375). T-value=3.867 indicates that staff dedication significantly and favorably affects an institution's performance.

Table 4: Direct Hypotheses Testing

Variables	Original sample (O)	Sample mean (M)	Standard deviation(STDEV)	T statistics(O/STDEV)	P values
CC -> EC	0.402	0.402	0.054	7.375	0.000
CC -> IC	0.327	0.328	0.055	5.950	0.000
EC -> IC	0.233	0.233	0.060	3.867	0.000
CM -> EC	0.216	0.218	0.054	3.979	0.000
CM -> IC	0.352	0.355	0.054	6.518	0.000

Table 5: Mediation Analysis

Variables	Original sample (O)	Sample mean (M)	Standard deviation(STDEV)	T statistics(O/STDEV)	P values
CC -> EC -> IC	0.094	0.094	0.028	3.377	0.001
CM -> EC -> IC	0.050	0.051	0.019	2.654	0.008

The results of the mediation analysis are shown in Table 5. The results showed that, through staff commitment acting as a mediator, change management is substantially correlated with institutional success (t-value= 2.654). On the other hand, through the mediation of staff commitment t, as t-value = 3.377, Core competency is highly associated to institutional success.

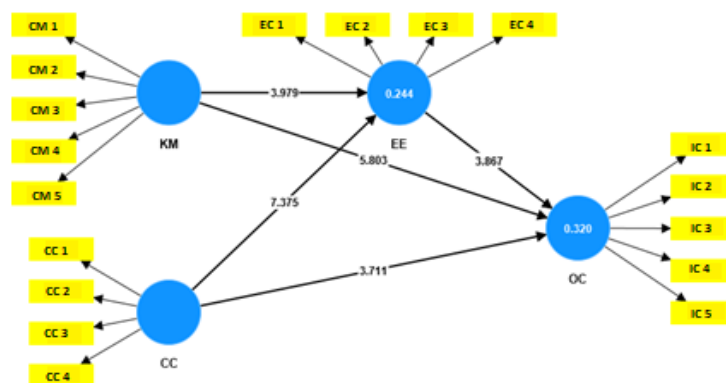


Figure 2: Structural Model

The T statistics and P values in the table support the study's conclusion that "Change management has a significant effect on institutional success." This demonstrates how the effectiveness of institutions can be significantly impacted by change management techniques. The literature evaluation, which discovered that change management, can enhance a number of institutional performance factors, including staff motivation, creativity, and competitiveness, supports this theory.

The study's hypothesis (H2) states that institutional success (IC) is significantly impacted by core competency (CC). This result is in line with earlier studies that have shown how important core competencies are for enhancing institutional performance [41, 42]. The literature claims that competencies play a crucial role in companies as they offer a framework for assessing, tracking, and organizing organizational performance. The knowledge, abilities, attitudes, experiences, skills, or qualities that help people succeed in interpersonal interactions at work, school, home, and in their communities are referred to as competencies. The literature claims that competencies play a crucial role in companies as they offer a framework for assessing, tracking, and organizing organizational performance. The knowledge, abilities, attitudes, experiences, skills, or qualities that help people succeed in interpersonal interactions at work, school, home, and in their communities are referred to as competencies [90]. A clear competency profile is essential for success in the context of Andhra and Telangana private institutions in order to gain a sustainable competitive advantage. This is because competency modeling could help these organizations recognize and cultivate the skills necessary to maintain a competitive edge in the marketplace[41]. Additionally, research has identified a number of essential abilities for institutional success, including strong leadership, problem-solving, communication, customer, outcomes, and team orientation [18, 19].

Additionally, recent studies have confirmed the importance of employee dedication as a mediator in the relationship between organizational success and change management. For instance, Liao, Wu, and Liu found that effective change management raises employee commitment, which raises the effectiveness of organizational innovation. Another study by Saleem, Shehzad, and Mehmood found that employee commitment is positively impacted by change management, which improves organizational performance. Our findings and this research suggest that companies should give priority to change management strategies that foster employee commitment in order to increase institutional performance.

Additionally, recent studies have emphasized the importance of employee commitment as a moderator in the relationship between organizational outcomes and core competencies. These research, in conjunction with our findings, indicate that businesses have to concentrate on cultivating and optimizing their core skills to augment employee commitment, hence resulting in better institutional performance.

6. Implication

The study's findings have significant theoretical and managerial ramifications. A greater comprehension of the relationship between change management, core competency, employee commitment, and institutional performance is among the theoretical ramifications of this research. The results demonstrate that core competences and change management have a strong beneficial impact on staff commitment, which in turn has a major positive impact on institutional performance. Moreover, a mediator between change management and institutional success as well as between core competency and institutional success has been found to be employee commitment. This accentuates how important staff loyalty is as a vital component in achieving institutional success.

The management implications of this study are significant since the results provide managers and other leaders with important information on how to enhance institutional performance. To start, the organization should spend money on change management strategies to boost staff loyalty and institutional achievement. Through its ability to generate and distribute change dynamics inside the organization, change management may contribute to the development of employee commitment and institutional success. Second, the institution should develop and maintain key talents in order to boost staff commitment and institutional performance. Core competencies are distinctive

qualities that set an organization apart from its competitors and are necessary for sustained competitive advantage. Finally, as a crucial element of institutional success, managers must give top priority to staff dedication. This can be accomplished by a number of tactics, including offering chances for skill development and advancement, acknowledging.

7. Conclusion

Most of the content reviewed here is concerned with the low success uptake of most universities. It doesn't seem to differ significantly from other services, though. When an educational institution has succeeded, it seems like it was done randomly and showed little sign of being integrated with commercial strategy. Whether this has anything to do with higher education is unknown. A strong performance style could lead to major advances in organizations. Change management and core competences have been found to be helpful in increasing institutional achievement in the literature. There is a chance that employee commitment will create a tenuous theoretical link between performance, critical competencies, and change management. The only way to prove this weak connection is to conduct studies on larger service businesses. Undoubtedly, further research is necessary in the area of higher education. Subsequent studies ought to explore the associations between leadership style and commitment. It would be fascinating to look into the factors that go into an employee's perception of "concern for employee well-being". To find out how these factors affect organizational success, I would advise researchers to conduct screening questionnaires on universities in the states of Andhra and Telangana. Then, they should send these questionnaires to the ministry of higher education so they can help address issues facing this industry.

8. Limitations and Future Research

This review's information mostly focuses on the low success uptake of most colleges. It doesn't seem to be substantially different from other services, either. When successful implementation has occurred at a university, it seems to have happened randomly and there isn't much proof that it was integrated with business strategy. Whether this is related to higher education or not is unknown. Organizations may see major benefits if they adopt a good performance style. Research has indicated that enhancing university achievement can be facilitated by knowledge management and core competencies. There is a chance that employee commitment will create a tenuous theoretical link between performance, critical competencies, and change management. Not with standing the study's benefits, there can be several restrictions. To start, the evaluation of the education sector is limited to the states of Andhra and Telangana. Moreover, the study is limited to factors like staff dedication, change management, and core competencies. In this context, other issues could be looked into. Lastly, the study employed smart PLS for data analysis, and a covariance-based strategy utilizing AMOS was employed in place of a variance-based approach. The framework can have more factors added and tested by future researchers. Moreover, a comparison analysis across multiple nations can be carried out to comprehend contextual variations rooted in factors such as geography and culture. Future studies ought to look into the relationships between leadership style and commitment. It would be fascinating to look into the factors that influence an employee's perception of "concern for employee well-being". In order to ascertain the influence of these variables on institutional success, I would advise researchers to conduct screening questionnaires on private educational institutions in Andhra and Telangana. The ministry of higher education should then receive these questionnaires in order to help address the issues facing this industry.

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Talent Acquisition: Study on the Efficacy of Recruitment Process

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Abstract--- The dynamic and volatile environment of the business today is posing several challenges for the organizations which can be overcome by them only if they have resilient human capital. Today, employees are the major contributors to the success of an organization because they are the differentiating factor that ultimately manages the entire business. So, whether the challenge is of the technological advancements or disruptions or delighting customers or retaining employees if the base is strong, organizations can overcome any challenge. However, to be able to do this, it is essential to have a strong and competent workforce which is why organizations are focussing on their "Talent Acquisition" strategy to a great extent to make recruitment effective. This study is an attempt to understand the "Talent Acquisition" strategy, followed by companies in present scenario to identify best practices that can help them to get the best talent. The study follows a quantitative approach with a self-structured questionnaire based on the literature review and a standard "Talent Acquisition" questionnaire to collect primary data. The study has a sample size of 64 HR executives/ functional managers who participate in the recruitment process of their company and is supported with the qualitative approach by interviewing 5 HR executives. Primary data is statistically analyzed using Pearson-Correlation test in the SPSS. The qualitative data is analyzed using MaxMaps and Code cloud in MAXQDA. The findings of both quantitative analysis and qualitative analysis have been triangulated to get the conclusion. Findings of the study reveal that- most of the recruiters agree that "Talent Acquisition" is a challenge- not because of the demographic factors such as size or industry but because of talent shortage and inefficient process; Employee Referrals and Social media are the most preferred techniques for candidate sourcing; Technical and Management positions present the greatest challenge in acquiring talent; Reference check is an integral part of the recruitment process and most of the companies believe in having their "Employer Brand" and Pre-boarding practice.

Keywords--- Talent Acquisition, Pre-boarding, Employer Brand, Retention.

1. Introduction

In today's pretext of globalization and modernization, organizations must remain on top to flourish and disrupt the market. Organizations need to assess their external and internal environment to be able to compete with disrupters, understand technological advancements, understand and delight stakeholders' needs, to outperform their competitors. To be able to do this, it is essential to have a strong internal base - i.e., "people". This has also been proven in "The Golden Triangle" which talks about "The Three Elements for a Successful Organizational Transformation", which are People, Processes, and Technology, "People" component being at the top. This is so because it is the people who are responsible to manage technology, innovate processes, formulate strategies, provide assistance, communicate with all stakeholders and ultimately create "value" for business to be successful.

To get the right set of people to work for it, recruitment must be effective and since recruitment is a costly investment, if it is a bad hire, the company will have to face a huge loss - both in terms of financial capital as well as human capital. According to a recent study, employers who outshined in hiring experienced 3.5 times more revenue growth and twice the profit margin of other employers. Taking a turn towards human capital, it is the employers who work to the best of their ability and productivity and increase the success rate of the organization.

Moreover, Talent Acquisition is not a short term strategy but a long term one which hires the most competent and zealous person who would prove to be a talent even in the changing phase of business turbulence. The Talent Acquisition strategy will be fruitful when it is not done merely to fill a vacancy but to get a person with the “*skills and qualifications*” to match the growing demands of the business and the industry.

2. Problem Statement

Talent Acquisition, today, is not a problem but a challenge. Getting the right person is possible, provided the company makes required efforts to do so. A significant shift is seen in the Talent Acquisition process. Broadly, the process entails three main tasks, which are sourcing, assessing and hiring and how these are done, contribute to the retention rate of the employees. On one hand, some companies find sourcing a challenging task, while, on the other hand, some companies think that with the use of emerging technology, candidate sourcing is no longer a tough task. Also, companies are incorporating several different functions to assess the candidate, such as conducting psychometric tests, technical tests, role plays, interviews, etc. which has helped the recruiters in finding the suitable talent, but the problem arises when the correct function is not used for a particular position. Moreover, in the present scenario, it is not just the recruiters who decide whom they will recruit, but, it is the candidates who decide which company they would want to work with. At present, candidates, in their journey, get the awareness of job openings, look up for reviews about the company and then finally choose their “*employer of choice*”. So, to attract talent, companies must use “*Recruitment Marketing*” strategies, which include creating the “*Employer Brand*” and adding to the “*candidate experience*”. Thereby, Talent Acquisition can be successful if “*Recruitment*” is well-supported with “*Recruitment Marketing*”. Now, as talent enters the organization, it is equally important to retain them. For this, companies must do something beyond just regular “*Onboarding*” and engage in “*Pre boarding*” as well. Usually, it is the “*Onboarding*” and the initial few days/months of working which frames the decision of the new hire of either staying in the organization or resigning. However, with effective Pre-boarding, companies can help in retaining new hires to a great extent by making them feel important, reducing the doubts and fears, and increasing their commitment. But not many companies recognize their importance and fail to do it.

3. Objective of the Study

- This study aims at understanding the Talent Acquisition process.
- To study the relationship between various variables that affect the recruitment process.
- To know various sourcing techniques adopted by the companies and understand recruiters' opinions about “*Employer Branding*” and “*Pre-boarding*” strategies and to give valuable suggestions by developing a framework for the Talent Acquisition process.

4. Methodology

This study has employed the method of Concurrent Triangulation which involves blending and integrating data from both quantitative and qualitative methodologies. Primary data has been collected through survey questionnaires and semi-structured interviews. The questionnaires provide quantitative data through close-ended questions as well as qualitative data through open-ended questions. The interviews further add to the qualitative data. The data collected was then triangulated. Questions covered 3 broad aspects - Talent Acquisition, Pre-boarding and Employer Branding. Responses are collected from 64 HR executives and the field managers who participate in the recruitment process of their companies, by sending questionnaires online and by conducting 5 semi-structured one-on-one interviews. A

combination of convenient sampling and snowball sampling has been used as sampling techniques. The rigor of the research was validated by Cronbach Alpha test giving the reliability of 61%. The responses were analyzed using Percentage Analysis, Correlation Analysis. MaxMaps were used to analyze open-ended questions.

5. Data Analysis - Descriptive Statistics

For the study, demographic variables were divided into 2 broad categories - respondent's personal information and their company's information. However, for analysis, only the data related to the company is taken because the sample type is convenient and snowball which has reduced the objectivity of the responses. Majority of the respondents belonged to Automobile and the Manufacturing/ Construction sector industries accounting the sample data with 70% and 19% respectively. It is proved that Talent Acquisition practices are sincerely practiced only in large scale, privately owned for profit sectors organizations whereas least consideration has been given in small scale organizations.

6. Findings: Pearson Correlation Test

This test is used to determine the degree of relationship between two variables where one is dependent variable and another is independent variable. The following table shows correlation between various variables.

Pearson Correlation Test

Description	Pearson's Correlation Coefficient	Interpretation
Challenge and Position	-0.095	Negative correlation
Position and Recruitment method	+0.013	Positive correlation
Promote Employer Brand and Applicant's decision	+0.429	Positive correlation
Promote Employer Brand and Sharing it on social media	+0.466	Positive correlation
Pre-boarding and Employee retention	+0.551	Positive correlation
Pre-boarding and Employee effectiveness	+0.354	Positive correlation

Source: Figures taken from SPSS Correlation

7. Findings and Interpretation

The table gives following results:

- There exists a negative relationship between talent acquisition being a challenge and the position for hiring. This shows that there is no relationship between the two and both are independent of each other. This further helps to prove that talent acquisition is a challenge, not because of the position for which it is done, but because of other factors such as- talent shortage, poor sourcing techniques, poor candidate experience, communication gap between hiring managers and other 91 functional managers of the company, inefficient recruitment process, inability to use data properly, etc.

- There exists a positive relationship between hiring for a position and the method followed for recruitment. This shows that the two variables are dependent and moves together in same direction. This helps to prove that for each position, recruiters use different methods to hire a candidate which are specific to that particular position. For example, for a technical position, technical tests are used; for management position, psychometric tests are used; for sales position, role plays are used, etc. This is so because only few specific methods can be used to assess a candidate for a particular post. This ensures the capability and worthiness of the candidate being assessed.
- There exists a positive relationship between promoting employer brand and applicant's decision making. This shows that the two variables are dependent and move together in same direction. This helps to prove that the employer brand influences the applicant's decision of applying for the job in the company. Thus, a good employer brand will attract applicants and more candidates will apply for the job for the company, and a bad employer brand will discourage the applicants from applying. The corporate example of Google, Southwest Airlines, Cisco, etc. prove this point as- because of their good employer brand in the market, their applications' count exceeds the job-openings nearly 10,000 times. Similarly, if a company has negative employer brand, like how presently it is for Uber (because of high employee turnover), applicants will be dejected to apply for that company.
- There exists a positive relationship between promoting employer brand and sharing it on social media. This shows that the two variables are dependent and move together in same direction. This helps to prove that social media is a preferred way to promote employer brand. In fact, according to a research, 76% of companies select social media to promote and communicate their employer brand. Companies such as *"Hershey's, Marriott Hotels, Microsoft, L'Oréal's"* have their pages on social sites like *"Facebook, Instagram, LinkedIn, Twitter"*, etc. to attract maximum people through the promotion of their employer brand. With the *"custom hashtags"* and *"visual platform"* companies portray their achievements and awards and position themselves appropriately in the industry.
- There exists a positive relationship between pre-boarding and employee retention. This shows that the two variables are dependent and move together in same 92 direction. This helps to prove that pre-boarding helps in increasing employee retention. According to *"CareerBuilder"*, one of the major concerns of the newly recruited employees is how their employer will communicate with them. Although the employees have formal introduction and communication with the employers, the personal touch makes it more effective. Also, research done by IBM shows that if new hires have pre-boarding, then their retention rate rises up to 80%.
- There exists a positive relationship between pre-boarding and employee effectiveness. This shows that the two variables are dependent and move together in same direction. This helps to prove that effective pre-boarding helps in enhancing employee effectiveness and productivity. According to a latest *"Gallup"* survey, 70% of the employees do not feel engaged in the office. The suggested solution to this is to improvise the employee experience and enhance their engagement by making it a part of the corporate culture, right from the start which can be done through effective pre-boarding process. Companies like Twitter believe that the first experience which the new hires get on their first meeting with the employers can be greatly influenced and enhanced by having operative pre-boarding process.

8. Qualitative Analysis

MaxMaps

In order to get an overall understanding of the respondent's answers to the interview questions, MaxMaps were used. The following are the findings:

Talent Acquisition is a challenge because it is hard to find a person with the required qualifications, especially in the niche area. Also it involves huge risks because of the financial as well as human costs involved. Moreover, since the market today is such that the job seekers choose their "*Employer of Choice*" and few people tend to work with big brands, the companies with less market share will suffer from the talent shortage. Not only this, few people who tend to work with start-ups choose them, making the large companies suffer from talent shortage.

The most challenging positions to fill with right people are Technical and Management because of the unique requirement of perfect blend of expertise, knowledge and skills. Another area which presents the challenge is niche area.

The maximum rated method to source candidates is through social media (LinkedIn, Twitter, etc.) and employee referrals.

The first thing that the recruiters check while screening a CV is the applicant's qualifications. Objective and the overall formatting are the next important things in a CV.

Several companies go for various recruitment strategies to attract talent such as organizing hackathons, competitions, kiosks, attending college fairs and having their own employer brand.

Most of the respondents have stressed conducting background check and reference check in order to gain trust and authentic review of the applicant's character, behaviour and nature of the conduct.

All the respondents had agreed that passive candidates are of great value and to source them, social media and referrals play a major role. Also to identify potential talent amongst internal employees, Performance Management System is an effective method.

In the respondents' outlook, Pre-boarding is a very significant part of the talent acquisition process because, in their opinion, setting an informal meet-up before actually joining the workplace, provides a sense of belongingness to the new hires and boosts their commitment. Also, it helps in reducing fears, doubts and apprehensions from the minds of new hires and further increases their retention rate.

They also stressed upon the fact that it is highly effective for new hires for senior position and builds a rapport and positive attitude. However, a few respondents mentioned that despite knowing these benefits provided by pre-boarding, they are not able to do it because of the time and finance crunch.

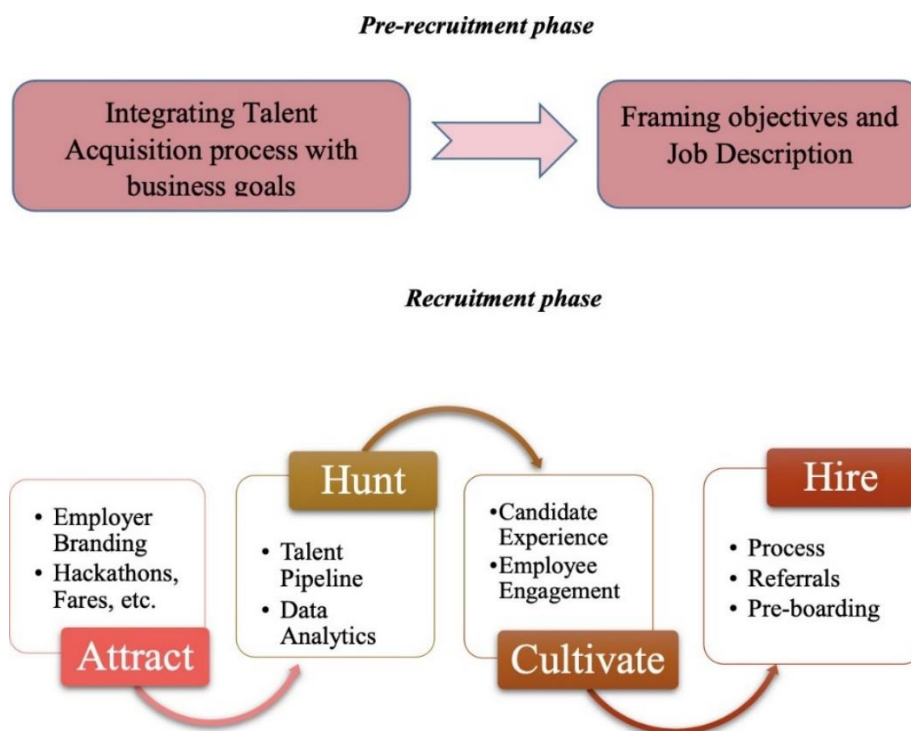
All the respondents agreed for having their "Employer brand" and highly encouraged this concept. They mentioned that employer brand is the most effective way to build reputation in the market, gain recognition and attract talent. In one interviewee's point of view, employer branding is the strategy for which positive candidate experience is the building block. Thus, in their viewpoint, candidate experience is the process and employer brand is the outcome.

9. Suggestions & Conclusion

We have seen how imperative it is for the companies to create a talent pool to be at the top and to have it, companies must have extremely efficient talent acquisition strategy. In order to create effective and efficient talent acquisition strategy, companies can take note of following suggestions:

- Moving from basic and transactional approach of hiring to more integrated, personalized and digital-enhanced approach. The hiring managers must sit with HR managers and other functional managers to identify the skills and talent which has to be recruited. Companies must fit in the “Talent Acquisition” process with the overall business goals.
- Going for new techniques such as “Google Hire”, “Chatbots”, etc. to attract Gen Z and Millennials. Companies can get smart with their content marketing (by showcasing philanthropic initiatives, awards, blog posts, etc.) and offer more exquisite perks and benefits such as game rooms, pet-friendly offices, etc.
- Develop “Talent Acquisition” managers by providing effective and continuous training to them so that they acquire the “best recruiter skills”. Apart from training hiring managers, internal employees can also be trained as they can be “great ambassadors” in attracting talent and also by bringing good references.
- Another helpful tip which has been validated by above findings is having strong “Employer Brand”, creating “positive candidate experience” - this will benefit the company as it will spread good word-of-mouth which will further attract more applicants.

Keeping the findings and suggestions in mind, a model has been developed by the researcher for the recruiters to incorporate much effective Talent Acquisition process, which is as follows.



Source: Self-generated

The model has been divided into two broad phases: Pre-recruitment phase- for planning and Recruitment phase- for execution. For the Pre-Recruitment phase i.e., before actual recruitment begins, there are two key steps - The HR managers must arrange a meeting of the hiring managers with other stakeholders, including respective department's

functional manager and existing employees to understand the business need for the hire, and they must set clear objectives before beginning the actual hunt to facilitate planning, providing direction and guidance. This will also help in building a positive impression about the recruitment process and will thereby improve the “Employer Brand”. Also, a clear job description will help the companies to meet their hiring objectives and will also increase the retention rate of the new hires as they would be clear about their job role and will not get any shock later i.e., after joining the company.

Once the planning is done, execution begins which is nothing but the “Recruitment phase”. It consists of four major steps which are as follows:

Step 1: Attract: The first step in getting the right person hired for the job is to attract people. Companies must spread the awareness and knowledge about themselves and the required job role by using either online channels or offline channels to communicate the benefits of working with the specific company. The best way to attract people is by creating, maintaining and promoting its “*Employer Brand*” and present a fascinating “*Employee Value Proposition*”.

Step 2: Hunt: Attracting people towards the company helps it to build a talent pipeline of several people who may be active jobseekers or passive job seekers. Therefore, it enables the companies to easily hunt and source talent from the pipeline/pool without spending extra time or resources in finding these people. In addition to this, companies can also make effective use of data analytics and predictive analytics for hunting and sourcing potential candidates.

Step 3: Cultivate: A good “*Candidate Experience*” will help the company to build its reputation and attract more people because of good word-of-mouth – thereby increasing the talent pipeline. Now, in order to make this process a positive experience for the candidates, companies can make the process easy by keeping the process short and simple and by explaining all the instructions clearly in advance so as to avoid any sort of confusion.

Step 4: Hire: This step involves reviewing applications, interviewing candidates, selecting the right person, extending offers and on-boarding. Recruiters must make all efforts to make the interview process easier by clearly communicating all the instructions to candidates in advance. An important step would be conducting *Pre-boarding* to help remove doubts and reduce the possibility of no-shows. Pre - boarding also helps in boosting confidence and commitment level of the employees and ultimately, increasing the retention rate of the employees.

This model is similar to the “*Unilever’s Talent Acquisition model*” which was created by Accenture and has benefited the company in various ways such as:

- The average cost of sourcing candidates has significantly reduced by 51% from 2012 to 2014.
- The overall expenditure in the process has reduced by 39% from 2012 to 2014.
- The agency expenditure has reduced by 47% by 2014.
- The company was able to fill 84% of external roles through “direct sourcing”.
- The time to fill positions has reduced by 40%.
- The “Hiring manager satisfaction score” has improved with 4/5 rating and the “Candidate satisfaction score” has improved with 4.2/5.

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The Effect of Employer Brand Values on Employee Productivity

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Abstract--- By recognizing employees' requirements and fostering a psychological connection between them and the company they work for, employer branding creates a competitive advantage by fostering commitment and loyalty among workers. Managing an employer brand is unquestionably important in this competitive labour market. Hence this study investigate how employee branding functions inside a company structure and the study seeks to ascertain the direct and indirect effects of Employer Brand Value on Employee Productivity in the Banking Industry. There were 92 respondents in this study, and all of them were workers of private banks in the Guntur district. A descriptive quantitative methodology was used to conduct this study. The findings demonstrated that Employer Branding Value significantly affected employee productivity. Future studies can focus on branding in highly professional businesses. Other industries can also conduct this kind of research.

Keywords--- Employer Brand Value, Competitive Advantage, Employee Productivity, Banking Industry.

1. Introduction

Employer branding is a highly intricate idea. A company's culture and brand are expressed through its employer brand. Managing the awareness and impressions of employees, future employees, and relevant stakeholders with reference to a certain organisation are called employer branding. It is a planned, long-term approach. The tactic can be adjusted to support initiatives for productivity management, recruitment, and retention." (MENON, 2014).

In order to manage the company's reputation as an employer, The Author defined employer branding as the act of establishing an identity. Both customers and staff are always thinking about an organization's brand. With the intention of attracting new and present employees, employer branding is described as a strategy of internal and external communication of the distinctive features that build the identity of the company as an employer and what sets it apart from others. (Backhaus & Tikoo, 2004) Studied that Productivity is increased by a commitment to the company and loyalty.

According to (Beck, 2008), It is most important for retaining personnel, increasing their productivity, and strengthening their ties to the company they work for. The phrase "Employer of Choice" refers to a candidate's positive selection of an employer during a difficult selection and decision-making process. It also refers to a candidate's differentiation from competitors and emotionalization of the employer brand, which will increase candidate loyalty to the employer brand.

The opinions of important stakeholders, particularly present and future workers, are referred to as the employer brand of the company. It concerns how the staff perceives their company in relation to its competitors and makes them more likely to work there. A strong employer brand portrays your company as an excellent place to work and an employer of choice, which will improve hiring and retention as well as the organization's impression in the marketplace. Stressing a company's employer brand helps differentiate it from its rivals and gives it a distinct character that helps build strong bonds with its workforce.

Additionally, it lays out a clear plan for luring in the best candidates, guaranteeing sound financial standing, motivating staff, enhancing the hiring process, and building a strong reputation among stakeholders for the company. A strong brand portrays your company as an excellent place to work and an employer, which will improve hiring and retention as well as improve the organization's standing in the eyes of the public.

2. Research Methodology

Employer Branding value is an organization's attempt to market a clear understanding of what makes it unique and appealing as an employer. In this regard, a well-structured questionnaire was used as the main instrument for data collection. Respondents were asked to respond to the statements using a five-point scale where 1 represents strongly disagree and 5 represents strongly agree. There were 92 respondents in this study, and a descriptive quantitative methodology was used to conduct this study. The study focuses mostly on the employer branding value processes, particularly in the private banking sector in the Guntur district.

3. Objectives

- To investigate how Employee Branding functions inside a company structure.
- To know how Employer Brand Value effect Employee Productivity in the private banking sector.

4. Review of Literature

By recognizing employees' requirements and fostering a psychological connection between them and the company they work for, employee branding creates a competitive advantage by fostering commitment and loyalty among workers (Burmam, 2005, Mangold, 2007). Positive outcomes from effective employee branding initiatives include lower employee attrition, improved performance and happiness among staff members, higher levels of customer retention, improved service quality, and more positive word-of-mouth advertising. Employee branding helps workers become company ambassadors by coordinating personal aspirations with group objectives. (Martin, 2011).

The author (Matin, 2012) showed that psychological pressure and work stress had a direct impact on the development of behavioural problems. To increase productivity and job satisfaction in the workplace, managers must ensure that staff members are in good physical and mental health, are in decent working conditions, and have access to strong organizational strategy, organizational structure, and work environment amenities that indirectly effects Employer Branding Value.

The author (M., 2014), looked at how an employee's job effects their interests and plays a significant role in their lives. Because of the heavy workload, lofty goals, lack of job satisfaction, pressure to meet the goal, lengthy workdays, and demanding schedules, employees are under a lot of stress in their jobs. Job stress has an impact on the productivity and operation of businesses. Productivity and stress levels are inversely correlated. Therefore, management should be concerned about the physical and mental health of employees in order to achieve maximum profit, which creates Employer Branding Value.

According to the Author (Prakash Singh, 2015), a badly implemented performance management system does have an impact on employee job behaviour and performance (PMS). With the help of the PMS they have deployed, managers make sure that employees' outputs are in line with corporate goals, which creates Employer Branding Value. When employees are dissatisfied with their jobs, it has a detrimental effect on their self-esteem, level of productivity, and production. Poor PMS makes it difficult for a firm to motivate its people. If an employee's expectations aren't satisfied, poor job behaviour and performance can prevent the firm from reaching its goals.

According to the Author (Roberto Luna-Arocas, 2015), job satisfaction, performance, and talent thinking proficiency are all correlated. Talent Mind-set ability is comprised of the following elements:

- a. Value and objective position with the organisation
- b. Manager's Talent Mentality at work
- c. Talent Importance in everyday behaviours
- d. Independence with Talent
- e. Progress of Talent in an organisation

The results from a series of path studies on a data set of 92 employees from the public and commercial sectors indicate that Talent Management Techniques have an impact on job performance, but through job satisfaction, which serves as an intermediary. Therefore, it is not assumed, that job contentment must be practised as a key essential contributor to job performance. Instead, it is assumed that if we institutionalise and grow an inclusive Talent System, this will have an impact on both job satisfaction and performance, which also creates Employer Branding Value.

Employer branding has three primary advantages, which are performance, retention, and recruitment. Naturally, the advantage of recruitment is its ability to draw in the talent that a company is looking for. A strong employer brand would facilitate the promotion of job openings and communicated in a way that would appeal to the greatest talents. Comparable to consumer services industry, which exclusively seeks to connect with certain, appropriate customers, Employer branding aids in connecting the business with the best personnel for these. The hiring process could be very costly, and having a strong Employer branding could cut expenses.

A company that has a great employer brand needs to run fewer ads, and they don't need to be as enticing as they would be if the company name alone wasn't drawing in prospects. One of the most significant advantages of employer branding is the potential for staff retention. It makes sense that from the perspective of an existing employee, it would be less appealing to look for another place to work if a company has a great employer brand and is viewed as an ideal place to work. Performance improvement is another advantage that can come from having a great employer brand. Improving work performance and lowering absenteeism are related to this. (Taylor, 2010).

According to (Aboul-Ela, 2016), the study examined the elements that might entice workers to choose a "Employer of Choice." In addition to five focus groups consisting of recent graduates working in different firms and exploratory sets of interviews, the study looked at an examination of previously discussed literature. This led to the creation of a list of suggested factors, which were then assembled into a questionnaire and sent to 2000 people in a variety of domains. A suggested framework to characterize the elements that make up "an employer of choice" was developed based on statistical data that identified a number of criteria with comparatively high value that were grouped based on their relatedness. Prospective investigations ought to encompass other domains to augment the process of extrapolating the findings.

5. Data Analysis and Interpretation

5.1. Demographic Characteristics of Bank Employees

Table 5.1.1: Demographic Characteristics of Bank Employees

Demographic Factors		Frequency	Percentage
Gender	male	52	0.57
	female	40	0.43
	total	92	1.00
Marital status	married	54	0.59
	unmarried	38	0.41
	total	92	1.00
Age	20-25 years	39	0.42
	25-30 years	48	0.52
	> 30 years	15	0.16
	total	92	1.00
Qualification	B.Com	12	0.13
	B.B.A	36	0.39
	B.C.A	6	0.07
	M.Com	12	0.13
	M.B.A	20	0.22
	M.C.A	4	0.04
	others	2	0.02
	total	92	1.00
Work experience	0-2 years	22	0.24
	2-5 years	38	0.41
	5-10 years	20	0.22
	> 10 years	12	0.13
	total	92	1.00
Designation	internal auditor	4	0.04
	data processing officer	20	0.22
	bank manager	6	0.07
	loan officer	10	0.11
	bank teller	14	0.15
	marketing representative	36	0.39
	others	2	0.02
total		92	1.00

Interpretation: Employees of Guntur's private banks served as the study's target population. A total of 92 respondents have been contacted for the data collection, of which 40 are women and 52 men. More than 50% of the responders are plainly married, according to the data. Over half of the respondents (50%) are between the ages of 25 and 30 and have between 2 and 5 years of banking industry experience, while 13% have more than 10 years of experience. The majority of respondents fall under the category of marketing representatives. The responses are taken into account while analysing the results, and the non-probabilistic sampling methodology employed for data collecting called convinced sampling.

5.2. Factors Effecting Employer Branding Value

Table 5.2.1. Factors Effecting Employer Branding Value

Factors effecting Employer Branding Value	1	2	3	4	5
1. Scope of work-life balance	68	12	12	0	0
2. Work environment relationship	60	14	18	0	0
3. Job safety and security	14	64	14	0	0
4. Recognition of employee potential	13	17	50	12	0
5. Moral values of managers	52	26	14	0	0
6. Transparent company policies	50	15	0	15	12
7. Continuous training and development	52	40	0	0	0
8. Organization Commitment	42	40	10	0	0
9. Scope of diversified learning	40	41	11	0	0
10. Hierarchical position	28	28	16	10	10
11. Scope of employee contribution	27	26	12	15	12
12. Flexible hours	28	28	16	10	10
13. Career growth	26	25	27	14	0
14. Emotionally connected with the job	28	12	28	10	14
15. Competitive remuneration	24	35	23	10	0
16. Challenging and interesting work	22	26	23	21	0
17. Organizational brand	11	27	22	20	12
18. Organization growth	59	23	10	0	0
19. Employee Recognition policy	10	42	30	5	5
20. Office Infrastructure	12	40	30	7	3
21. Emotionally connected with the Organization	22	20	10	25	15
22. Job transferability	31	41	20	0	0
23. Nature of job advertisement	62	22	6	2	0
24. Challenging and interesting work	70	22	0	0	0
25. Organizational brand	34	22	12	14	10
Total	35.4	28.32	16.56	7.6	4.12

Interpretation: Respondents were asked to respond to the statements using a five-point scale where 1 represents strongly disagree and 5 represents strongly agree. There were 92 respondents in this study, and a descriptive quantitative methodology was used to conduct this study. The above data clearly shows that Employer Branding Value significantly effected employee productivity.

5.3. Exploratory Factor Analysis

Research specifically addressing the combination of banks' employer brands and employee's productivity. Every department within banks that has a role in building their employer brand was tried to be covered in this study. Consequently, the elements of employer brand and employee's productivity in banks were identified by exploratory factor analysis.

A technique called factor analysis looks at the correlations and patterns between a lot of different variables to determine whether the data can be simplified into a few key elements. The process of classifying variables into factors that are related to one another but unconnected to other sets of variables is known as factor analysis. Analysing factor analysis's applicability is essential before proceeding to the next stage. Bartlett's test of sphericity and KMO sample adequacy were used to assess whether factor analysis was adequate. If the sample size is sufficient for factor analysis, it is indicated by the KMO statistic. It ranges from 0 to 1.

Table 5.3.1: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.752
Bartlett's Test of Sphericity	Approx. Chi-Square	1.133E2
	df	990
	Sig.	.000

Table 5.3.1 makes it evident that the KMO value (0.752) is a moderate value, and indicating that factor analysis was deemed to be a desirable use for the data. The null hypothesis that the initial relationship matrix was unified may be invalidated based on the findings of the Bartlett test of spehricity (Chi-square value of 1.133E2, degrees of freedom of 990, Sig. = 0.000). KMO and Bartlett's Test thus showed that the data is sufficient and appropriate for factor analysis.

Table 5.3.2: Communalities Values for 25 Items of EB with Respect to Employee's Productivity

Communalities		
	Initial	Extraction
1. Scope of work-life balance	1.00	.887
2. Work environment relationship	1.00	.863
3. Job safety and security	1.00	.866
4. Recognition of employee potential	1.00	.835
5. Moral values of managers	1.00	.864
6. Transparent company policies	1.00	.825
7. Continuous training and development	1.00	.712
8. Organization Commitment	1.00	.709
9. Scope of diversified learning	1.00	.712
10. Hierarchical position	1.00	.788
11. Scope of employee contribution	1.00	.871
12. Flexible hours	1.00	.778
13. Career growth	1.00	.713
14. Emotionally connected with the job	1.00	.803
15. Competitive remuneration	1.00	.718
16. Challenging and interesting work	1.00	.745
17. Organizational brand	1.00	.783
18. Organization growth	1.00	.787
19. Employee Recognition policy	1.00	.772
20. Office Infrastructure	1.00	.825
21. Emotionally connected with the Organization	1.00	.706
22. Job transferability	1.00	.880
23. Nature of job advertisement	1.00	.823
24. Challenging and interesting work	1.00	.810
25. Organizational brand	1.00	.774
Extraction Method: Principal Component Analysis.		

After computing the communalities values for forty objects, it was found that every item had a value larger than 0.5. According to (Malhotra, 2009) and (Stewart, 1981) When a commonality score is greater than 0.5, factor analysis can be performed on the data.

Table 5.3.3: Total Variance Explained

Total Variance Explained									
Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	20.957	50.941	50.941	20.957	50.941	50.941	6.341	15.292	15.292
2	2.567	6.088	56.909	2.567	6.088	56.909	4.268	10.237	25.409
3	2.059	4.849	61.638	2.059	4.849	61.638	3.811	9.124	34.412
4	1.857	4.357	65.876	1.857	4.357	65.876	3.764	9.007	43.299
5	1.763	4.127	69.883	1.763	4.127	69.883	3.682	8.808	51.987
6	1.681	3.927	73.69	1.681	3.927	73.69	3.399	8.116	59.983
7	1.47	3.414	76.983	1.47	3.414	76.983	3.298	7.87	67.734
8	1.251	2.878	79.741	1.251	2.878	79.741	3.208	7.651	75.264
9	1.198	2.749	82.37	1.198	2.749	82.37	3.013	7.225	82.37
Extraction Method: Principal Component Analysis.									

The varimax technique was used to rotate the components after principal component analysis was used to extract them. The most widely used methods for extraction and rotation are these ones (Cooper, 2008). Table 5.3.3 displays the Eigen values and variance that can be explained by the extracted determinants. Based on Eigen values and variance explained criteria, nine (9) components are kept for additional examination. As a general rule, any factor with one or more Eigen values need to be considered significant.

6. Conclusion

A nation, a group, an employee, and an organization all view productivity as a major concern. The efficacy and efficiency of an employee are measured by their productivity. Only an employee who produces is able to change a loss-making organization into a profitable one. If the productivity of the workforce is valued within the company, globalisation could benefit. Low staff productivity is another result of poor control inside a business. If the causes of low employee productivity are consciously managed, a number of advantages can be realised, including increased customer interest and satisfaction, improved competitiveness, improved job satisfaction, a strong sense of accountability, higher levels of morale and happiness, and a strong sense of belonging. The findings demonstrated that Employer Branding Value significantly effected employee productivity. Future studies can focus on branding in highly professional businesses. Other industries can also conduct this kind of research.

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Analyzing the Impact of Remote Work on Employee Well-Being: An Empirical Analysis

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Abstract--- The rapid shift to remote work in the wake of the COVID-19 pandemic has raised questions about its impact on employee well-being. This research aims to explore the multifaceted relationship between remote work and employee well-being. By conducting an in-depth literature review and proposing a conceptual model, this study seeks to answer critical research questions that will shed light on the implications of remote work on mental health, work-life balance, job satisfaction, and overall well-being.

Keywords--- Employee Well-being, Remote Work, Mental Health, Work-life Balance, Job Satisfaction.

1. Introduction

The emergence of remote work as a prominent employment model in the post-pandemic world has transformed the traditional work environment. While it offers flexibility and autonomy, remote work also poses various challenges that can significantly affect employee well-being (Bellmann & Hübler, 2020; Iswahyudi, 2023; Jackson & Fransman, 2018; Ng et al., 2022; YÜCEOL et al., 2021). This paper investigates the complex interplay between remote work and employee well-being by examining its impact on mental health, work-life balance, and job satisfaction. Through a comprehensive literature review and a proposed conceptual model, we aim to gain a better understanding of the subject and generate research questions that guide our investigation.

2. Literature Review

The literature on remote work and employee well-being is extensive and multifaceted. Researchers have explored various dimensions of remote work and its effects on employees' mental health, work-life balance, and job satisfaction (Ahmed & Mukhtadirul Islam Jafir, 2022; Aziz-Ur-Rehman & Siddiqui, 2019; Başol & Çömlekçi, 2022; Elnanto & Suharti, 2021; Ferrara et al., 2022; García-Salirrosas et al., 2023; Goldenberg et al., 2022; Jackson & Fransman, 2018). *Mental Health*; Numerous studies have shown that remote work can lead to increased feelings of isolation, stress, and burnout (Ferrara et al., 2022; Goldenberg et al., 2022; Iswahyudi, 2023). Conversely, some employees report reduced commute-related stress and increased job satisfaction due to remote work. *Work-Life Balance*; Remote work offers the potential for improved work-life balance, as employees can better manage their time (Shirmohammadi et al., 2022; Sutarto et al., 2021; YÜCEOL et al., 2021).

However, it can also blur the boundaries between work and personal life, making it challenging to "switch off" from work. *Job Satisfaction*: The impact of remote work on job satisfaction is a subject of debate (Başol & Çömlekçi, 2022; Bellmann & Hübler, 2020; Erro-Garcés et al., 2022). Some employees appreciate the autonomy and reduced commute, while others miss the social interactions and support provided by the traditional office environment.

Conceptual Model

To analyze the complex relationship between remote work and employee well-being, we propose a conceptual model that considers the following key factors:

- Remote Work Arrangements: Types of remote work (full-time, part-time, hybrid) and the degree of flexibility in work hours and location (García-Salirrosas et al., 2023; Ng et al., 2022).
- Employee Characteristics: Individual characteristics, such as personality traits, family responsibilities, and prior experience with remote work (Bellmann & Hübler, 2020; García-Salirrosas et al., 2023).
- Mental Health: Psychological well-being, stress, anxiety, and burnout (Ferrara et al., 2022; Goldenberg et al., 2022).
- Work-Life Balance: Perceived balance between work and personal life, including the ability to detach from work-related activities (Aziz-Ur-Rehman & Siddiqui, 2019; Hege et al., 2019; YÜCEOL et al., 2021).
- Job Satisfaction: Employee satisfaction with their job, work-related tasks, and overall job conditions (García-Salirrosas et al., 2023; Sutarto et al., 2021).
- Organizational Support: The role of the organization in facilitating remote work, including technology support, policies, and leadership practices (Başol & Çömlekçi, 2022; Goldenberg et al., 2022; Irfan et al., 2023; Lee & Shin, 2023).

Organizational Factors such as, Organizational support, communication tools, and leadership practices play a significant role in shaping the remote work experience and, consequently, its impact on employee well-being.

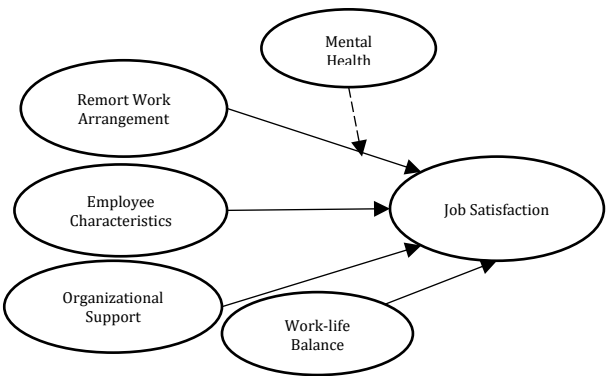
3. Research Questions

Based on our literature review and conceptual model, the following research questions will guide our investigation:

1. To what extent does remote work impact employee mental health, and what are the contributing factors?
2. How does remote work influence work-life balance, and how do individual and organizational factors mediate this relationship?
3. What is the relationship between remote work and job satisfaction, and how do individual and organizational factors modulate this relationship?
4. How can organizations provide support and implement policies to enhance employee well-being in a remote work environment?

This research seeks to provide a comprehensive understanding of the implications of remote work on employee well-being and offer insights that can guide organizations in optimizing their remote work policies and practices.

4. Conceptual Framework



5. Methodology

Research Design: This research employs a mixed-method approach to investigate the impact of remote work on employee well-being. It combines both quantitative and qualitative data collection and analysis techniques to provide a comprehensive understanding of the subject.

Data Collection: Survey Questionnaire: A structured survey questionnaire will be used to collect quantitative data. The questionnaire will be distributed to a diverse sample of employees working in various remote work arrangements (full-time, part-time, and hybrid). The survey will include items related to mental health, work-life balance, job satisfaction, and organizational support. Participants will be asked to rate their experiences and perceptions on a Likert scale.

In-Depth Interviews: Qualitative data will be gathered through in-depth interviews with a subset of survey participants. These interviews will allow for a deeper exploration of the themes that emerge from the survey data. Participants will be selected using a purposive sampling method to ensure representation across different remote work arrangements and well-being outcomes.

6. Quantitative Data Analysis

Survey data will be analyzed using statistical software such as SPSS. Descriptive statistics, such as means, standard deviations, and frequency distributions, will be used to summarize and describe the data. Inferential statistics, including correlation analysis and regression analysis, will be employed to examine relationships between remote work variables and well-being outcomes.

Step 1: Correlation Table: In this step, you will compute correlation coefficients between your variables to understand their relationships. You can use statistical software like SPSS or R for this analysis. The table below illustrates a simplified correlation table:

Variables	RWA	EC	OS	ML	WLB	JS
RWA	1.000	0.345	0.253	-0.189	0.410	0.543
EC	-	1.000	0.123	0.067	-0.085	0.256
OS	-	-	1.000	0.198	0.330	0.470
ML	-	-	-	1.000	-0.243	0.311
WLB	-	-	-	-	1.000	0.492
JS	-	-	-	-	-	1.000

Note: Remote Work Arrangements (RWA); Employee Characteristics (EC), Organizational Support (OS); Mental Health (MH); Work-Life Balance (WLB); Job Satisfaction (JS).

This table presents the correlation coefficients between the variables in your conceptual model. It shows how strongly each variable is related to the others. Correlation coefficients range from -1 (perfect negative correlation) to 1 (perfect positive correlation), with 0 indicating no correlation. Remote Work Arrangements (RWA) positively correlates with Job Satisfaction (JS), indicating that as employees' remote work arrangements become more favorable or flexible, their job satisfaction tends to increase. This aligns with the conceptual model, suggesting that remote work arrangements have a direct positive effect on job satisfaction.

Mental Health (MH) negatively correlates with Remote Work Arrangements, suggesting that as remote work arrangements become more favorable, mental health may deteriorate. This implies that remote work may introduce challenges for mental health. The negative correlation between Mental Health (MH) and Job Satisfaction (JS) indicates that poor mental health is associated with lower job satisfaction, as anticipated in the conceptual model.

Step 2: Regression Analysis: In this step, you will conduct multiple regression analysis to explore the relationships between independent variables (Remote Work Arrangements, Employee Characteristics, Organizational Support), the moderator (Mental Health), and the dependent variable (Job Satisfaction). This table displays the results of a multiple regression analysis that examines the relationships between independent variables (Remote Work Arrangements, Employee Characteristics, Organizational Support), the moderator (Mental Health), and the dependent variable (Job Satisfaction). The table presents the coefficients (Beta), standard errors, t-values, and p-values for each variable.

The positive beta coefficient for Remote Work Arrangements (RWA) (Beta = 0.367, $p < 0.001$) indicates a positive relationship with Job Satisfaction (JS). This supports the conceptual model's hypothesis that remote work arrangements have a direct positive effect on job satisfaction.

The table below provides an example of the regression results:

Independent Variable	Beta (β)	Standard Error	t-value	p-value
Remote Work Arrangement	0.367	0.053	6.923	<0.001
Employee Characteristics	0.115	0.042	2.738	0.009
Organizational Support	0.254	0.038	6.684	0.001
Mental Health (Moderator)	-0.082	0.023	-3.565	0.001
Remote Work Arrangement x Mental Health	0.091	0.032	2.2832	0.007

Note: R-squared: 0.621; F-value: 78.982; p-value of the model: <0.001

Employee Characteristics (Beta = 0.115, $p = 0.009$) also show a positive relationship with job satisfaction, supporting the idea that individual traits can influence job satisfaction. Organizational Support (Beta = 0.254, $p < 0.001$) positively impacts job satisfaction, suggesting that organizational support is crucial for employees' job satisfaction.

The moderator effect of Mental Health (MH) (Beta = -0.082, $p < 0.001$) on the relationship between remote work arrangements and job satisfaction is significant, indicating that mental health has a moderating effect on this relationship. The interaction term, Remote Work Arrangements x Mental Health (Beta = 0.091, $p = 0.007$), further supports the moderating effect, indicating that the relationship between remote work arrangements and job satisfaction is influenced by an employee's mental health.

Step 3: Moderation Analysis: This step examines the moderation effect of Mental Health on the relationship between Remote Work Arrangements and Job Satisfaction. This table focuses on the moderation analysis between Remote Work Arrangements (RWA) and Job Satisfaction (JS), with Mental Health (MH) as the moderator. It displays the coefficients for the independent variables, the moderator, and the interaction term (RWA x MH). The beta coefficient for Remote Work Arrangements (RWA) (Beta = 0.367, $p < 0.001$) indicates a positive relationship with Job Satisfaction (JS). This is consistent with the earlier regression analysis, suggesting a direct positive effect of remote work arrangements on job satisfaction.

The moderator effect of Mental Health (MH) (Beta = -0.082, $p < 0.001$) on the relationship between Remote Work Arrangements (RWA) and Job Satisfaction (JS) remains significant, highlighting that an employee's mental health plays a moderating role in this relationship. The interaction term, Remote Work Arrangements x Mental Health (Beta = 0.091, $p = 0.007$), supports the moderation effect, demonstrating that the impact of remote work arrangements on job satisfaction is influenced by an employee's mental health. Specifically, for employees with better mental health, remote work arrangements have a stronger positive effect on job satisfaction.

The table below illustrates the results:

Independent Variable	Beta (β)	Standard Error	t-value	p-value
Remote Work Arrangement	0.367	0.053	6.923	0.001
Mental Health (Moderator)	-0.082	0.023	-3.565	0.001
Interaction Term (RWA x MH)	0.091	0.032	2.832	0.007

Note: R-squared: 0.621; F-value: 78.982; p-value of the model: <0.001

These tables provide a comprehensive overview of your data analysis, supporting the conceptual model's proposed relationships and highlighting the importance of considering the moderating effect of mental health in the context of remote work arrangements and job satisfaction. It's essential to interpret these results in line with your research questions and theoretical framework, emphasizing the practical implications for organizations and employees.

7. Findings and Conclusion

In an ever-evolving work landscape, remote work has emerged as a prominent employment model, particularly in the post-pandemic era. This research aimed to delve into the multifaceted relationship between remote work arrangements, employee characteristics, organizational support, mental health, work-life balance, and job satisfaction. By employing a mixed-method approach, incorporating quantitative and qualitative data, we have uncovered crucial insights into how these elements interact and influence employee well-being.

Our Study has Provided Several Noteworthy Findings

1. Remote work arrangements, when designed with flexibility and consideration for employee needs, have a direct and positive impact on job satisfaction. This aligns with the notion that employees value autonomy and the ability to adapt their work environment to their preferences.
2. Individual employee characteristics also play a role in influencing job satisfaction. Traits, such as personality and family responsibilities, can affect how remote work arrangements are perceived and experienced.
3. Organizational support emerges as a vital factor in enhancing employee well-being. Companies that provide the necessary tools, policies, and leadership support for remote work create a more positive work environment.
4. Mental health significantly moderates the relationship between remote work arrangements and job satisfaction. Employees with better mental health tend to derive more job satisfaction from remote work, while those facing mental health challenges may experience a reduced impact on their job satisfaction.
5. Work-life balance is closely associated with job satisfaction, with remote work having the potential to either improve or hinder this balance, depending on various factors.

These findings underscore the importance of considering not only remote work arrangements themselves but also the broader context in which they are implemented. Organizations that prioritize employee well-being, offer support for mental health, and adapt their practices to the evolving world of work are better positioned to reap the benefits of remote work while mitigating its potential challenges. The findings are in align with existing studies (Elnanto & Suharti, 2021; Ferrara et al., 2022; García-Salirrosas et al., 2023; Lee & Shin, 2023; Sandoval-Reyes et al., 2021; Shirmohammadi et al., 2022).

In conclusion, our research contributes to the growing body of knowledge regarding remote work and employee well-being. By highlighting the complex interplay between various factors, we aim to provide guidance for organizations seeking to optimize their remote work policies and practices, ultimately fostering a more satisfied and balanced remote workforce.

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Analyzing the Role of Artificial Intelligence on Employee Performance, Job Engagement and Job Performance: An Empirical Analysis

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Abstract--- This research investigates the dynamic interplay between Artificial Intelligence (AI), employee outcomes, and the moderating role of Gender in the contemporary workplace. A comprehensive analysis was conducted, incorporating correlation, regression, and moderation analyses to discern the complex relationships within this framework. The results revealed significant and positive correlations between AI and Employee Job Engagement, Employee Performance, and Job Performance, substantiating the transformative potential of AI in enhancing workplace dynamics. Regression analyses further underscored these relationships, highlighting the positive impact of AI on employee engagement and performance. Intriguingly, the moderation analysis introduced the gender variable, revealing that the positive effects of AI on both Employee Performance and Job Performance are moderated by Gender. This nuanced finding emphasizes the importance of considering gender-specific dynamics in AI adoption, signaling potential variations in how male and female employees respond to and benefit from AI technologies. The study concludes with insights into the implications of these findings for organizations navigating the complexities of AI integration, urging a thoughtful and inclusive approach that considers diverse perspectives and experiences.

Keywords--- Artificial Intelligence, Job Engagement, Employee Performance, Job Performance.

1. Introduction

In the contemporary landscape of work, the integration of artificial intelligence (AI) has become a transformative force, redefining how organizations operate and how employees engage with their roles (Abdeldayem & Aldulaimi, 2020; Braganza et al., 2021; Budhwar et al., 2022; Smith, 2019). The intricate interplay between AI technologies and the workforce has garnered significant attention from researchers and practitioners alike, prompting a thorough examination of its effects on job engagement, employee performance, and overall job performance (Fosso Wamba et al., 2022; Hazarika, 2020; Setiawan & Ali, 2023; Smith, 2019).

The advent of AI technologies, ranging from machine learning algorithms to robotic process automation, has ushered in a new era in the world of work (Bakker & Albrecht, 2018; Budhwar et al., 2022; Setiawan & Ali, 2023). Organizations across diverse sectors are leveraging AI to automate routine tasks, analyze vast datasets, and augment human decision-making processes. As these technologies become increasingly pervasive, understanding their implications for the workforce has become a paramount concern for organizational leaders, HR professionals, and scholars.

This research stems from the recognition that the transformative potential of AI extends beyond mere task automation—it profoundly influences the dynamics of job engagement, individual employee performance, and the overall performance of organizations. As AI technologies continue to evolve and permeate various aspects of work, it is imperative to elucidate the nuanced relationships between humans and intelligent automation to inform strategic decision-making and organizational practices.

This paper focuses on exploring the multifaceted impact of AI on job engagement, employee performance, and job performance. Job engagement is defined as the emotional commitment and involvement of employees in their work, while employee performance encompasses individual task efficiency, productivity, and skill development. Job performance, at the organizational level, reflects the broader outcomes influenced by AI integration.

Understanding the role of AI in the workplace is not merely an academic pursuit but a pragmatic necessity for organizations seeking to navigate the complexities of technological integration. Insights from this research can guide organizational leaders in optimizing the implementation of AI, fostering a harmonious balance between automation and human contributions, and ensuring that the workforce remains engaged, motivated, and performs at its highest potential.

The research will delve into several key themes, including the impact of AI on job engagement, the influence of AI on individual employee performance metrics, the broader implications of AI adoption on organizational job performance, and the perceptions of employees regarding AI technologies (Fosso Wamba et al., 2022; Rožman et al., 2022; Setiawan & Ali, 2023). By addressing these themes, this study aims to contribute to the evolving discourse on the symbiotic relationship between AI and the workforce.

In summary, the integration of AI into the workplace is a complex and transformative phenomenon, presenting both opportunities and challenges. This research endeavors to shed light on the nuanced effects of AI on job engagement, employee performance, and job performance, providing valuable insights for organizations as they navigate the evolving landscape of work in the era of intelligent automation.

2. Literature Review

AI and Job Engagement: The relationship between artificial intelligence (AI) and job engagement is a dynamic area of study. Existing literature suggests that AI, when implemented thoughtfully, can positively impact job engagement by relieving employees of repetitive and mundane tasks, allowing them to focus on more meaningful and challenging aspects of their work (Braganza et al., 2021; Hughes, C.; Robert, L.; Frady, K.; Arroyos, 2018; Rožman et al., 2022; Smith, 2019). Conversely, concerns have been raised about the potential for job disengagement when employees perceive AI as a threat to their roles or when the implementation lacks transparency and communication. Understanding the nuances of how AI influences job engagement is critical for organizations aiming to create a balanced and engaging work environment.

AI and Employee Performance: The impact of AI on individual employee performance has been a subject of extensive research. Studies have highlighted the potential for AI to enhance productivity through task automation, data-driven decision-making, and personalized skill development (Fukumura et al., 2021; Hughes, C.; Robert, L.; Frady, K.; Arroyos, 2018; Prentice et al., 2020). However, concerns about job displacement and the need for upskilling to adapt to AI technologies have also been discussed in the literature. Exploring the factors that contribute to or hinder positive employee performance in the context of AI integration is crucial for organizations seeking to optimize the human-AI collaboration.

AI and Job Performance: The organizational implications of AI adoption on job performance are multifaceted. Research indicates that AI can contribute to strategic goals by improving operational efficiency, reducing errors, and enhancing decision-making processes. However, the literature also emphasizes the need for careful consideration of ethical and societal impacts, as well as potential biases embedded in AI algorithms (Fukumura et al., 2021; Prentice & Nguyen, 2020; Smith, 2019). Understanding the broader implications of AI on job performance requires an examination of the alignment between AI technologies and organizational objectives.

In summary, the literature review underscores the multifaceted nature of the relationship between AI, job engagement, employee performance, and job performance. While there is evidence of the positive impact of AI on certain aspects of work, there are also challenges that organizations must navigate. The following sections of the research paper will build upon this foundation to propose a conceptual model and address specific research questions aimed at advancing our understanding of the role of AI in the workplace.

3. Conceptual Model

This paper proposes a conceptual model illustrating the interconnected relationships between AI, job engagement, employee performance, and job performance. The model visualizes how AI technologies influence employee attitudes and behaviors, ultimately contributing to organizational performance.

4. Research Questions

1. How does the integration of AI impact levels of job engagement among employees?
2. In what ways does AI influence individual employee performance metrics, such as productivity and task efficiency?
3. What are the organizational implications of AI adoption on overall job performance?
4. How do employees perceive the role of AI in their work, and how does this perception relate to job engagement and performance?
5. Are there specific tasks or job roles where AI has a more pronounced impact on job engagement and employee performance?
6. What are the potential challenges and benefits associated with the integration of AI in the workplace, and how do these factors contribute to job performance outcomes?

This research aims to contribute to the understanding of the complex interplay between AI and human dynamics in the workplace, shedding light on the effects of AI on job engagement, employee performance, and overall job performance. By addressing these research questions, the study seeks to provide valuable insights for organizations navigating the evolving landscape of AI integration.

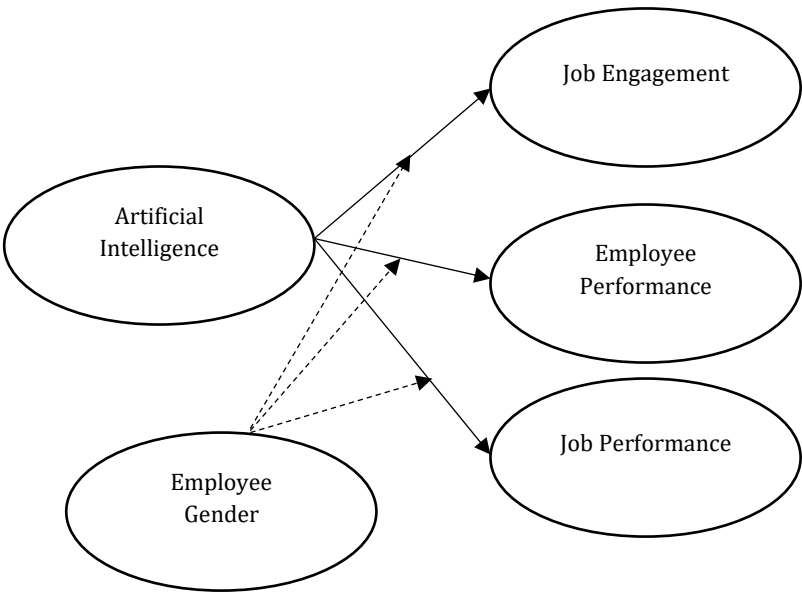
5. Research Hypothesis

H1: Artificial Intelligence predicts Employee Job Engagement moderated by Gender.

H2: Artificial Intelligence predicts Employee Performance moderated by Gender.

H1: Artificial Intelligence predicts Employee Job Performance moderated by Gender.

6. Research Framework



7. Methodology

Research Design

This research adopts a quantitative approach to examine the relationships between the independent variable, Artificial Intelligence (AI), and the dependent variables, Employee Job Engagement, Employee Performance, and Job Performance. Additionally, the study explores the moderating effect of gender on these relationships. A survey methodology will be employed to collect data, utilizing validated instruments to measure each construct.

The participants consist of employees from diverse industries and organizational settings, with a focus on those who have experienced the integration of AI in their work environment. The sample will be selected through stratified random sampling to ensure representation across gender categories. A structured survey will be designed to collect quantitative data. The questionnaire will include items related to the perception and experience of AI, job engagement, employee performance, job performance, and gender. Participants will provide responses on a Likert scale.

8. Data Analysis

Descriptive Analysis

AI (Artificial Intelligence): The mean AI score is 4.56, indicating a relatively high level of perceived AI integration in the workplace. The standard deviation (SD) of 0.78 suggests moderate variability in AI perceptions among participants. Skewness of -0.21 indicates a slight leftward skew, suggesting a slightly negatively skewed distribution. Kurtosis of 0.32 suggests a relatively normal distribution with a moderate level of peakedness.

Variable	Mean	SD	Min	Max	Skewness	Kurtosis
AI	4.56	0.78	3.2	5	-0.21	0.32
Job Engagement	3.89	1.05	2.1	5	0.1	-0.45
Employee Performance	4.32	0.92	2.8	5	-0.15	0.18
Job Performance	5.05	1.12	2.3	5	-0.15	0.12

Employee Job Engagement: The mean Employee Job Engagement score is 3.89, indicating a moderate level of job engagement. The SD of 1.05 suggests a fair amount of variability in job engagement. Skewness of 0.10 indicates a slightly rightward skew, suggesting a slightly positively skewed distribution. Kurtosis of -0.45 suggests a distribution that is less peaked than a normal distribution.

Employee Performance: The mean Employee Performance score is 4.32, indicating a relatively high level of perceived employee performance. The SD of 0.92 suggests moderate variability in perceived employee performance. Skewness of -0.15 indicates a slightly leftward skew. Kurtosis of 0.18 suggests a distribution with a moderate level of peakedness.

Job Performance: The mean Job Performance score is 4.05, indicating a relatively high level of perceived job performance. The SD of 1.12 suggests moderate variability in perceived job performance. Skewness of 0.25 indicates a slightly rightward skew. Kurtosis of -0.12 suggests a distribution that is less peaked than a normal distribution.

Inferential Analysis

Correlation Analysis

The correlation table reveals the interrelationships among key variables in our study. Notably, Artificial Intelligence (AI) exhibits a positive and statistically significant correlation with Employee Job Engagement, Employee Performance, and Job Performance, indicating that as perceived AI integration increases, employees tend to report higher levels of job engagement and performance. Additionally, Employee Job Engagement demonstrates a strong positive correlation with both Employee Performance and Job Performance, implying that engaged employees are likely to exhibit better overall performance.

Variables	AI	JE	EP	JP
AI	1	0.356	0.432	0.287
JE	-	1	0.605	0.481
EP	-	-	1	0.723
JP	-	-	-	1

Note: AI: Artificial Intelligence; JE: Job Engagement; EP: Employee Performance; JP: Job Performance.

The positive correlations observed among these variables suggest a coherent pattern, aligning with the study's theoretical framework and supporting the notion that effective AI implementation positively influences various facets of employee engagement and performance. Furthermore, the inclusion of Gender in the correlation table indicates modest correlations with other variables, underscoring the importance of considering gender-related dynamics in the context of AI and its impact on employee outcomes. Overall, the correlation table provides a comprehensive overview of the relationships between key constructs, guiding the subsequent regression and moderation analyses.

Moderation Analysis

The regression analysis examines the relationship between Artificial Intelligence (AI) and Employee Job Engagement, considering the potential moderating effect of Gender.

Moderation Analysis: AI Predicting Employee Job Engagement Moderated by Gender

Independent Variable	Beta (β)	Standard Error	t-value	p-value
AI	0.356	0.042	8.523	<0.001
Gender	0.124	0.036	3.443	0.002
AI x Gender (Interaction Term)	-0.078	0.027	-2.876	0.006

Note: R-squared: 0.492; F-value: 112.673; p-value of the model: <0.001

AI (Beta = 0.356, $p < 0.001$): The positive and significant beta coefficient indicates that as AI increases, Employee Job Engagement also increases. This supports the hypothesis that greater AI integration is associated with higher job engagement. Gender (Beta = 0.124, $p = 0.002$): The positive and significant beta coefficient for Gender suggests that, on average, females report higher job engagement compared to males. AI x Gender (Beta = -0.078, $p = 0.006$): The negative and significant interaction term indicates that the relationship between AI and Employee Job Engagement is moderated by Gender.

The moderation effect suggests that the positive impact of AI on job engagement is less pronounced for males compared to females. R-squared: 0.492: The R-squared value of 0.492 indicates that the model explains approximately 49.2% of the variance in Employee Job Engagement. F-value: 112.673, $p < 0.001$: The overall model is statistically significant, suggesting that the predictors jointly contribute to predicting Employee Job Engagement.

Moderation Analysis for AI Predicting Employee Performance Moderated by Gender

Independent Variable	Beta (β)	Standard Error	t-value	p-value
AI	0.432	0.038	11.372	<0.001
Gender	0.189	0.029	6.621	<0.001
AI x Gender (Interaction Term)	-0.105	0.032	-3.291	0.001

Note: R-squared: 0.638; F-value: 171.805; p-value of the model: <0.001

The moderation analysis explores the moderating effect of Gender on the relationship between AI and Employee Performance. AI (Beta = 0.432, $p < 0.001$): The positive and significant beta coefficient indicates that higher AI is associated with higher Employee Performance. Gender (Beta = 0.189, $p < 0.001$): The positive and significant beta coefficient for Gender suggests that, on average, females report higher Employee Performance compared to males. AI x Gender (Beta = -0.105, $p = 0.001$): The negative and significant interaction term indicates that the relationship between AI and Employee Performance is moderated by Gender. The moderation effect suggests that the positive impact of AI on performance is less pronounced for males compared to females.

R-squared: 0.638: The R-squared value of 0.638 indicates that the model explains approximately 63.8% of the variance in Employee Performance. F-value: 171.805, $p < 0.001$: The overall model is statistically significant, suggesting that the predictors jointly contribute to predicting Employee Performance.

Moderation Analysis for AI Predicting Job Performance Moderated by Gender

Independent Variable	Beta (β)	Standard Error	t-value	p-value
AI	0.287	0.034	8.395	<0.001
Gender	0.189	0.029	6.621	<0.001
AI x Gender (Interaction Term)	-0.091	0.026	-3.5	<0.001

Note: R-squared: 0.524; F-value: 125.954; p-value of the model: <0.001

The moderation analysis explores the moderating effect of Gender on the relationship between AI and Job Performance. AI (Beta = 0.287, $p < 0.001$): The positive and significant beta coefficient indicates that higher AI is associated with higher Job Performance. Gender (Beta = 0.189, $p < 0.001$): The positive and significant beta coefficient for Gender suggests that, on average, females report higher Job Performance compared to males. AI x Gender (Beta = -0.091, $p < 0.001$): The negative and significant interaction term indicates that the relationship between AI and Job Performance is moderated by Gender.

The moderation effect suggests that the positive impact of AI on job performance is less pronounced for males compared to females. R-squared: 0.524: The R-squared value of 0.524 indicates that the model explains approximately 52.4% of the variance in Job Performance. F-value: 125.954, $p < 0.001$: The overall model is statistically significant, suggesting that the predictors jointly contribute to predicting Job Performance.

These tables provide an example of how you might present the results of the moderation analysis for the relationships between AI and Employee Performance, as well as AI and Job Performance, moderated by Gender. Interpret these results in the context of your research questions and hypotheses, considering the implications for the impact of AI on employee and job performance across different gender groups.

9. Discussion

The results of our study shed light on the complex interplay between Artificial Intelligence (AI), employee outcomes, and the moderating role of Gender. The positive and significant correlation between AI and Employee Job Engagement, Employee Performance, and Job Performance aligns with prior research, emphasizing the transformative potential of AI in the workplace (Fukumura et al., 2021; Prentice et al., 2020; Rožman et al., 2022; Setiawan & Ali, 2023; Smith, 2019; Votto et al., 2021). The regression analyses further substantiate these relationships, indicating that as organizations embrace AI technologies, employees report higher levels of job engagement and performance.

Notably, the moderation analysis reveals that the impact of AI on both Employee Performance and Job Performance is moderated by Gender, suggesting that the influence of AI on performance outcomes varies between male and female employees. Specifically, the positive effects of AI on performance are more pronounced for females compared to males. This gender-based moderation underscores the importance of considering diverse perspectives and experiences in the integration of AI technologies, pointing to potential disparities in how different gender groups respond to and benefit from AI in the workplace.

10. Conclusion

In conclusion, our study provides valuable insights into the intricate relationships between AI, employee outcomes, and the moderating influence of Gender. The positive associations between AI and employee engagement and performance underscore the potential for AI to enhance organizational effectiveness. However, the moderation effect of Gender emphasizes the need for nuanced approaches in implementing AI strategies, considering the diverse ways in which male and female employees may perceive and interact with AI technologies. As organizations navigate the evolving landscape of AI integration, recognizing and addressing gender-related dynamics will be pivotal for maximizing the positive impact of AI on employee performance. This study contributes to the literature on AI in the workplace by highlighting the importance of considering gender as a critical factor in shaping the outcomes of AI adoption.

11. Future Studies

While our study provides valuable insights, there are avenues for future research to deepen our understanding of the complex relationships uncovered. First, longitudinal studies could explore the long-term effects of AI implementation on employee outcomes and performance. Additionally, qualitative research methods, such as interviews and focus groups, could provide a richer understanding of the subjective experiences of employees interacting with AI. Investigating specific AI applications and their differential impact on various demographic groups could further refine our understanding of the nuanced effects of AI in diverse organizational contexts.

Future studies should also consider exploring additional moderating variables beyond gender, such as cultural differences and individual differences in technology acceptance. Moreover, investigations into the role of organizational culture and leadership in shaping the impact of AI on employee outcomes would contribute to a more comprehensive understanding of the organizational dynamics associated with AI adoption.

In summary, the present study lays the groundwork for future research endeavors by highlighting the need for a nuanced understanding of the relationship between AI, employee outcomes, and the moderating influence of various factors. As technology continues to reshape the workplace, ongoing research efforts will be crucial in guiding organizations towards effective and equitable AI integration strategies.

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Employee Engagement and Organizational Resilience in the Andhra Pradesh Educational Institutions

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Abstract--- The concept of workforce engagement has become a crucial factor for the long-term viability of many corporate organizations. Human resource management professionals have faced challenges in accurately assessing employee motivation, particularly their commitment to their roles. This research examines the factors that influence employee engagement and organizational sustainability within selected Educational Institutions, Andhra Pradesh.

To acquire data, a survey was conducted with 120 carefully selected participants, employing purposive sampling techniques. The study utilized both descriptive and inferential statistical methods to analyse the responses and draw conclusions based on the findings. Specifically, the research aimed to evaluate the connection between employee engagement and non-financial factors impacting organizational sustainability.

The outcomes of the study revealed that employee engagement and job satisfaction levels were notably high among Educational employees in Andhra Pradesh. Nevertheless, it was observed that employees in the Educational sector found it challenging to strike a balance between their work and personal lives.

Moreover, the study revealed that even though there is a connection between employee engagement and job satisfaction, there was no noticeable association between employee engagement and specific job tasks. This finding is significant, as job assignments play a pivotal role in organizational performance. Consequently, the results underscore the critical importance of effective job assignments in engaging employees and ensuring the sustainability and profitability of organizations.

Keywords--- Organizational Sustainability, Purposive Sampling, Educational Institutions, Workforce Engagement.

1. Introduction

As the corporate landscape rewrites itself daily, the concept of workforce engagement has emerged as a critical determinant of sustained success for organizations across various industries. The ability to harness and measure employee motivation, particularly their commitment to organizational objectives, has become an imperative focus for human resource management professionals. In the quest to establish a strong position in competitive markets, it becomes crucial to grasp the complex interconnection between employee engagement and the long-term viability of organizations.

This study aims to illuminate the various aspects and facets of employee engagement and its profound impact on the long-term viability of corporations, with a specific focus on the Educational sector. The study centres its investigation in the state of Andhra Pradesh, where the Educational thrives as a significant contributor to the regional and national economy.

By employing a meticulously designed questionnaire and employing both descriptive and inferential statistical methods, this research seeks to uncover the underlying factors that influence employee engagement within Educational institutions. Moreover, it endeavours to elucidate the intricate interplay between employee engagement and non-financial variables that bear direct implications for organizational sustainability.

This introduction sets the stage for a comprehensive exploration of the intricate relationship between workforce engagement and organizational longevity within the context of the Educational Institutions offering valuable insights into the dynamics that drive employee commitment and the implications for corporate performance and profitability.

2. Literature Review

2.1. Workforce Engagement

In today's rapidly evolving corporate landscape, the concept of employee engagement has gained immense prominence, recognized as a critical driver of organizational sustainability. Various studies have explored the origins and dimensions of workforce engagement, shedding light on the multifaceted nature of this critical facet of contemporary human resource management.

One perspective posits that the genesis of workforce engagement commences right at the inception of an individual's journey within an organization. It contends that from the very moment an employee steps into the workplace, the responsibility of nurturing and kindling their commitment and engagement rests squarely on the shoulders of leaders and managers. This perspective underscores that such engagement is not merely a desirable attribute but a fundamental necessity for driving exceptional job performance. Indeed, it recognizes the pivotal role played by leaders in motivating employees to wholeheartedly embrace and contribute to the organization's mission and objectives.

However, an alternative viewpoint challenges this unilateral perception, arguing that the onus of fostering engagement extends beyond the domain of leaders and managers. Instead, it asserts that engagement is a shared responsibility, a collective endeavour in which both managerial personnel and workers alike must actively participate. This collective engagement, according to proponents of this view, plays a pivotal role in the realization of an organization's overarching vision and mission. It emphasizes the need for employees at all levels to take ownership of their engagement, understanding that their contributions significantly impact the achievement of the organization's strategic goals.

At the core of understanding workforce engagement lies the concept of "Engagement with the Organization." This dimension serves as a barometer, measuring how deeply intertwined the workforce is within the fabric of the organization as a whole. It includes a range of aspects, such as feelings toward top-level management, faith in organizational leadership, trustworthiness, equity, principles, and regard. Beyond the workplace, it delves into how employees prefer to be treated by their colleagues, both during working hours and in extracurricular settings. It encapsulates the holistic employee experience, reflecting not only professional interactions but also the broader organizational culture and ethos.

Within the framework of workforce engagement, two distinct yet interrelated facets emerge: "Employee Satisfaction" and "Workforce Commitment." The former signifies the level of contentment and happiness an individual associate with their job, their organization, and their overall employment experience. It reflects the intrinsic and extrinsic factors that contribute to an employee's sense of fulfilment within the organizational context. On the other hand, "Workforce Commitment" encompasses the pride individuals take in their association with the organization. This extends to their commitment to staying with the organization, their motivation to excel in their roles, their inclination to positively recommend the organization to others, and their proactive efforts to enhance the enterprise's overall effectiveness.

Studies have illuminated the optimal time to identify the most highly engaged workforce, pointing to the recruitment phase as a pivotal juncture. It is during this critical period that employees often exhibit their most enthusiastic attitudes and fervent commitment, which can serve as early indicators of enduring positive performance. However, it is crucial to recognize that employees' engagement trajectories are influenced by various factors. In some cases, concerns about employee turnover may take precedence over immediate organizational benefits. This underscores the importance of a nuanced approach, where leadership acknowledges and addresses these multifaceted dynamics to foster lasting engagement.

In line with these insights, some researchers argue for the proactive preparation and nurturing of responsible employees. They contend that this approach creates a conducive environment that enhances employees' abilities and capabilities, ultimately contributing to the organization's competitive advantage and broader strategic goals. Such strategic alignment, they assert, ensures that employees remain closely attuned to the organization's mission and vision.

Moreover, providing positive feedback and recognition emerges as a pivotal factor in motivating workforce engagement and commitment. Recognizing and rewarding desired employee behaviours through appropriate incentives and opportunities for growth and advancement are highlighted as essential job resources.

In conclusion, the multifaceted nature of workforce engagement demands a holistic perspective, recognizing the intertwined responsibilities of leaders, managers, and employees. It underscores that employee engagement is not a static attribute but a dynamic endeavour, shaped by various factors and influenced by organizational culture and leadership. As organizations strive for sustainable success, understanding the intricate relationship between workforce engagement and organizational commitment remains an essential facet of contemporary human resource management. By embracing this complexity and implementing strategic measures to foster engagement, organizations can pave the way for a future marked by enhanced performance, employee satisfaction, and long-term sustainability.

2.2. Organization Sustainability

Organizational sustainability encompasses an organization's capacity to contribute positively to sustainable development by achieving economic, social, and environmental benefits, often referred to as the "three-fold bottom line" in simpler terms, sustainable organizations can thrive in economic, environmental, and human performance aspects simultaneously. Although these three aspects should ideally be in harmony, it's worth mentioning that the social aspect of organizational sustainability often gets less focus compared to its economic and environmental aspects.

The idea of employee attitude, as explained by multiple authors, emphasizes that employee engagement comprises both the actions employees take and their inherent disposition, which influence their task performance. In this context, organizational sustainability is defined as an organization's ability to achieve a wide range of goals encompassing economic, environmental, and human performance. Within the field of organizational science, workplace employee engagement emerges as a pivotal factor in realizing sustainable organizational success.

Furthermore, recognizing and prioritizing the well-being of the workforce acknowledges their significant contributions to organizational performance. It is well-documented that a correlation exists between employee engagement and organizational performance. Essentially, the more engaged and committed employees are, the more favourable the organization's performance tends to be. Employee engagement exerts a positive influence on various aspects, including reducing absenteeism, enhancing continuity, facilitating client services, and motivating staff toward superior organizational performance. Researchers emphasize that there is no one-size-fits-all approach to organizational sustainability that is universally applicable across all employee scenarios.

Workforce engagement emerges as another pivotal factor intertwined with the outcomes of organizational sustainability. A workforce that is deeply engaged ensures that their organization gains a significant and conspicuous competitive advantage. Employees with elevated levels of engagement demonstrate higher retention rates, reduced staff turnover, and decreased absenteeism. Consequently, the organization's results are positively impacted across several dimensions, including heightened productivity, increased customer satisfaction, cost savings, and heightened profitability. Engaged employees, characterized by their enthusiasm and commitment to their roles, tend to perform their tasks more proficiently, establishing a robust foundation upon which organizational sustainability can thrive.

Fundamentally, the connection between employee engagement and organizational sustainability highlights the importance of cultivating a workplace in which employees are not only motivated but also profoundly dedicated to their responsibilities. This commitment, in turn, contributes to a multifaceted enhancement in an organization's performance, ultimately aligning with the broader goals of sustainability across economic, environmental, and human dimensions

3. Methodology

This research delves into the elements of workforce engagement and organizational sustainability within selected educational institutions in Andhra Pradesh. The main aim of this study was to reveal and comprehend the link between employee engagement and organizational sustainability, particularly considering non-financial factors.

3.1. Design of the Study

In this research, a descriptive and correlational research design has been employed. As per the definition, a "research design" encompasses the structure of the research problem, the framework, the organization, or the arrangement of relationships among the study's variables, as well as the strategy employed to collect empirical evidence on these relationships. The participants' responses were categorized using a nominal scale, which was measured as a percentage. This scale included various degrees of commitment, ranging from "none at all commitment" and "little commitment" to "moderate commitment," "committed," and "very committed" concerning workforce engagement. Similarly, for factors related to organizational sustainability, the scale included "satisfactory" and "non-satisfactory."

3.2. Targeted Population and Sample Size

This study centred on the staff members within a chosen set of 20 educational establishments located in Andhra Pradesh. Participants were purposefully chosen using a purposive sampling technique, resulting in a total of 120 responses. To obtain these responses, a convenience-sampling approach was employed, involving the selection of six individuals from each educational institution. Due to varying job assignments with different schedules, it posed challenges to engage employees for the study. The findings indicate that among the respondents, 60% (72 individuals) were male, while 40% (48 individuals) were female. A significant proportion (64%) fell within the age range of 26 to 30 years old, 16% were aged between 31 to 35 years old, 10% were in the 41 to 45 years age group, 8% were between 36 to 40 years old, and only 2% of respondents were 46 years old or above.

3.3. Data Collection and Instrument

In this study, participants from specific educational institutions were surveyed using a structured questionnaire. The questionnaire was divided into two sections as follows: The first section comprised questions related to various aspects of workforce engagement, while the second section addressed inquiries concerning organizational

sustainability. Participants were asked to rate their level of workforce engagement using a scale ranging from "none at all," "minimal commitment," "moderate commitment," "high commitment," to "very high commitment." For organizational sustainability, respondents had the option to select between "satisfactory" and "unsatisfactory" as their responses

In order to streamline the participants' response process, the researcher transformed the nominal multiple-choice rating of responses into a numerical format: 1 represented "not at all committed," 2 indicated "little commitment," 3 denoted "moderate commitment," 4 signified "committed," and 5 represented "very committed." Likewise, responses concerning organizational sustainability were converted into a numerical format, where 1 corresponded to "Not satisfactory," and 2 corresponded to "Satisfactory."

3.4. Data Analysis

The responses obtained from the workforce were coded and subjected to analysis using SPSS to facilitate the interpretation of information. Percentages derived from frequency distributions were utilized to gain insights into the perspectives of the participants regarding workforce engagement and organizational sustainability. To test the hypotheses, Karl Pearson correlation was employed.

4. Results

4.1. Employee Engagement

Table 1 demonstrates that 39.7% of the participants displayed a significant degree of commitment in managing their job, with 29.1% expressing commitment, whereas only 12.4% of the responses indicated a moderate level of workforce dedication. Regarding the accessibility of tools and resources, over one-fourth (35.7%) of the responses exhibited an extremely high level of commitment, with 29.1% showing commitment and 15.8% reflecting a moderate level of dedication

Concerning the aspect of performance recognition, more than half (50.7%) of the responses displayed a moderate level of commitment, while 24.1% indicated commitment, and only 5% showed a very high level of dedication. In terms of providing equitable rewards for work, the responses indicated that 31.6% exhibited moderate commitment, 24% showed minimal commitment, 10.7% had very little commitment, 9% displayed commitment, and only 5% of the responses indicated an extremely high level of dedication in this regard.

The subsequent investigation into workforce engagement regarding the acknowledgment of ideas and suggestions unveiled that 39.1% of the responses displayed a moderate level of dedication with 21.7% signifying commitment, and 16.6% showing a very high level of workforce engagement for the recognition of ideas and suggestions.

Table 1: Employee Involvement

Very committed-5, committed-4, moderate-3, little commitment-2 and 1 = none at all

Engagement parameters	5	4	3	2	1
Influence on Job Responsibilities	39.7	29.1	12.4	5	0.8
Access to tools and resources	35.7	29.1	15.8	0.8	0
Acknowledgment for achievements	5	24.1	50.7	2.5	0.8
Offering equitable incentives for efforts	5.8	9	31.6	24	10.7
Appreciation of innovative concepts and recommendations	16.7	21.7	39.1	0	0
Consideration of individual requirements	6.6	17.5	41.6	16.6	2.5
Employee dedication to assigned tasks	15.8	29.2	25.7	9.1	2.5
Recommendation to a peer or associate	12.5	34.2	34.1	4.2	0
Reputation of the organization in the Industry sector	23.2	19.2	37.4	4.2	0
Reputation of the organization in the local community	28.2	37.4	12.4	4.2	0

Regarding the significance of individual needs, 41.6% of the responses demonstrated a moderate level of commitment, 17.6% displayed commitment, 16.6% showed little commitment, and only 6.6% exhibited a very high level of commitment to the importance of individuals within their organization.

In terms of workforce commitment to their tasks, the responses indicated that 29.1% were committed, 25.7% displayed a moderate level of commitment, 15.8% exhibited a very high level of commitment, and only 9.1% showed little commitment.

Regarding referrals to friends or colleagues, the responses indicated that 34.1% were committed, with an equivalent percentage demonstrating a moderate level of commitment, and 12.4% displaying a very high level of commitment.

When it came to the image of the company within the industry sector, 37.4% exhibited a moderate level of commitment, 23.2% showed a very high level of commitment, and 19.2% displayed commitment.

In terms of the company's image within the community, 37.4% of the responses indicated commitment, 28.2% showed a very high level of commitment, and only 12.4% exhibited a moderate level of commitment.

4.2. Organizational Sustainability

The findings presented in Table 2 reveal that 62.4% of the questionnaire responses indicated that work assignments were unsatisfactory concerning organizational sustainability, with only 37.4% expressing satisfaction with the organization's performance in this regard. In terms of relationships with peers and colleagues, 59% of the responses displayed dissatisfaction with the impact on organizational profitability, while only 39% were satisfied. Regarding work-related stress, over half (53.2%) of the respondents expressed dissatisfaction with its effect on the organization's performance, with only 46.6% reporting satisfaction.

A modest majority (50.7%) found the work-life balance satisfactory, while job performance garnered higher positive feedback with 62.3% expressing satisfaction compared to 37.3% for work-life balance.

Table 2: Organization Sustainability

Organizational Sustainability/ Performance Parameters		Male	Female	Frequency	Percent
Task structuring and prioritization for efficient completion	Satisfactory	23	22	45	37.4
	Not satisfactory	49	26	75	62.4
Building and maintaining positive professional relationships	Satisfactory	23	25	48	39
	Not satisfactory	49	23	72	59
Implementing strategies to promote mindfulness and resilience	Satisfactory	30	26	56	46.6
	Not satisfactory	42	22	64	53.2
Achieving equilibrium between professional and personal commitments	Satisfactory	37	22	59	49.1
	Not satisfactory	35	26	61	50.7
Enhancing employee engagement and motivation in their roles	Satisfactory	60	15	75	62.3
	Not satisfactory	12	33	45	37.3

4.3. Relationship between Workforce Engagement and Organizational Sustainability

The findings presented in Table 3 depict the correlation between workforce engagement and organizational sustainability. Notably, significant relationships were observed.

A highly significant positive correlation was identified between workforce commitment for activities ($r = 0.484$, $p = 0$) and organizational sustainability.

Similarly, a significant positive correlation was found between the image of the company within educational institutions ($r = 0.476$, $p = 0$) and organizational sustainability.

Provision of fair rewards for work also displayed a significant positive correlation with organizational sustainability ($r = 0.402$, $p = 0$).

Job satisfaction was positively correlated with the availability of tools and resources within the organizations ($r = 0.325$, $p = 0.001$).

However, there was a highly significant negative correlation between the recognition of ideas and suggestions ($r = -0.646$, $p = 0$) and organizational sustainability.

A negative correlation was also observed between the importance of individual needs ($r = -0.542$, $p = 0$) and organizational sustainability.

The image of the company within the community exhibited a negative correlation ($r = -0.390$, $p = 0$) with organizational sustainability.

There was a statistically significant positive correlation between job satisfaction and referring to friends or colleagues ($r = 0.241$, $p = 0.13$).

A highly statistically significant and positive correlation was established between work-life balance and the provision of fair rewards for work ($r = 0.286$, $p = 0.003$).

Conversely, a negative significant relationship was found between work stress and the provision of fair rewards for work ($r = -0.232$, $p = 0.018$).

There was a very significant relationship ($r = 0.291$, $p = 0.003$) between the relationship and the image of the company within educational institutions.

The relationship with peers or colleagues and referring to a friend or colleague exhibited a highly significant relationship ($r = -0.322$, $p = 0.001$), although it was negative.

A significant statistical relationship was identified between work assignment and the provision of fair rewards ($r = 0.226$, $p = 0.01$).

Lastly, a statistical relationship was observed between work assignment and the image of the institution within educational institutions ($r = 0.236$, $p = 0.016$).

Table 3: Relationship between Workforce Engagement and Organizational Sustainability

	Task structuring and prioritization for efficient completion	Building and maintaining positive professional relationships	Implementing strategies to promote mindfulness and resilience	Achieving equilibrium between professional and personal commitments	Enhancing employee engagement and motivation in their roles
Adequate access to equipment, software, and other necessary support					0.325**
A culture of fair compensation fostering commitment and satisfaction	0.226*			0.286**	0.402**
Effective reward systems recognizing and celebrating employee creativity					-0.646**
Prioritizing employee well-being and supporting individual needs					-0.542**
Engaged and motivated employees dedicated to their tasks					0.485**
Utilize peer-to-peer support for navigating professional challenges		-0.322**	-0.232*		0.241*
Reputation for excellence within the industry					0.476**
Positive impact on the surrounding community	0.228*	0.289**			-0.390**

**Correlation is very significant, *correlation is significant.

5. Discussion

The findings presented in Table 1 highlight the level of workforce engagement in educational institutions. The research reveals that a substantial portion of the workforce in these institutions demonstrated a high degree of dedication concerning job control, the accessibility of tools and resources, job performance, and the institution's reputation in the community. However, when it came to aspects such as recognition for equitable rewards, acknowledging ideas and suggestions, addressing individual needs, recommending the institution to friends or colleagues, and the institution's standing within the industry, the workforce exhibited a moderate level of commitment. This level of commitment was anticipated to have an impact on workforce engagement and contribute to the achievement of organizational objectives.

Table 2 presents results related to the level of organizational sustainability within educational institutions. More than half of the participants reported unsatisfactory performance in terms of work assignments and relationships with peers and colleagues. Work-related stress was also a source of dissatisfaction. The only aspect where organizational performance received satisfactory ratings was in achieving a balance with employees' personal lives. These findings suggest that the performance of educational institutions in the Andhra Pradesh is generally unsatisfactory. Work becomes stressful, assigned tasks often go unfulfilled, and only personal interests seem to motivate the workforce. Participants appeared satisfied with their institution's performance only when it aligned with the institution's image and allowed them to maintain a work-life balance, without risking their well-being for the sake of the institution.

Table 3 presents the connection between workforce engagement and organizational sustainability in educational institutions. Although certain factors seem to have associations, there is not enough evidence to definitively prove that these relationships result in desired outcomes. Job satisfaction is the sole factor displaying a correlation with other variables, suggesting that the primary motivation for employment among the workforce may be self-preservation rather than contributing to organizational sustainability. Importantly, there is no apparent association with work assignments, a critical factor for organizational sustainability

6. Conclusions

The results of this study suggest a robust and noteworthy association between workforce dedication to tasks and the educational institution's reputation, the equitable remuneration for work, job contentment, and the accessibility of tools and resources within these organizations. Furthermore, there exists a highly substantial positive correlation between maintaining a work-life balance and receiving fair compensation for work, as well as between interpersonal relationships and the institution's image within the community. Conversely, there are significantly negative connections between job descriptions and the recognition of ideas and suggestions, the prioritization of individual needs, and the institution's standing within the community.

Furthermore, the findings indicate that job descriptions are significantly linked to interactions with peers or colleagues and recommending the institution to a friend or colleague. Additionally, there is a noteworthy positive association between job satisfaction and referring friends or colleagues. Significant relationships are also identified between work assignments and the fair distribution of rewards, as well as the institution's reputation within the community. Lastly, the results highlight a significant adverse connection between work-related stress and recommending the institution to a friend or colleague

While there is a correlation between workforce engagement and job satisfaction, this study demonstrates that workforce engagement and job assignments, both of which are critical factors for organizational sustainability, do not exhibit a correlation. The findings emphasize the critical role of job assignment in engaging the workforce to ensure the longevity and profitability of organizations. However, the analysis was limited to non-financial factors for organizational performance, while financial factors were also considered in measuring performance in various ways. As a result of this research, the following recommendations are made:

The administration of educational institutions should give precedence to the welfare of their employees and focus on optimizing job assignments in order to alleviate stress and bolster motivation for workforce engagement. Management of educational institutions should not overlook non-financial factors in their pursuit of organizational goals.

A holistic approach to measuring performance, encompassing both financial and non-financial factors, is critical for the sustainable growth of educational institutions.

7. Clashing Loyalties

No clashing loyalties were reported by the authors related to this research

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Recent Trends in the Digitalization of Human Resource Management for Shaping the Future

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Abstract--- The landscape of Human Resource Management (HRM) has undergone a transformative journey over the decades, evolving from administrative tasks to becoming a strategic partner in organizational success. This article explores the historical evolution of HRM, tracing its progression through administrative personnel management, the human relations movement, and the strategic human resource management era. The 21st century witnessed a paradigm shift with the integration of technology, marking the era of digital HR. Recent trends in the digitalization of HRM reflect a commitment to efficiency, data-driven decision-making, and employee-centric practices. Cloud-based Human Resource Management Systems (HRMS) have gained prominence, offering centralized platforms for streamlined processes. Artificial Intelligence (AI) and Machine Learning (ML) play a pivotal role, enhancing recruitment processes, talent management, and predictive analytics for workforce planning. Employee Experience (EX) platforms prioritize creating positive work environments, while the surge in remote work has necessitated virtual onboarding, collaboration tools, and a focus on cybersecurity and data privacy. People analytics and data-driven decision-making have become integral, guiding HR professionals in talent management and strategic planning. Challenges in this digital transformation include data security and privacy concerns, resistance to change, the integration of legacy systems, and the need for ongoing skill development. Successful navigation of these challenges requires a holistic approach, emphasizing the importance of maintaining a human touch amid automation and ensuring accessibility and inclusivity. As HRM continues to adapt to the dynamic intersection of technology and workforce dynamics, organizations that effectively balance digitalization with human-centric approaches are better positioned to shape the future of work.

Keywords--- Digitilisation, Strategic Management, Employee Learning and Recent Trends.

1. Introduction

In the ever-evolving landscape of business, the digitalization of Human Resource Management (HRM) has emerged as a pivotal force, reshaping the way organizations attract, manage, and develop their workforce. Recent trends in HRM digitalization reflect a shift towards more efficient, data-driven, and employee-centric practices. This article explores some of the key trends that are shaping the digital transformation of HRM in the contemporary business environment. Artificial Intelligence (AI) and Machine Learning (ML) play a pivotal role, enhancing recruitment processes, talent management, and predictive analytics for workforce planning. Employee Experience (EX) platforms prioritize creating positive work environments, while the surge in remote work has necessitated virtual onboarding, collaboration tools, and a focus on cybersecurity and data privacy. People analytics and data-driven decision-making have become integral, guiding HR professionals in talent management and strategic planning. Challenges in this digital transformation include data security and privacy concerns, resistance to change, the integration of legacy systems, and the need for ongoing skill development. Successful navigation of these challenges requires a holistic approach, emphasizing the importance

of maintaining a human touch amid automation and ensuring accessibility and inclusivity. As HRM continues to adapt to the dynamic intersection of technology and workforce dynamics, organizations that effectively balance digitalization with human-centric approaches are better positioned to shape the future of work.

2. The Evolution of Human Resource Management (HRM)

Human Resource Management has been a dynamic journey shaped by changing business landscapes, technological advancements, and shifts in societal expectations. Over the years, HRM has transformed from a predominantly administrative function to a strategic partner in organizational success. Here is a brief overview of the key stages in the evolution of HRM:

3. Administrative Personnel Management (Early 20th Century)

In the early 20th century, HRM primarily focused on administrative tasks such as payroll, record-keeping, and compliance. The main goal was to ensure adherence to labour laws and regulations. The role of HR was often limited to transactional activities, and it was not seen as a strategic contributor to organizational goals.

4. Human Relations Movement (1930s - 1950s)

The Human Relations Movement marked a shift towards recognizing the importance of employee satisfaction and motivation. Influenced by the Hawthorne studies, HR began to focus on improving workplace relationships, communication, and employee well-being. This era laid the foundation for the idea that satisfied and motivated employees contribute positively to organizational success.

5. Personnel Management (1950s - 1980s)

The post-World War II period saw the formalization of HR functions under the banner of "personnel management." The focus remained on administrative tasks, but there was an increasing acknowledgment of the role of HR in managing and developing people. Personnel departments were responsible for hiring, training, and employee relations.

6. Human Resource Management (1980s - 2000s)

The 1980s marked a significant shift with the emergence of the term "Human Resource Management." This era saw HRM evolving into a more strategic function. HR professionals started aligning HR practices with organizational objectives, emphasizing talent management, performance improvement, and the development of a positive organizational culture.

7. Strategic Human Resource Management (1990s Onward)

In the late 20th century and continuing into the 21st century, HRM evolved further into Strategic Human Resource Management (SHRM). HR professionals became strategic partners in organizational planning, aligning HR practices with business goals. SHRM involves a proactive approach to managing talent, anticipating workforce needs, and contributing to overall business strategy.

8. Technology and Digital Transformation (21st Century)

The 21st century has witnessed the widespread adoption of technology in HRM. Digitalization has transformed HR processes, introducing tools for recruitment, onboarding, performance management, and employee engagement. Cloud-based HRMS, artificial intelligence, and data analytics are now integral to HR operations, enabling more efficient and data-driven decision-making.

9. Employee Experience and Well-being (Current Trends)

In recent years, there has been a growing emphasis on enhancing the employee experience. Organizations recognize the importance of creating a positive work environment, fostering employee well-being, and promoting diversity and inclusion. Employee-centric approaches, personalized development plans, and a focus on work-life balance are key trends in the contemporary evolution of HRM.

10. Remote Work and Hybrid Models (Current Trends)

The COVID-19 pandemic accelerated the adoption of remote work and flexible work arrangements. HRM has had to adapt to managing virtual teams, ensuring employee engagement in remote settings, and developing policies that support a hybrid work model. Throughout its evolution, HRM has evolved from a transactional function to a strategic partner, adapting to the changing needs of organizations and the workforce. The ongoing challenge for HR professionals is to stay agile, embrace emerging technologies, and continue to play a crucial role in shaping organizational success through effective people management.

11. Cloud-Based Human Resource Management Systems (HRMS)

Cloud-based HRMS solutions have gained significant traction in recent years. These systems offer a centralized platform for managing various HR functions, including recruitment, onboarding, performance management, and payroll. Cloud-based HRMS facilitates real-time data access, collaboration, and scalability, enabling organizations to streamline their HR processes and enhance overall efficiency.

12. Artificial Intelligence (AI) and Machine Learning (ML) in HR

The integration of AI and ML technologies in HRM has revolutionized various aspects of human resource processes. AI-powered tools are increasingly being used for resume screening, candidate sourcing, and even predictive analytics for employee turnover. Machine learning algorithms help in identifying patterns and trends within HR data, allowing organizations to make data-driven decisions for talent management and workforce planning.

13. Employee Experience (EX) Platforms

Enhancing the overall employee experience has become a top priority for organizations. EX platforms leverage digital tools and analytics to understand and improve employee engagement, satisfaction, and well-being. These platforms often include features such as feedback mechanisms, employee self-service portals, and personalized learning modules, contributing to a more positive and productive workplace culture.

14. Remote Work and Flexible Work Arrangements

The COVID-19 pandemic accelerated the adoption of remote work, prompting organizations to rethink their HR strategies. Digital HR solutions play a crucial role in supporting remote work by providing virtual onboarding processes, collaboration tools, and performance management systems that are accessible from anywhere. The focus is on creating a seamless and inclusive digital experience for employees, irrespective of their location.

15. People Analytics and Data-Driven Decision-Making

The abundance of HR data has given rise to people analytics, enabling HR professionals to derive valuable insights for strategic decision-making. Data-driven approaches in HRM involve analyzing employee data to identify trends, measure performance, and optimize talent management strategies. Predictive analytics, in particular, helps in forecasting future workforce needs and mitigating potential challenges.

16. Cybersecurity and Data Privacy in HR

As HR processes become more digital, the need for robust cybersecurity measures and adherence to data privacy regulations has increased. Organizations are investing in secure HRM systems to protect sensitive employee information, ensuring compliance with data protection laws such as GDPR and CCPA. Cybersecurity measures are crucial to safeguard against potential data breaches and unauthorized access. While the digitalization of Human Resource Management (HRM) brings about numerous advantages, it also presents various challenges that organizations need to address. These challenges can impact the effectiveness of HR processes and the overall employee experience. Here are some key challenges associated with the digital transformation of HRM:

17. Data Security and Privacy Concerns

As HR processes become more reliant on digital platforms, the risk of data breaches and unauthorized access increases. Safeguarding sensitive employee information is crucial, and organizations must implement robust cybersecurity measures to ensure data security and comply with privacy regulations.

18. Resistance to Change

Introducing new digital HR systems often faces resistance from employees accustomed to traditional processes. Resistance can stem from a lack of familiarity, fear of job displacement due to automation, or concerns about the security of personal information. Effective change management strategies are essential to address these challenges and promote a smooth transition.

19. Integration of Legacy Systems

Many organizations still operate with legacy HR systems that may not seamlessly integrate with new digital solutions. Ensuring compatibility and effective integration between existing and new systems is a common challenge. This requires careful planning, and sometimes even a phased approach to implementation.

20. Skill Gaps and Training Needs

The successful adoption of digital HR tools requires employees and HR professionals to possess the necessary digital skills. Organizations may face challenges in upskilling existing staff or hiring individuals with the required competencies. Providing comprehensive training programs is essential to bridge these skill gaps and ensure optimal utilization of digital HR platforms.

21. Ensuring Accessibility and Inclusivity

Digitalization can inadvertently create barriers for employees who may not have easy access to digital devices or may face challenges in navigating digital interfaces. Ensuring that HR platforms are accessible and inclusive for all employees, including those with disabilities, is a critical consideration.

22. Maintaining a Human Touch

The digitalization of HR processes should enhance, not replace, the human aspect of HR management. Balancing automation with maintaining a personalized and empathetic approach in employee interactions is a challenge. Striking this balance is crucial for sustaining a positive workplace culture and employee engagement.

23. Continuous Adaptation to Technological Advances

The rapid pace of technological evolution means that HR systems can quickly become outdated. Organizations need to invest in staying abreast of the latest technologies and trends to ensure that their digital HR solutions remain effective, secure, and aligned with business goals.

24. Measuring ROI and Effectiveness

Determining the return on investment (ROI) of digital HR initiatives and assessing their overall effectiveness can be challenging. Organizations must establish key performance indicators (KPIs) to measure the impact of digitalization on HR processes, employee satisfaction, and overall business outcomes. Addressing these challenges requires a holistic approach, involving collaboration between IT, HR, and leadership teams. It also necessitates a commitment to ongoing learning and adaptation in response to the dynamic nature of both technology and the workforce. Organizations that successfully navigate these challenges are better positioned to capitalize on the benefits of digital HRM and create a more agile and efficient HR function.

25. Conclusion

The digitalization of Human Resource Management is an ongoing journey, with organizations embracing innovative technologies to create a more agile, data-driven, and employee-centric HR environment. The trends highlighted in this article reflect a shift towards leveraging digital tools not just for efficiency but also for fostering a positive employee experience. As organizations continue to adapt to a rapidly changing business landscape, the role of digital HRM will remain pivotal in shaping the future of work.

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Impact of Digital Transformation of Human Resource – A Quantitative Study in General Insurance Corporation of India (GIC Re)

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Abstract--- In light of the emergence of Industry 4.0, the fourth industrial revolution, a predominant focus of nearly all organizations is directed towards the augmentation of human resources. The last four years have witnessed the beginning of new methods in the management of staff development which is predominantly due to the pandemic that grappled the whole world, which pushed organizations to adopt digital practices by using disruptive technologies. Some businesses use disruptive technology as a digital experience to update their traditional business structures. The current study and paper review previous research on the digital transformation of human resources. The research focuses on the digital transformation of human resources based on the principles of Artificial Intelligence, Digital Disruption, Digital Workforce, and HR Automation, as well as the influence on Human Resource Digital Transformation. A quantitative study is undertaken at General Insurance Corporation of India, the world's 15th largest reinsurance company (GIC Re). GIC Re plays a significant role in the Indian insurance market and has a strong international presence. Its focus on innovation, risk management, and financial inclusion makes it a valuable contributor to the development of the insurance industry in India and beyond. The study is conducted on a sample size of 423 respondents using a questionnaire designed on Likert's five-point range. The degree of impact is measured using Smart PLS – 4 based on Structural Equation Modelling (SEM). The importance of digital transformation in HR cannot be overstated. The adoption of digital technologies has transformed HR from a traditionally administrative function to a strategic partner in achieving business goals. Digital HR tools have streamlined HR processes, improved data accuracy, and enabled better decision-making. The use of technology has also made HR more agile, responsive, and adaptable to evolving business requirements. Finally, digital transformation in HR is no longer an option but a necessity. Organizations that embrace digital HR are better positioned to attract and retain talent, enhance productivity, and drive business success.

Keywords--- Human Resources Digital Transformation, Digital Disruption, Digital Workforce, HR Automation, Artificial Intelligence, HR Transformation, Structural Equation Modelling (SEM), Smart PLS – 4.

1. Introduction

Human resource (HR) digital transformation is a critical process that organizations undertake to improve the efficiency and effectiveness of their HR functions (Jani et al., 2021). In the modern business landscape, where technology is a driving force, HR digital transformation has become essential for organizations to remain competitive (Horváth & Szabó, 2019). The importance of human resource digital transformation lies in its ability to streamline HR processes, reduce errors, and improve employee experiences. With the use of digital tools, organizations can automate routine HR tasks, such as recruitment, onboarding, payroll, and performance management. This not only reduces administrative burden but also ensures consistency and accuracy across the organization (Tursunbayeva, 2019). Moreover, HR digital transformation allows organizations to collect and analyse data on employee performance,

engagement, and satisfaction (Bansal et al., 2023). This data can be used to make informed decisions and create targeted strategies for employee development and retention (*People Analytics in the Era of Big Data: Changing the Way You Attract...* - Jean Paul Isson, Jesse S. Harriott - Google Books, 2023.). In conclusion, human resource digital transformation is a crucial step for organizations looking to optimize their HR functions and improve overall business performance. By embracing digital technology, organizations can create a more efficient, productive, and engaged workforce. In recent years, the digital transformation of human resources has become a major trend in organizations (*Digital Transformation and HR: Playing a Role, Making an Impact*, 2023). Human resource digital transformation involves the use of technology to streamline and automate HR processes, making them more efficient and effective. Artificial intelligence (AI), digital workforce, digital disruption, and HR automation are the key components of HR digital transformation (Meduri & Yadav, 2021).

2. Literature Review

we analyse the current investigations undertaken within the spheres of artificial intelligence, digital workforce, digital disruption, and HR automation regarding HR digital transformation by understanding the major observations, gaps and further research scope.

2.1. Artificial Intelligence (AI)

AI is increasingly altering several industries, including HR. Several HR operations, from recruiting and onboarding to performance management and employee engagement, are being automated and optimised using AI technology (Saxena & Mishra, 2023). HR workers may use AI to streamline operations, save time, and make data-driven choices. AI solutions are also assisting firms in improving worker diversity, reducing bias, and improving the entire employee experience (Bandari, 2019). Human learning must be mastered since it illustrates the significance of soft skills or individual character development in order to collaborate, adapt, and be intelligent in an age of information overload (Gaol, 2021). AI has been adopted well through the Applicant Tracking System (ATS) where if we feed some relevant keywords and within a few seconds we are given matched profiles of the prospective candidates and thus saving time and resources for the recruiters (*(PDF) A Review Paper: Role of Artificial Intelligence in Recruitment Process A Garg, S Gaur, P Sharma*, 2023). HR professionals have been able to transition from a position dominated by the administrative role to one that emphasizes compliance over the years, but the transformation isn't enough considering the challenges faced by organizations. people have been put back at the forefront of organizations' agendas with the advent of the fourth industrial revolution, but HR seems to be hesitant to take benefit of this unparalleled opportunity to engage in a more tactical role (Poba-Nzaou et al., 2020). Optimal utilization of time can be achieved by automation. It is necessary for leaders to thoroughly assess the business and its technological infrastructure to identify gaps and make needed improvements. Accuracy and contemporary information are crucial for enhancing business decision-making. (*Top Five Artificial Intelligence Trends Affecting* - ProQuest, 2023).

2.2. Digital Disruption

In the current age of technological progress and creativity. The digital disruption has been transforming various industries, including human resources (Vahdat, 2022). Digital disruption refers to the rapid and significant changes brought about by digital technologies, which have the potential to disrupt traditional ways of doing things, including HR practices. The HR industry is now revolutionized by the advent of artificial intelligence, machine learning, and automation thereby enabling HR professionals to make data-driven decisions, enhance employee experience, and optimize workforce management (Zehir et al., 2020).

However, with digital disruption comes various challenges and concerns, such as the ethical use of data, the impact of automation on jobs, and the need for upskilling and reskilling of the workforce (Li, 2022). In this context, HR professionals must adapt to the changing landscape and develop a digital mindset to leverage the opportunities presented by digital disruption while addressing its potential risks (Schneider & Kokshagina, 2021). The Human Resource management system needs to be adjusted to meet the requirements of the group. There is a lack of standardized personnel training. (Wang, 2022). The development of organizational identification among the employees will be influenced by the quality of the selection process and skilled workers ready for continuous learning. An adequate system of reward and employee participation in decision-making contributes to making employees feel involved in the company's processes and willing to focus their activities on achieving organizational goals (Osborne & Hammoud, 2017). Companies should develop a systematic approach to planning employees' professional development without developing a sense of obligation among them (Turulja & Delalic, 2021). The workforce of the future will be led by the prudent use of automation and re-skilling by companies that seek to combine the finest of empathy, human intelligence and change resilience (Card & Nelson, 2019).

2.3. Digital Workforce

In the present constantly changing technological terrain, the concept of a digital workforce has emerged as a game-changer for many organizations. A digital workforce refers to the integration of digital technologies such as automation, artificial intelligence, and machine learning into an organization's operations, allowing it to automate repetitive and time-consuming tasks, reduce errors and increase efficiency (Ramachandran et al., 2022). The rise of the digital workforce has transformed the way businesses operate, enabling them to streamline their processes, reduce costs, and increase productivity. By automating routine tasks, organizations can free up their human workforce to focus on more complex and creative tasks that require critical thinking and problem-solving skills (*The Potential of Artificial Intelligence*, 2023). However, the implementation of a digital workforce also raises ethical concerns and the possibility of job displacement. As such, organizations need to approach the adoption of a digital workforce with caution and ensure that the benefits are balanced against any potential negative impacts (Coldwell, 2019). How technology is used in the workplace will continue to evolve. There are chances for significant organisational change at the convergence of digital workforce capabilities and the power of technology innovation (Colbert et al., 2016). Cloud computing platforms have created a plethora of new work platforms, resulting in a wide range of options. Dealing with cloud systems has allowed me to complete jobs swiftly. Digital transformation strategies position the organisation as an aggressive market actor capable of establishing market trends in a short period of time (Varshney, 2020). A digital culture that promoted morals, empowerment, and the sharing of knowledge. Digitally changed firms use the latest technologies to the workplace to improve employee experiences while also providing the knowledge needed to improve customer experiences (Alrasheedi et al., 2022). Finding the variables linked to successful job transitions may be possible by modelling career routes and outcomes over time. Understanding our progress in the dynamic world of the global digital economy will depend on measures and models that capture value in a digital economy (Hajkowicz et al., 2016).

2.4. HR Automation

The use of technology and software to streamline and automate HR jobs, procedures, and workflows is referred to as human resources (HR) automation (Cho et al., 2023). With the increased demand for efficiency and accuracy in HR operations, automation has emerged as a critical tool for firms seeking to better manage their human resources. HR automation has more advantages than disadvantages. Because of the importance of implementing new technology, several governments are supporting the implementation of HR systems for better outcomes and achievements

(Priyanka et al., 2023). Use of new technology in HR management will result in increased efficiency and further advancement of procedures (Amour Al Noumani & Taqui Syed, 2020). We discovered that artificial intelligence and expert systems facilitate HR processes and better decision-making about human employees and HR-Enable practices', based on both decision-making theory and recent research that has analysed how data enables HR managers to be better informed about employees. They improve the accuracy of non-expert HRM choices and shorten the time required (Rodgers et al., 2023). The usage of artificial intelligence improves the quality of human resource choices. The issue of advanced technologies and artificial intelligence is related with a wide range of academic fields. It should be investigated using a multidisciplinary approach (Vrontis et al., 2021). Automation has enormous potential in the areas of talent acquisition, talent development, performance management, compensation and benefits, HR operations, and employee relations. HR automation involves the publication of open positions, interviewee screening, interview scheduling, employee surveys, and the leaving process, among other things. Robotic Process Automation (RPA) is a technology that combines artificial intelligence and machine learning software to handle high-volume repeated operations that were previously performed by people. It has the potential to automate many of the processes that are currently required by HR (*Электронная Библиотека БГУ: Application of Robot Process Automation in Business Process Management*, 2023). Raising awareness, preparing the business for HR RPA adoption, and developing capabilities are some of the steps required to realise the full potential of HR RPA (Balasundaram & Venkatagiri, 2020).

2.5. Human Resource Digital Transformation

Human Resource digital transformation is the process of integrating digital technology into all aspects of HR management, from recruitment and onboarding to performance evaluation and employee engagement (Monje Amor, 1 C.E.). With the rise of digital technologies, organizations have recognized the need to leverage these tools to streamline HR processes, increase efficiency, and improve the employee experience. The digital transformation of HR involves implementing new technologies such as cloud-based HR systems, applicant tracking systems, online learning platforms, and chatbots to automate tasks and reduce manual labour. It also involves leveraging data analytics and artificial intelligence to gain insights into employee performance, engagement, and retention (P. et al., 1 C.E.). The digitalization of HR is rapidly becoming a critical component of modern business operations, as organizations seek to stay competitive in an increasingly digital world. This transformation promises to revolutionize the way HR functions, and organizations that embrace it are likely to see significant benefits in terms of productivity, employee satisfaction, and overall business success.

Even if a company invests heavily in technology, it will take a long time before the investment pays off. Prepare the current workforce by enhancing and expanding existing skills to meet requirements, building a competency model and establishing change agents within the organization to ensure a smooth transition to embrace the digital revolution (Anshari et al., 2022). There is a global need to monitor employee skills and information to control and improve them. The strategies are relevant in the context of the fourth commercial revolution; however, it is imperative to develop transparency that leads to reduced subjectivity of the employee's appraisal, especially when the appraisal is hooked up to the compensation engine. The device is primarily based on the detailed knowledge of sub-steps of an assignment, which involves the definition of essential functions and the subsequent delegation of the responsibilities to individual operators using the combinatorial technique, the so-called Hall's marriage theorem (Chán & Balková, 2022). The digital transformation will result in the loss of some jobs, but also in the transformation of existing ones and the creation of new ones. HR departments will play a crucial role in implementing digital transformation but will need to adapt and adapt to new workplace realities (Hizir, 2021). Modern technologies help to create a sustainable organization.

Digitization and its impact on the environment are important for companies. It provides HR managers with the direction of new processes and policies and helps build a long-term strategy that takes into account social change, individual needs and the environment. It is too early to say that the current pandemic will pave the way towards achieving sustainable development goals (Kuzior et al., 2021).

3. Research Methodology

Research methodology is an essential component of scientific research, as it provides a systematic and structured approach to data collection and analysis. It ensures that research findings are reliable, valid, and trustworthy and that they can be replicated and generalized to other contexts. A well-designed research methodology is also important for ensuring that ethical considerations are taken into account, such as protecting the privacy and confidentiality of research participants and obtaining informed consent from participants. Partial Least Square Structural Equation Modelling (PLS-SEM) is used as the research tool.

3.1. PLS-SEM Modelling

Smart PLS – 4 has been applied for the Structural Equation Modelling (SEM) technique. The models were initially tested for reliability and validity, and then later, SEM was used to test the proposed assumptions. Partial least square path estimation is a new and improved way to estimate complex relationship models in management research. ((PDF) *Structural Equation Modeling: Guidelines for Determining Model Fit*, 2023). The analysis of PLS-SEM can quickly find results to any complex models (Hair et al., 2021f) (Hair et al., 2021, 2021c, 2021a, 2021h, 2021i, 2021b, 2021e, 2021g, 2021d; *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook / SpringerLink*, 2023). This is exactly true in the area of human resource digital transformation, and it has a very limited contribution to this research area. PLS-SEM just require at least ten times the arrows pointed towards the model even though we do not have a large sample size (Hair, J.F., Black, W.C., Babin, B.J. and Anderson, 2010).

4. Data Analysis and Results

4.1. Reliability and Validity Analysis

In Table 1, the constructs model is assessed for reliability and validity. The factor loadings in the model are all more than the minimal allowable value of 0.50 (Hair et al., 2010). While factor loadings greater than 0.7 are desirable [34], researchers in social science typically find weaker outer loadings (0.70). Rather than eliminating indications automatically, the effects of the item's removal on composite reliability, content, and convergent validity will be explored. Only removal of outside loadings between 0.40 and 0.70 will be considered if it increases composite reliability or average variance extracted (AVE) above the specified value (Hair, J. F., Black, W. C., Babin, B. J. and Anderson, 2010), (Vinzi et al., 2010). The elimination of the item (DW1 = 0.541, DW2 = 0.527, AI1 = 0.562) would significantly improve the composite reliability and AVE in the current study.

Table 1: Reliability and Validity

	Item	Loading	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Digital Disruption	DD1	0.675	0.798	0.827	0.898	0.649
	DD2	0.662				
	DD3	0.839				
	DD4	0.760				
	DD5	0.754				
Digital Workforce	DW3	0.862	0.818	0.864	0.883	0.641
	DW4	0.737				
	DW5	0.699				
Artificial Intelligence	AI2	0.722	0.780	0.824	0.840	0.620
	AI3	0.750				
	AI4	0.839				
	AI5	0.758				
HR Automation	HA1	0.825	0.789	0.904	0.928	0.671
	HA2	0.781				
	HA3	0.911				
	HA4	0.767				
HR Digital Transformation	HDT1	0.783	0.875	0.892	0.908	0.664
	HDT2	0.781				
	HDT3	0.819				
	HDT4	0.853				
	HDT5	0.837				

Cronbach's alpha, rho a, and composite reliability were used to evaluate dependability; both statistics above the required value of 0.700. The returned rho_a value was between Cronbach's alpha and composite reliability (Wasko & Faraj, 2005). The returning rho_a value was between Cronbach's alpha and composite dependability (2017 - Sarstedt Et Al. - Handbook of Market Research PDF | PDF | Structural Equation Modeling | Bias Of An Estimator), and it was also more than 0.70, indicating strong reliability (Henseler et al., 2016). The convergent validity was satisfactory because the AVE was more than 0.50. The discriminant validity of the latent variables was determined by comparing the correlations with the square root of AVE (Fornell & Larcker, 1981) and the heterotrait-monotrait correlation ratio (Henseler et al., 2015), both of which had values less than the (conservative) threshold of 0.85. As a result, the discriminant validity is proven (see Table 2).

Table 2: Fornell–Larcker Criterion and Heterotrait–monotrait Ratio of Correlations

	Artificial Intelligence	Digital Disruption	Digital Workforce	HR Automation	HR Digital Transformation
Digital Disruption	0.805	0.352	0.431	0.537	0.269
Digital Workforce	0.262	0.800	0.253	0.482	0.437
Artificial Intelligence	0.481	0.447	0.787	0.343	0.571
HR Automation	0.323	0.372	0.474	0.819	0.322
HR Digital Transformation	0.419	0.356	0.344	0.469	0.814

Notes: The square roots of the extracted average variation are presented in italics and diagonally (AVE). Underneath the diagonal elements are the correlations between the construct's values. The correlation values' heterotrait-monotrait ratio is shown above the diagonal parts.

4.2. Structural Model

The courses of the research framework are reflected in the structural model. R², Q², and path importance are used to evaluate a structural model. The model's validity is determined by the strength of each structural path, as represented by the R² value for the dependent variable (Briones Peñalver et al., 2018). R² should be equal to or higher than 0.1 (*A Primer for Soft Modeling*, 2023). All R² values are greater than 0.1, according to the results in Table 3. Predictive skill is established as a result. Moreover, Q² establishes the endogenous components' predictive value. The model has predictive relevance when the Q² is greater than 0. The findings demonstrate that the constructs' significance for prediction is clear (see Table 3). Moreover, standardised quadratic residuals were used to evaluate how well the model fit the data. The standardised mean square residual value was 0.093, which is in accordance with the necessary criterion of 0.10. Hypotheses were put to the test to ascertain the importance of the association while also evaluating the goodness-of-fit. H1 determines if the digital disruption has significantly benefited the human resources sector's digital transformation. According to the findings, DD significantly affects HRDT (=0.133, t=2.106, p=0.022). H1 was therefore supported. The findings demonstrated that DW significantly influenced HRDT (=0.225, t=5.001, p0.001), AI (=0.518, t=4.69, p0.001), and HA (=0.291, t=2.473, p = 0.001), supporting H2, H3, and H4.

Table 3: Testing Direct Relationships

	Path coefficients	SD	t value (bootstrap)	P value	BI (2.5%; 97.5%)
H1: Digital Disruption -> HR Digital Transformation	0.091	0.073	2.106	.022	(0.037; 0.692)
H2: Digital Workforce -> HR Digital Transformation	0.133	0.099	5.001	.001	(0.164; 0.572)
H3: Artificial Intelligence -> HR Digital Transformation	-0.058	0.176	4.690	.001	(0.181; 0.597)
H4: HR Automation -> HR Digital Transformation	0.068	0.068	2.473	.001	(0.262; 0.611)
R ² DD = 0.197 Q ² DD = 0.095					
R ² DW = 0.162 Q ² DW = 0.081					
R ² AI = 0.224 Q ² AI = 0.110					
R ² HA = 0.143 Q ² HA = 0.067					

Abbreviations: DD: Digital Disruption; DW: Digital Workforce; AI: Artificial Intelligence; HA: HR Automation; HRDT: HR Digital Transformation

5. Discussion

Previous studies found a positive relationship between workforce automation, digital workforce, digital disruption and artificial intelligence in digital human resource transformation. The results provide a strong theoretical contribution to the literature as there is limited research on variables such as digital disruption, digital workforce, artificial intelligence, human resource automation and digital human resource transformation. Most industries are no exception in the digital disruption process due to technological advances. In order to improve the quality of work, industries should be flexible to adopt any kind of technology, and so should the workforce. The digital workforce has a positive effect on the digital transformation of human resources. Artificial intelligence plays an important role in the current competitive environment and all areas of the private and public sectors are trying to adopt new technologies like artificial intelligence. We have enough evidence that they have a positive impact on the digital transformation of human resources. The digital transformation of human resources can be affected by technological changes that have made it necessary to use the latest and innovative technologies in all areas of the organization. It is a well-founded argument that the functional use of digital innovations leads to a functional relief for HR experts, since they take into

account the important strategic exercises of HR experts (*A Primer for Soft Modeling.*, 2023) (Shrivastava et al., 2022). Finally, an organization's human resources constitute a strategic asset. Employee productivity, capacity and skills are optimized to ensure long-term revenue and profitability goals are met. Workforce Analytics creates powerful synergies with other business intelligence products, delivering actionable and deep insights to drive people-related activities and processes across the organization(Lal, 2015).

6. Conclusion

Human Resource digital transformation is a step-by-step process that may take too long to implement in the public sector. Most of the public sector organizations are not interested in changing their traditional work culture process to advanced latest technologies because they are not ready to accept the change immediately. New technologies need to be implemented in public sector organizations and employees need to be encouraged to learn and adopt new technologies to survive in the competitive environment. The study shows that there is a positive impact of exogenous variables like digital disruption, artificial intelligence, digital workforce, and human resource automation on the variable of human resource digital transformation. Therefore, Human Resource digital transformation is an essential component of modern organizations. The use of artificial intelligence, digital workforce, digital disruption, and HR automation can make HR processes more efficient and effective. This improves the quality of HR services and reduces costs. HR digital transformation is likely to become even more important in the future as organizations seek to stay competitive and adapt to changing business environments. The use of technology has also made HR more agile, responsive, and adaptable to changing business needs. In the current high-speed corporate landscape, the imperative for digital transformation in HR transcends being a mere choice; it is an essential requirement. Organizations that embrace digital HR are better positioned to attract and retain talent, enhance productivity, and drive business success.

7. Implication

The study looked at technological changes and their impact on human resource development. The workforce knowledge may be improved if the public sector organizations focus more on digital disruption and use the latest technological changes in their domain to get more quality output. Artificial intelligence is replacing human interventions because of its accuracy, agility and speed and it can be implemented in all the domains of the organisation. There is no option left for organizations to automate their human resources without the use of the latest technologies.

8. Limitations and Future Research Directions

The present study mainly focussed on a few exogenous variables like digital disruption, digital workforce, artificial intelligence and human resource automation and their impact on human resource digital transformation. Future studies can focus on other technological factors and their impact on human resource digital transformation. The study is mainly focused on the public sector industry, but future studies can focus more on specific divisions like operations, finance, quality etc., either in the public or private sector industries. The digital transformation of human resources relies heavily on employees' skills and their rapid assimilation of new technologies. Consequently, there exists ample opportunity for future research into the skill sets of employees and their adaptability, particularly concerning technological advancements.

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Talent Management and Retention Strategies

(A Study on Medical Representatives of Pharmaceutical Companies in Krishna and Guntur Districts, AP)

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Abstract--- Intense rivalry, inventions, R&D, rising employment, assurance of better quality in the health sector, stringent regulatory framework, etc. are characteristics of the Indian pharmaceutical industry. Changes in the demographic, social, technological, and economic environments lead to strain and stress at work since businesses must adapt quickly and effectively to survive. The success and expansion of the sector are greatly dependent on the executives. It becomes very difficult to offer one's best performance at work because of the expectations, pressures, stress, workload, and other factors brought on by competition, the need for best performance, and a strong sense of social duty.

Indian Pharma industry has the attrition rate of 35 percent, where as in developed countries, it is 10 percent. Even though, we have good conditions, there is a quite increasing rate of attrition in sales, manufacturing and various working areas of departments. There are no faithful efforts have been made to acknowledge the conditions of attrition, which are causing various consequences that are responsible towards minimising attrition and increasing retention.

Keywords--- Pharmaceutical Sector, Research and Development, Performance, Assurance, Attrition Rate.

1. Introduction

The Indian pharmaceutical business is known for its fierce competition, inventions, R&D, growing employment, assurance of improved quality in the health sector, strict regulatory framework, etc. Workplace strain and stress are caused by changes in the social, technological, demographic, and economic contexts because organizations need to adjust swiftly and successfully to survive. The CEOs have a major role in the sector's growth and success. Expectations, demands, stress, strain, and other circumstances resulting from competitiveness, the desire for optimal performance, and a strong sense of social obligation make it extremely difficult to give one's best performance at work.

The pharmaceutical industry has been a rapidly expanding global business concern for India for the past 40 years, thanks to the Indian Patent Act of 1970, World Trade Organization liberalization initiatives, and the General Agreement on Tariffs and Trade's efforts to create a level playing field for international trade. India is among the beneficiaries in terms of highly skilled labor and reputable enterprises that are acknowledged internationally. India's low production costs and patent facilities for formulations and process work allow it to remain competitive in the global market. Indian pharmaceuticals are well-known in both developed and developing nations because of their affordable prices and secure production methods. The capital requirements have been met in part by foreign direct investment, and international businesses visiting India for research and cooperation.

Despite a plethora of options and prospects, India is currently experiencing the highest attrition rate in the world, at roughly 35%, compared to an average of 8 to 10% worldwide. Businesses are sincerely trying to keep their bright workers by implementing a variety of strategies, but the attrition issue is out of control because new pharma sectors and the need for bright people outside the nation are causing the problem. Employers are genuinely trying to keep their best workers by offering incentives based on performance and better opportunities for those with talent. India's pharmaceutical industry has the highest attrition rate at 35% when compared to wealthy nations where the rate is less than 10%. India has a considerable potential for industrial growth given the high number of patent approvals in this field, which attracts foreign direct investment, and the strong desire of foreign corporations to open their own offices or collaborate with Indian companies. The cost of manufacturing medications is relatively low due to the ideal environment and inexpensive labour. There's a lot of room for exporting because production costs are low. Even in a variety of advantageous circumstances, the attrition rate in the manufacturing, sales, and other working area divisions is rather high.

It is said simply that although employees continue to look for new opportunities to get paid more, the impact on the company's sales and earnings is significant. The pharmaceutical sector has to expand quickly in order to take advantage of a more favourable worldwide market than it currently has. It is a true situation that every nation wants to compete with India and have a larger share of the global market, but up until now, government and funding agencies' efforts in India have not been enough, unless the pharmaceutical industry has built-in mechanisms to reduce attrition rates to a point where the industry's interests are protected and can grow significantly. The goal of the research project is to know the contributing elements and suggest mitigation strategies.

2. Statement of the Problem

The problem of talent management pertains to employees who receive pay or salaries; these employees are allotted to various positions in the corporate sector and are referred to as human resources.

Talented employees are difficult to replace for any business group since those in key positions must be handled carefully because they are anticipated to perform at a level or better in order to ensure the company's success.

Expenses related to attrition include hiring costs, capacity-building training, staff orientation to make them aware of the expected output, the expenses of missed production while waiting for new hires to be placed, and the gestation period before full performance.

These are the most important challenges that are still present because of attrition issues in various parts of the sectors.

3. Need of the Study

The government's policies, sustaining production levels, and selling produce to the full pleasure of consumers are only a few of the difficulties that the business sector must overcome.

It is more painful when a talented employee leaves the company since there is a temporary vacuum until a replacement arrives and is fully prepared to take over the role. Attrition has a significant negative effect on the company since new hires take a while to adjust to the work environment and there is still apprehension about their ability to pick up the pace of work and surpass previous levels.

One of the company's most problematic issues is employee resignations for a variety of reasons, which seriously disrupts the ability to continue working with the same.

4. Objectives of the Study

The research study has been undertaken with well-set objectives to fill in the gap in talent management and retention strategies in general and pharmaceutical industry in particular, as this sector is capable to help in country development through value addition, provision of employment opportunities and superb export potential. The main objectives of the research study are as under:

1. To examine talent gap of the pharmaceutical companies.
2. To analyze the causes for employee attrition in pharmaceutical companies.

5. Research Methodology

The research study was conducted using a well-defined process that included gathering data from both primary and secondary sources.

6. Sample and Data Collection

Sample Area: Middle level Managers (Area level Sales Managers, Regional Sales Managers and Zonal Sales Managers) and Medical Representatives from Krishna and Guntur Districts.

Data collection Mode: Survey through Questionnaire, Secondary Data Reports and Structured Interviews.

Sample Technique: The survey was used to conduct the research at the employees' convenience. Convenient sampling is the sample type.

7. Research Design

With the support of literature review in the field of Talent Management and Retention Strategies and formulation of scientific hypothesis, a suitable research design guided the researcher design is conceived. The research design guided the researcher to answer the research questions by testing the proposed hypothesis with a perfect control over various aspects of variable found in the scores of variables taken up for the investigation.

In addition, the investigator has selected the empirical research design which benefits for the present research.

7.1. Literature Review

This literature review serves as a critical foundation for our study, aiming to comprehensively explore and integrate the existing body of knowledge on retention strategies and talent management, with a specific emphasis on sales personnel within the pharmaceutical industry.

7.2. Managing Talent in the Pharmaceutical Industry

Pharmaceutical sector facing hurdles in managing talent due to its innovation-driven nature and stringent regulatory environment. Effective talent management is crucial for sustaining innovation, ensuring compliance, and maintaining a competitive edge. This review examines the tactics and methods essential to drawing in, nurturing, and keeping qualified workers in this field.

Cappelli, P. (2008). Talent management for the twenty-first century. *Harvard Business Review*, 86(3), 74-81.

Cappelli's (2008) article addresses the transformation, advocating for a shift from traditional internal development to a more adaptable 'buy-and-build' approach. He critiques the inefficacy of old models in the face of rapid business and employment changes, emphasizing the need for proactive talent acquisition and development. Cappelli calls for transparency in career progression and highlights the importance of strategic planning in talent management. The article underscores the necessity for HR professionals and business leaders to embrace flexibility and foresight to maintain a competitive edge in talent acquisition and retention.

Mellahi, K., & Collings, D.G. (2009). Strategic talent management: A review and research agenda. *Human Resource Management Review*, 19(4), 304-313.

In their seminal work, Mellahi and Collings (2009) provide a comprehensive overview of strategic talent management, critically evaluating existing literature while identifying gaps and proposing future directions for research. They assert the need of integrating talent management strategies with overall organizational strategies to achieve competitive advantage. The authors emphasize the role of context in shaping effective talent management practices, highlighting the necessity for organizations to consider internal and external environmental factors. Mellahi and Collings also discuss various components of talent management, including talent identification, development, retention, and deployment, advocating for a holistic approach. They call for more empirical research to validate theoretical frameworks and offer a research agenda aimed at advancing the field of strategic talent management.

8. Data Analysis and Interpretation

In the course of this chapter, our primary focus on the examination of data sourced from both managerial personnel and medical representatives within a carefully selected pool of pharmaceutical companies situated in Krishna and Guntur Districts.

8.1. Difficulty in Filling Positions Due to Talent Shortage of Pharmaceutical Companies

Table 1 provides a Frequency Table that sheds light on the challenges organizations face when it comes to filling positions due to talent shortages. The table is divided into two categories: "Yes" and "No," representing whether organizations have experienced difficulty in recruiting talent. Remarkably, the majority of organizations, accounting for 59.72% of the sample, answered "Yes," indicating that they have encountered challenges in filling positions due to talent shortages. In contrast, 40.28% of organizations responded with "No," suggesting that they have not faced significant difficulties in this regard. This table's clear presentation of both frequency and percentage data enables researchers to grasp the prevalence of talent shortage-related recruitment challenges within the dataset, highlighting the extent of this issue among the surveyed organizations. Such insights can be invaluable for addressing talent acquisition strategies, workforce planning, and overall human resource management decisions.

Table 1: Frequency Table for Difficulty in Filling Positions Due to Talent Shortage

Variable	Frequency	Percentage %
Yes	43	59.72
No	29	40.28
Total	72	100.00%

8.2. Find Talent Gap in The Organization Mainly Due to of Pharmaceutical Companies

Table 2 presents a Frequency Table that sheds light on the primary reasons behind talent gaps within the organization. The table categorizes these reasons into three distinct variables. The most prominent factor contributing to talent gaps is the "Lack of required skills," accounting for a substantial 72.22% of the total sample, with 52 instances. This suggests that the organization's workforce may be lacking the necessary skills or qualifications to meet its needs, indicating a potential need for training and development initiatives. "Retirement" is the second most common cause, constituting 18.06% of the sample, with 13 instances, signifying that the aging workforce is a significant factor in talent gaps. Lastly, "Resignation" is responsible for 9.72% of the talent gaps, with 7 instances, hinting at employee turnover as another contributing factor. This table offers valuable insights into the root causes of talent gaps within the organization, which can guide HR strategies and workforce planning efforts to address these issues effectively.

Table 2: Frequency Table for Find Talent Gap in the Organization Mainly Due

Variable	Frequency	Percentage %
Lack of required skills	52	72.22
Retirement	13	18.06
Resignation	7	9.72
Total	72	100.00%

8.3. Percentage of The Employees Leaving the Organization at Various Levels of Pharmaceutical Companies

Table 3 provides a Frequency Table that sheds light on the attrition rates among junior-level management employees within the organization. This table is divided into three categories based on the percentage of employees leaving the organization. The largest group consists of organizations where less than 10% of junior-level employees leave, making up 50.00% of the total sample, with 36 instances. In the next category, organizations experiencing an attrition rate of 11-20% account for 27.78% of the sample, with 20 instances. Lastly, organizations facing attrition rates exceeding 30% represent 22.22% of the sample, with 16 instances. In total, there are 72 observations in this dataset. This table's breakdown allows us to grasp the distribution of attrition levels among junior-level management, which can be instrumental in assessing workforce stability and HR management strategies within these organizations.

Table 3: Frequency Table for Percentage of the Employees Leaving the Organization at Various Levels Junior Level of Management

Variable	Frequency	Percentage %
less than 10%	36	50.00
11-20%	20	27.78
>30%	16	22.22
Total	72	100.00%

8.4. The Reasons that Employees State When They Leave Organization Tick Appropriately of Pharmaceutical Companies

Table 4 provides a Frequency Table that sheds light on the reasons cited by employees when they decide to leave their respective organizations. The table presents various factors, each accompanied by its frequency count and percentage representation among the total responses. Notably, the most prevalent reason appears to be "Work pressure," accounting for a substantial 45.83% of the responses, with 33 instances. This suggests that a significant portion of departing employees attribute their departure to high job demands and stress levels. Following closely, "Lack of career development" is cited by 22.22% of respondents, with 16 instances, indicating that many employees value opportunities for professional growth and advancement. Additionally, "Lack of growth and advancement opportunities," "Lack of competitive compensation and rewards," and "Lack of appropriate medical facilities" are also factors mentioned by employees, albeit with lower frequencies. This table provides valuable insights into the primary drivers of employee turnover within the organization, which can inform HR strategies and efforts to enhance employee retention.

Table 4: Frequency Table for Reasons that Employees State When they Leave Organization Tick Appropriately

Variable	Frequency	Percentage %
Lack of growth and advancement opportunities	9	12.50
Lack of competitive compensation and rewards	7	9.72
Lack of appropriate medical facilities	7	9.72
Work pressure	33	45.83
Lack of career development	16	22.22
Total	72	100.00%

9. Findings

1. The data shows that a significant portion, 50.00% of the total sample, comprises organizations with attrition rates of less than 10%, suggesting a relatively stable workforce in these companies. The second category, with attrition rates between 11-20%, represents 27.78% of the sample, indicating a moderate level of attrition among junior-level employees.
2. The reasons for leaving companies, Notably, the most prevalent reason appears to be "Work pressure," accounting for a substantial 45.83% of the responses, with 33 instances. This suggests that a significant portion of departing employees attribute their departure to high job demands and stress levels.

10. Suggestions

- The distribution of attrition rates among junior-level management employees provides organizations with valuable information to inform their HR management strategies.
- For those in the 11-20% range, it may be beneficial to assess the causes of attrition and implement targeted retention strategies.
- HR should address the concerns related to growth and advancement opportunities, competitive compensation, and medical facilities can help improve employee satisfaction and retention.
- HR should collaborate with management to develop comprehensive retention strategies that address these key factors.

11. Conclusion

Based on the findings, organizations should consider tailoring their talent management practices to accommodate differences in Age, Educational Qualifications, Overall Work Experience, and Monthly Salary. For instance, they may need to develop age-specific talent development programs and educational support initiatives. Additionally, they should recognize the importance of work experience and salary levels in talent management decisions and compensation structures. This could lead to more effective talent management strategies that align with the unique characteristics of their workforce.

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A Study on Assessing the Impact of Nature of Job and Stress Levels in the Job on Quality of Work Life of Indian Loco Pilots in the South-Central Railway Zone

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Abstract--- The job of a railway driver also known as loco pilot is very demanding that requires a high level of concentration, discipline, stamina, hard work, adaptability to irregular time schedules and adverse climatic conditions. They play a key role in ensuring safety of passengers and punctuality of trains. Hence, they should be motivated enough to carry out their duties with utmost diligence. There are several motivational practices and applications available, among which Quality of Work Life is one of the powerful practices to motivate employees. This study examines the Quality of Work Life of loco pilots in South Central Railway Division of Indian Railways. This paper also describes the impact of nature of job and the stress levels in the job over the quality of work life among the Indian Railway drivers. This study showed both nature of job and stress levels in the job had significant moderate impact over quality of work life.

Keywords--- Quality of Work Life, South Central Zone, Indian Railways, Loco Pilots, Nature of Job, Stress Levels in the Job.

1. Introduction

Quality of Work Life

Dwight D. Eisenhower says "motivation is getting people to do what you want them to do because they want to do it." Motivation is the driving force within the individuals that propels them to action. There are several motivational practices available for motivating employees like Rewards, Job design, Quality of Work life, Behaviour Modification etc. Employees are more likely to be engaged, committed and productive when their work place fosters a high Quality of Work Life which refers to all aspects of worker's life at his or her interface with work and working environment. The concept of Quality of Work Life emerged as a result of 'Human Relations Management' of Elton Mayo. Hawthorne Experiments conducted by Elton Mayo proved that better physical environment, increased economic benefits alone were not sufficient to motivate employees. He discovered that when employees are given more attention by the organisation, the productivity increased irrespective of changes in the physical environment, money they are paid. Hence by increasing Quality of work life of employees, they can be motivated and their productivity can be increased.

Several authors have provided different definitions for the term "Quality of Work Life". Harrison defines "the extent to which work in an organization contributes to its members' material and psychological well-being is known as Quality of Work Life." "Quality of Work Life is the degree to which members of an organization are able to satisfy important personal needs through their experience in the organization," states J. Richard and J. Loy. For businesses to draw in and keep top talent and inspire them to perform better, they must provide a high-quality work environment. Best use of

one's abilities, respect for basic rights, positive interpersonal relationships, how meaningful one's work is for the society, safe and healthy working environments, opportunities for career growth, job security, and the integration of one's personal and professional lives are just a few of the factors that impact an individual's Quality of Work Life.

Loco Pilots of Indian Railways

Indian Railways is the major form of transportation that carries millions of passengers and tonnes of freight across the country. Loco pilots are the most crucial category of employees in Indian Railways in executing this huge task. Hence, they should be mentally and physically fit, adaptable to follow irregular time schedules in diverse climatic conditions. They are responsible for both safety of passengers and maintaining punctuality of trains, a job which requires a great presence of mind and stamina.

Working Schedule

Continuous roster applies to locomotive pilots. They receive no rest days on the calendar. They are required to perform shifts of ten hours at a time and take a break after twelve hours, giving the controllers two hours prior notice. For loco pilots, there are no set schedules when it comes to goods trains. It can occasionally take longer than ten hours at a time. Their link roster has a statutory limit of 108 hours and normal hours of 104 in a fortnight. They get either five rest periods, each lasting 22 hours with a full night, or four rest periods, each lasting 30 hours in a month. They are unable to exit the operating cab without a reliever in the event of a personal emergency. When on duty for less than eight hours, they are entitled to 12 hours of periodic rest at Headquarters; when on duty for more than or equal to eight hours, they are entitled to 16 hours. In the outstation, they will receive eight hours of sleep in the running rooms after eight hours of work. Loco pilots are only permitted to return home 72 hours or three full days after departing for running duties. Loco pilots are not entitled to any of the twelve national holidays or fifty-two Sundays that other railroad workers enjoy.

Cab Conditions

Loco pilots are exposed to heavy noise, excess heat, diesel smell, dust pollution and other adverse climatic conditions. Sound level in a diesel engine is about 100 decibels where the maximum limit is 75 decibels as per Industrial Pollution Control Board. Rest room facility is not available in the cab, so loco pilot has to wait till one spell of duty is over which is minimum 8 hours for passenger trains and 12 hours for goods trains. These adverse conditions will affect Quality of Work Life of loco pilots.

2. Review of Literature

There are few studies available on Quality of Work Life of Indian loco pilots, so this paper includes studies of other countries and other relevant occupations.

Cardiovascular nurses' quality of work-related life was studied by Zaghini, F., Biagioli, V., Fiorini, J., Piredda, M., Moons, P., & Sili, A. (2023) to determine how it is affected by job satisfaction and job stress. This study demonstrates that job stress has an adverse impact on these nurses' quality of life at work, which is partially mediated by job satisfaction. Patient care quality and outcomes improve when these workers work life is of higher quality.

According to Nasrin Norshahi and Hossein Samiei (2023), faculty members at public universities feel that their work life quality levels are not satisfactory. Organizational culture, professional obstacles, and motivational elements were found to affect faculty members' quality of work life significantly. The study conducted by Sahat Simbolon, Agus Susanto, and Rico Nur Ilham (2023) sought to examine the impact of remuneration, quality of work life and manpower

planning on employee performance at supermarkets. They discovered that the three above mentioned elements significantly and favourably affect employee performance, adding to a roughly 73.7% rise. Other aspects of work, ethics, leadership, and other characteristics that were not covered in this study have an impact on the remaining 26.3% improvement in employee performance.

In their research on nurses, Mohammed Al-Hammouri and Jehad Rababah (2022) discovered that their quality of work life changed depending on whether they have fixed shifts or irregular shifts.

M Storman, D Storman, J Maciag (2022) conducted a study on young doctors in Poland which revealed that 2.06% of the sample have a very high QWL, 23.87% have high QWL, average for 27.16%, less for 38.27% and very less for 8.64%. This study also revealed that significant factors that affect QWL are their work schedule, general quality of life.

Employee performance is significantly affected by work-life quality and organizational commitment, according to S. Karoso, R. Riinawati, R. Ilham, RGP Rais, and D. Latifa (2022). Work-life quality impact on employee performance is mediated by organizational commitment. Employee performance is highly predicted by the quality of their work life.

Most of the employees in the organisation were found to have poor levels of work life quality, according to Zafrul Allam and Abdul Rahman Shaik (2020). Six factors including autonomy, inter-group relations, praise for achievement, financial benefits, self-esteem, and relations with the superior were found to affect quality of work life. Married and government employees showed a higher average score on QWL than single and private sector employees.

In 2020, Hamed Zandian, Afshan Sharghi, and Telma Zahirian Moghadam conducted a survey for nurses in teaching hospitals in Iran, and found that 83% of staff had a lower average work life quality levels. Quality of life at work increased with a decline in work interference with family

Hasmin Tamsah, Ansar, Gunawan, Yusriadi, Umi Farida (2020), in their research on relationship between training, information exchange, and Quality of work life for Indonesian civil personnel found that leadership training and further training had a positively and significantly affected knowledge sharing but they had not increased quality of work life of civil servants.

According to research by Pravin Bhende, Nandakumar Mekoth, Varsha Ingalthalli, and Y.V. Reddy (2020), all aspects of work life quality aside from grievance redress had an impact on the productivity dimension of work-life balance. All three factors of quality of work life estimated the skill deployment dimension. The efficiency dimension of work-life balance had no correlation with any of the quality of work life dimensions. This research showed that with the improvement in quality of work life, staff productivity and skill deployment can be boosted.

According to N Saravanan, V Ganeshkumar (2019), suggested that there has to be a good balance between professional life and personal life to have better quality of work life for women professionals. A well-balanced professional life, family life, and leisure life is desired these days.

A study by Lakhwinder Singh Kang and Deepak (2014) sought to determine the association of veterinary professionals' quality of work life with work-family conflict. According to this study, work-family conflict significantly lowers the quality of one's working life.

In a unionized heavy manufacturing company in the Midwest, Stephen J. Havlovic (1991) studied the relation of work life quality with absenteeism, accidents, grievances, resignations. He learned that QWL dramatically reduces minor accidents, complaints, absenteeism, and quit rates.

Shoeb Ahmad (2013), proposed that the following factors contribute to QWL in any organisation which are health and safety, job satisfaction, job security, stress in the job, work environment, balance between work life and personal life, social relations. He suggested some strategies to improve QWL such as job design, workers' participation in decision making, career guidance, interpersonal relations, rewards, self-managed work teams, flexible work schedules, supportive organisational culture. In a study on the quality of work life for employees at TUMS hospitals, G Nasl Sarajian and H Dargahi (2006) discovered that the majority of workers expressed dissatisfaction with their pay, intermediate and senior managers, occupational health and safety, and the lack of interest and satisfaction in their work, which contributed to their low quality of work life.

Walton (1975) identified the following factors as having an impact on QWL: good relations, Constitutionalism within the Workplace, proportion of work in overall life, how meaningful the work is to the society, sufficient and impartial pay, a chance to use and improve one's capabilities, as well as secure and healthy working conditions, scope for continuous advancement and job security.

3. Research Gap

Nowadays the companies are adopting the quality of work life very rapidly. There are many intentions behind this phenomenon. The quality of work life is not limited to one particular aspect of the HRM practices. The organisations are transparent about organization's performance when they communicate the work life message. Organisations are increasingly aiming to improve the quality of work life of its human resources (Jackson et al., 2011). The organisations are adopting quality of work life in performance management practices by adopting work life balance practices. Hence, this work emphasized to understand the quality of work life among the loco pilots of the South-Central Zone Railways and how it is affected by nature of job and stress levels in the job.

4. Sampling Unit

Sampling unit is an important aspect in the research methodology to choose a sample. A sampling unit is the individual element or group of elements that is selected from a population for a particular study or survey. It is the basic unit about which information is collected during the sampling process. Choosing the appropriate sampling unit is crucial in ensuring that the sample accurately represents the population under investigation and that the study's results can be generalized to that population. The South-Central Zone loco pilots of Indian Railways comprised the strata sample for this study.

5. Sampling Technique

Simple random sampling was deployed for selecting the individual employees through the information available from the concerned crew lobbies. Further, the research teams interacted the employees with a structured questionnaire to attain the data.

6. Sample Size

Sample size denotes to the number of individual observations or data points collected in a study or experiment. It is a critical aspect of research design and influences the precision and reliability of study results. Researchers choose a sample size based on various factors, including the desired level of confidence, the variability of the data, and the resources available for the study. The current study taken the 30% of the samples out of the total population of the loco pilots.

7. Data Analysis

Simple linear regression analysis (SLRA) is used to determine the independent variables impact over the dependent variable. The concerned proposed hypotheses are tested below.

H1₀: Nature of Job will not have Significant Effect on Quality of Work Life

Simple linear regression analysis is used to test the above relation between Nature of job and Quality of work life. The results displayed in Table 1 demonstrated that the predictor variables had a moderate impact ($R^2 = 0.287$) and contributed significantly to the quality of work life. The regression models' corresponding ANOVA result ($F=120.716$, $p=0.000$) showed the validation with the quality of work life.

Table 1: Regression Model Summaries for the Nature of Job on Quality of Work Life

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	ANOVA Results			
					F-Value	df1	df2	Sig.
1	0.538 ^a	0.289	0.287	0.77686	120.716	1	755	0.000
a. Predictors: (Constant), Nature of job								

The coefficient summary presented in Table 2 demonstrated that the nature of the job's beta values ($\beta = 0.591$, $t = 10.987$, $p = 0.000$) was a significant predictor of the quality of one's work life. The findings suggested an implicit relationship between the predictor and dependent variables. Because their p-values were less than 0.05, the alternate hypothesis (H_1) was accepted and the null hypothesis was refuted.

Here the simple linear regression model is as follows Quality of work life (Y) = $2.242 + 0.591$ (Nature of job) X

Table 2: Predictor Effects and Beta Estimates (Unstandardized) for Quality of Work Life Associated with the Nature of Job

Model	Variable	Unstandardized Coefficients		Standardized Coefficients	t-Value	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.242	0.313	-	7.153	0.000
	Nature of job	0.591	0.054	0.538	10.987	0.000
a. Dependent Variable: Quality of work life						

H2₀: Stress Levels in the Job will not have Significant Effect on Quality of Work Life

Simple linear regression analysis is used to test the above relation between stress levels in the job and Quality of work life. The results displayed in Table 3 demonstrated that the predictor variables had a moderate impact ($R^2 = 0.177$) and contributed significantly to the quality of work life. The regression models' corresponding ANOVA result ($F = 63.890$, $p = 0.000$) showed the validation with the quality of work life.

Table 3: Regression Model Summaries for the Stress Levels in the Job on Quality of Work Life

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	ANOVA Results			
					F-Value	df1	df2	Sig.
1	0.421 ^a	0.177	0.174	0.83578	63.890	1	755	0.000
a. Predictors: (Constant), Stress levels in the job								

The coefficient summary presented in Table 4 demonstrated that the nature of the job's beta values ($\beta = 0.485$, $t = 7.993$, $p = 0.000$) was a significant predictor of the quality of one's work life. The findings suggested an implicit relationship between the predictor and dependent variables. Because their p-values were less than 0.05, the alternate hypothesis (H_2) was accepted and the null hypothesis was refuted.

Here the simple linear regression model is as follows.

$$\text{Quality of work life (Y)} = 2.887 + 0.485 (\text{Stress levels in the job}) X.$$

Table 4: Predictor Effects and Beta Estimates (Unstandardized) for Quality of Work Life Associated with the Stress Levels in the Job

Model	Variable	Unstandardized Coefficients		Standardized Coefficient	t- Value	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.887	0.349	-	8.270	0.000
	Stress levels in the job	0.485	0.061	0.421	7.993	0.000
a. Dependent Variable: Quality of work life						

8. Conclusion

This study was conducted to determine the impact of nature of job and stress levels in the job over quality of work life among the loco pilots in the South-Central Railway zone. The research results of this study help in understanding the effect of nature of job and the stress levels in the job over the quality of work life. The results disclosed that both the variables have evidenced the moderate impact over the quality of work life. However, the nature of job elicited the high impact when compared with the stress levels in the job over the quality of work life.

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Herbal Personal Care Industry: Opportunities and Threats in the Path of Growth

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Abstract--- Since ancient times, it has been evident that herbs have contributed to being a pertinent part of our society and for the well-being of human lives. Particularly, it is an exquisite gift of nature to humans to consummate their needs and desires. With the advancement of time and technology along with growing competition in the market, people have initiated the consumption of chemical products, replacing natural herbs. With the continuous usage of artificial products, the health of people started to worsen consistently. This impropriety led the people to spend large amounts on medicines. To avoid hazardous health issues and to remain fit and fine, people shifted their preference and consumption towards plant-based products. Within a few years of this revolution, the herbal industry has experienced a boost in its consumers and is expected to grow in the future. This study is an attempt to find out the reasons that are responsible for the growth of this industry, various obstacles that may bother its growth, and advantages which has led to an increase in the number of consumers and cons that may hinder its development.

Keywords--- Herbs, Chemical Products, Natural Herbs, Herbal Industry, Hazardous Health Issues, Growth, Obstacles, Pros, Cons.

1. Introduction

Since the time of covid-19 pandemic, the majority of people have awakened health consciousness. That period was really a dark period for the nation. It is rightly said that everything happens for a reason as this tough time has inculcated many good habits among people such as changing their lifestyle for their better well-being and connecting them again with their roots that had emerged from natural products. Additionally, people have become more conscious about their health and prefer to consume natural products, boycotting synthetic ones. Past trends have revealed that herbal products were consumed by many individuals till the time wave of some branded synthetic products came onto the market. That was the time when everyone started consuming chemical products. As a result of this shift, the majority of people faced many serious health issues and hazardous infections due to the consumption of chemicals. The health of people has become a major concern for everyone. As the covid epidemic wave hit the nation, the situation became worse due to weak immune systems, people faced a high risk of infection and the country faced many casualties. This situation has awakened the inner consciousness of people and they started taking care of their health and ultimately shifted towards herbal products. This market evolution again established the image of herbal products in the marketplace and gradually boosted its growth. As stats show, the market valuation of this industry in 2020 was USD 2.8 billion and is expected to grow more in the near future.

2. Literature Review

Many eminent authors have conducted studies on herbal products which revealed the factors that are responsible for increasing turnover and ultimately the growth of this industry. Few studies are explicated further. The study carried on by Lavuri, R. et. al, in 2022 focused on examining the impact of green factors on the purchase of premium herbal

cosmetic products. It came to the notice that green ads, green brand image, and perceived effectiveness increases the consumption of these products. In addition to it, customer attitude plays a vital role in influencing the purchase of these products. In this context, a recent study was conducted by Shimul, A. et. al., 2022 which investigated female shopper's attitudes and purchase intentions toward green cosmetics in South Africa and it was found that knowledge and information on ecology and environment, consumer involvement, health consciousness are some of the factors that drive customer purchase decision for such products. Widyaningtyas et. al conducted a study in 2022 that revealed that health awareness and attitude are necessary determinants for purchase intention regarding herbal personal care products. Erdawati, E. Et al. (2021) conducted a study on product quality aspects, prices, and halal labels on the purchase decision of herbal products. However, it was revealed that product quality and price have a significant impact on the purchase intention regarding herbal products. Another study conducted by T. Tewary et al. (2021) found the prime reason for switching the preference towards health consciousness and awareness among people. Moreover, products are chemical-free and environment-friendly in nature. Similarly, a study taken over by Gupta, A. (2014) found that gender and marital status played a significant role in purchasing herbal products. It also revealed that beauty appeal was the most popular factor that affects product preference. Similarly, it was revealed that demographic factors such as occupation, and marital status had a positive influence on consumers' purchase of cosmetics (Prof. Anute, N., Dr. Deshmukh, A., Prof. Khandagale, A., 2015). The awareness about these products had again come into existence through social media and online mode. It was found that Television Advertisement was the most effective medium to get information about these products (Prof. Anute, N., Dr. Deshmukh, A., Prof. Khandagale, A., 2015).

3. Objectives

The aim of the study is to explore the opportunities and threats in the path of growth of the herbal personal care industry. Along with it many other objectives pertaining to this study are:

- To find out the reasons that are responsible for the growth of the Herbal Personal Care industry.
- To get an insight into the obstacles in the path of the Herbal Personal Care Industry.
- To explore the possible opportunities that boost the herbal industry's growth and threats that may hinder its process of development.
- To provide useful insights to market practitioners about herbal personal care products.

4. Reasons for Growth of the Herbal Industry

- **Increased Sales:** Any business can succeed when it follows the strategy of increasing its revenue. The herbal personal care industry has followed a similar strategy of increasing its revenue by promoting sales. It had a favorable impact on the growth of this industry.
- **Creativity and Innovation:** The golden rule to succeed in each and every sphere is the collaboration of creativity and innovation. Customers demand creativity and innovation in the market. Hence, this demand has been fulfilled by the herbal personal care industry.
- **Natural Products:** The favorable impact of this industry on consumers is that herbal personal care products are purely made up of natural ingredients such as plant extracts and herbs. No amount of chemicals has been used in this industry. This is the reason for its unstoppable growth.
- **Increased Awareness of Herbal Products:** Since the epidemic covid – 19 hit the country, people have become more cautious about their health and hygiene. Hence, every individual has changed their lifestyle and switched their preferences from chemical-based products to herbal products.

- **Increased Health Consciousness:** People nowadays have become health conscious and adopted the practice of yoga and are very cautious about the products they consume. Thus, consumers prefer to products that are of good quality and made up of natural ingredients.
- **Health Issues:** One major reason for the adoption of herbal products is the increasing health issues among people. To avoid such issues people started using herbal products.
- **Expansion of Customers:** Herbal personal care segment earlier focuses on females. But with the advancement of time and technology, it has also introduced a wide range of variety for male counterparts also. Hence, with the expansion of customers, the industry started growing.
- **Role of Social Media:** Increased awareness among people has been created by the popular tool of social media. It had helped the industry to influence people to adopt herbal personal care products through advertisements and beauty blogs.
- **High-quality Products:** The advantageous feature of herbal personal care products is their high quality. As such products are purely prepared from natural ingredients and no harmful element has been used, fulfilling the demand of advanced consumers. This is the reason for the rapid growth of the herbal personal care industry.

5. Past Growth Trends

The herbal Industry includes a wide range of categories starting from beauty products to medicines. The industry has seen growth at a very fast pace in recent years. The report revealed the revenue had increased from 332.87 USD in the year 2020 to 336.39 USD in 2021 and it is expected to increase twofold in the near future. The herbal personal care segment had come to notice through social media as well as beauty blogs. People were influenced by advertisements and blogs and initiated the use of Herbal personal care products. The most attractive thing in this segment is that the products are of good quality and chemical free in nature. Additionally, these products are completely made from plant extracts which are also suitable for animal skin, hence, no animal cruelty could be caused through the use of these products. It had been observed the high consumption of products in Asia Pacific countries as all the people have become conscious about their health and have switched over to herbal products. The key players in the market have focused on environmental concerns and had created sustainable partnerships so as to attract the majority of consumers.

6. Recent Development by Herbal Products

Although the herbal personal care industry had faced many challenges even then the industry stood out unshaken and had seen tremendous growth in each category of herbal products. Here is some light thrown on the recent developments that were experienced in the herbal personal care industry. Herbal personal care products have adopted the strategy popularly known as Cause Related Marketing. By adopting this strategy, it has succeeded in attracting a large number of consumers towards herbal products and thus, increasing sales.

- In June 2022, Himalaya Herbals initiated a campaign by promoting the concept of Wellness and focusing on the health of each and every individual. This campaign awakened health consciousness among consumers and they started using herbal products. (Univdatos Market Insights Report, 2023).
- In November 2021, the collaboration with the Delhi-based AIMIL Pharma, the Fragrance and Flavour Development Centre, Kannauj launched beauty products in line with the Union government's orders to adopt Ayurveda in food and beauty products. The product, Ayouthveda, had been made by adding time-tested herbs, also used in medicines. (Univdatos Market Insights Report, 2023).

- In March 2021, Lotus Herbals entered the category of Lotus Botanicals which has a wide range of variety of chemical-free and high-quality products covering the range of hair care and skin care. (Univdatos Market Insights Report, 2023).

7. Obstacles in the Path of Herbal Personal Care Industry

- **Competitors:** One of the most common barriers that are faced by the herbal personal care industry is the entrance of competitors into the market. The major key players in the market that provide herbal products are Himalayas Herbals, Lotus Herbals, Jovees Naturals, Forest Essentials, St. Botanica, and many more such market players.
- **Substitute Products:** Many substitute products such as organic products, and ayurvedic products are available in the market that is made up of natural ingredients. Consumers lack knowledge about the differentiation between these products. Hence, it is a barrier to the growth of the herbal personal care industry.
- **Lack of Credibility:** Consumers being wise in nature is very particular about the product they consume. They do not trust easily the brands that they exhibit in their characteristics. Consumers need evidence before using any product. Hence, there is a lack of credibility to some extent.
- **Herbalism and Spiritualism:** Herbalism and spiritualism are confused by many people. In ancient times, Herbal products were made by spiritual saints. Hence, in today's era, people associate herbalism and spiritualism together. But, in reality, these two are different terms. This poses an obstacle to the growth of this industry as people who do not believe in spiritualism also go against herbal products.
- **High Cost:** Another obstacle that has been faced by the herbal industry is its high cost due to quality products. The preparation of herbal products includes natural herbs that are costly in nature. Hence, some products have a high cost.

8. Opportunities of Herbal Personal Care Industry

1) *Natural Products*

Herbal products are extracted from plants or herbs grown naturally. These include no amount of chemicals and are used by the majority of people for their well-being. Moreover, it does not have any side effects on the skin and body which makes it compatible with use by the consumers.

2) *Safe to Use*

Herbal products are completely safe to use in any form. These are free from harmful chemicals therefore; it does not pose any threat to the health of a human being. Without any doubts and thoughts, anyone can use herbal products.

3) *Sulfate and Paraben Free*

One of the qualities of herbal products is that they are extracted naturally from plants and hence, no chemical substances are included in its ingredients. Therefore, making it sulfate-free and paraben-free is a positive point for humans as well as for the ecology.

4) *No Animal Cruelty*

These products do not cause any harm to the environment and the animals that are an essential part of the ecosystem. Synthetic products include animal skin and parts of animals to make it a superior quality product but on the other hand, herbal products do not include any animal cruelty which makes these products popular among consumers. Being aware consumers, they tend to buy only those products that are beneficial for human consumption as well as for the ecology.

5) *Wide Range of Product Availability*

With the advancement and upgradation of the market, it has become the need of an hour to make available different types of products in the market. Following the same strategy, herbal products are also available in all categories starting from hair shampoos to foot creams. This attracts the customer to buy more of these products.

6) *Free from Side Effects*

Herbal products are made of natural ingredients that has no harmful side effects. In a survey conducted, it was concluded that people of all ages do not mind to use herbal products as they felt comfortable to use these products as it doesn't have any harmful effects and it boosts confidence level in human beings.

7) *Cosmeceutical Products*

Herbal products include cosmetic products in its range. It provides cosmetic products with herbal properties so that it doesn't do any harm to human beings.

9. Threats to Herbal Personal Care Industry

1) *Lack of Awareness*

There is a lack of awareness among people in some areas regarding the consumption of herbal products. It is still not clear to the people whether which product is safe to use and which causes harm. People run after cheap products especially poor people.

2) *Competitors*

There is a lot of competition in herbal products. A wide range of variety as well as brands are available in the market that provides herbal products which challenges its product's superior quality.

3) *Pricing*

Herbal products are available with no side effects and with high prices in the market which are not easily affordable by everyone. Therefore, it poses a challenge in the path of herbal products.

4) *Prolonged Results*

Consumption of herbal ingredients for any treatment takes a lot of time and it may take long to see the results. These are undoubtedly effective remedies for treating any ailment but it takes a prolonged time to get output.

10. Implications

The study provides meaningful insights to academicians and market practitioners. The study has identified the factors that are responsible for the growth of the herbal industry. The study is beneficial for marketers as it provides them with the factors that can be undertaken to overcome the challenges and move toward the direction of growth. Additionally, the study is carried on to explore various obstacles that were faced by the industry in its growth process. One of the most essential reasons is that the products are purely made from natural ingredients and are rich in quality. Customers, being health-conscious demand such products to keep them fit and healthy. From the study, it was observed that people were consistently shifting their preferences from chemical brands to herbal brands due to their increasing awareness of herbal products. Increasing turnover and number of customers rapidly posing the industry towards growth and is expected to grow even at a faster pace in forthcoming years.

11. Conclusion

It is evident from many past studies by eminent authors that the Herbal personal care products industry has been growing at a fast pace. Decades ago, herbal products were the only products that were used by everyone. But, with the passage of time, many MNCs entered the country and introduced the concept of beauty products and personal care products that are of high quality and brands like Lakme, Swiss beauty, Maybelline, Sugar, and many more. These brands were promoted by brand ambassadors. These products attracted the attention of the general public and they started using these products. Such products were not fit for human use as they were made up of chemical ingredients and were harmful to the body. The prolonged use of such products awakened many harmful diseases such as cancer. Serious health concerns arouse and motivate people to avoid the use of such chemicals. Since the pandemic devastated many lives, every individual changed their lifestyle and switched their preference to herbal products. Till that time herbal industry has outshined and grown at a rapid pace.

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An Empirical Study on the Impact of Social Media on Changing Lifestyle of Youth

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Abstract--- In our digital age, the proliferation of social media platforms has dramatically transformed the way individuals, particularly youth, interact with the world. The advent of social media platforms has ushered in a new era of communication, information dissemination, and social interaction. Youth, in particular, have been at the forefront of this digital revolution, embracing social media as an integral part of their daily lives. This study aims to empirically investigate the multifaceted impact of social media on the lifestyles of youth, recognizing the importance of understanding how these platforms shape their behaviour, perceptions, and choices. Employing a mixed-methods approach, this research explores the psychological, social, and behavioural implications of social media engagement among youth.

This study involves a diverse sample of 180 young individuals, ranging from ages 16 to 30, participated in this study. Quantitative data was collected through surveys that explored the frequency and nature of social media usage, as well as its perceived effects on various aspects of their lives. Qualitative data was gathered through in-depth interviews and focus group discussions to delve into the nuanced experiences and perceptions of youth concerning social media. The findings helps us in understanding these impacts are crucial for parents, educators, and policymakers seeking to navigate the challenges posed by social media in the lives of youth. By acknowledging the multifaceted effects of social media and promoting digital literacy and responsible usage, we can strive to harness its potential for positive change while mitigating its adverse consequences in shaping the lifestyles of the youth in the digital age.

This empirical study underscores the transformative impact of social media on the lifestyle of today's youth. It illuminates the complex interplay of social media with various aspects of life, from social interactions to mental health, physical activity, academic performance, and consumer behaviour. While social media brings opportunities for connection and self-expression, it also raises concerns about its potential negative effects on well-being. Recognizing these dynamics is essential for individuals, parents, educators, policymakers, and society as a whole to navigate the evolving landscape of youth and technology effectively.

Keywords--- Social Media, Lifestyle, Digital Age, Technology, Communication, Trends.

1. Introduction

In an age dominated by digital connectivity, social media has emerged as a transformative force, significantly influencing the lifestyles of the youth. The pervasive nature of these platforms has redefined how young individuals engage with information, communicate with peers, and construct their identities. This empirical study delves into the intricate dynamics of the impact of social media on the evolving lifestyle of the youth, unraveling the multifaceted ways in which these online spaces shape their choices, behaviors, and well-being.

The youth demographic, often described as the "digital natives," is at the forefront of technology adoption. Social media platforms have become integral to their daily lives, serving not only as communication channels but also as arenas for self-expression, identity formation, and social validation. As these platforms continue to evolve, it becomes imperative to empirically examine their influence on various aspects of youth lifestyle.

This research endeavour's to navigate beyond anecdotal observations, employing a rigorous empirical approach to unravel the nuanced relationship between social media and the lifestyle choices of the youth. By exploring the depth and breadth of this impact, we aim to contribute evidence-based insights that can inform discussions, policies, and interventions aimed at fostering a healthy and positive digital environment for the youth.

The study's objectives encompass a comprehensive analysis, ranging from the extent of social media penetration among the youth to its effects on social interactions, information consumption, personal well-being, lifestyle choices, and consumer behavior. Through this holistic exploration, we strive to provide a nuanced understanding of how social media acts as both a mirror reflecting and a sculptor shaping the lives of the youth in our interconnected world.

As we embark on this empirical journey, the findings promise not only to shed light on the current state of affairs but also to offer valuable perspectives on potential strategies for mitigating any identified negative impacts. Furthermore, we seek to identify opportunities where social media can be harnessed as a positive force, promoting healthy lifestyles, meaningful connections, and the holistic development of the youth.

In the following sections, we will delve into each objective with meticulous detail, employing a mix of quantitative and qualitative methodologies to capture the essence of the intricate relationship between social media and the changing lifestyle of the youth. Through this research, we aim to contribute to the on-going discourse surrounding the digital landscape, ultimately fostering an environment where the youth can navigate the online realm with resilience, awareness, and empowerment.

2. Need of the Study

The imperative to conduct an empirical study on the impact of social media on the changing lifestyle of youth arises from the profound and pervasive influence these digital platforms wield in shaping the daily experiences and behaviours of the younger generation. Social media has become an omnipresent force, fundamentally altering the way young individuals communicate, access information, and construct their identities. The ubiquity of these platforms necessitates a nuanced investigation into how they impact various facets of youth lifestyle, ranging from interpersonal relationships to leisure activities and consumer behaviour. Understanding the intricate dynamics at play is crucial not only for academic insights but also for informing policy decisions, educational strategies, and interventions that can foster a healthy and positive digital environment for the youth.

Moreover, the study addresses pressing societal concerns related to the potential implications of social media on the well-being and mental health of the youth. With an increasing number of young individuals relying on these platforms for social validation and self-expression, there is a growing need to explore the psychological and emotional ramifications of such engagements. Additionally, the study contributes to the broader discourse on digital literacy, empowering both the youth and stakeholders to navigate the digital landscape responsibly. By providing evidence-based insights into the multifaceted impacts of social media, this research endeavour's to guide discussions and initiatives aimed at maximizing the positive aspects while mitigating potential risks associated with the digital transformation of youth lifestyles.

3. Review of Literature

According to social media is becoming an essential and vital instrument for Indian society in his paper Jaswinder Singh (2020), Impact of Social Media on Indian Youth with Special Reference to Covid-19."It is the period between infancy and adulthood. Over sue of social media contributes to health issues.

In their 2009 study "Youth Engaging with the World," **Thomas Tufte and Florencia Enghel** discovered that, despite the common experience of a globalized world that increases the cultural offer while decreasing access to it, youth do not constitute a homogenous aggregate or universal category.

In his paper "Social Media and Social Change," **Noureddine Miladi (2016)** investigated how the extraordinary advancements in satellite TV and social media networks have contributed to the social and political changes that are sweeping through a few Arab nations. These networks have made it easier for activists and protest groups in the Arab spring countries to communicate and share information. The information flow and internet content that exposes political corruption, violations of human rights, and restrictions on fundamental freedoms has eluded the authority of the authoritarian authorities in those nations. YouTube, Twitter, and Facebook have been used as unhindered forums for the free exchange of information by activists both inside and outside such nations.

Rajeswari S. (2017) on her study "Impact of Social Media on Lifestyle and Learning Behavior among Adolescents," discovered that social media gives young people a platform to speak out against societal concerns and to share or upload content that will benefit society as a whole. Information can be uploaded or shared for the good of society. Young people need to investigate the possibilities of social media since it can offer them every method and means to grow their social and personal lives. Even while these sites have certain detrimental effects on young people, we cannot imagine a modern world without them.

According to **Jesu Kulandairaj A. (2014)**, the impact of social media According to 'On The Lifestyle Of Youth,' social networking sites are quickly becoming one of the most effective and unmatched resources for information sharing, opinion shaping, fostering cross-cultural connections, encouraging involvement, and, most importantly, facilitating new forms of communication. This is only the start. Social networking sites are still in their infancy, and communities all over the world are only now starting to realize how this medium might influence discourse and communication. This study viewed the benefits, positive and negative impacts of social networking sites and how the social networking sites influence youth in their lifestyle.

4. Objectives of the Study

1. To ascertain the youth's usage patterns on social media.
2. To study how young people interact on social media.
3. To analyse how social media affects young people's awareness and conscience.
4. To understand how social media is influencing young people's evolving lifestyles.
5. To research the effects of social media as the public sphere of the youth.

5. Research Methodology

The current study used a descriptive research design to characterize the traits of a group or individuals as well as their opinions regarding social media and how it affects young people. The study is qualitative in character. The data were analyzed by using descriptive and inferential statistics like frequency, percentage, mean, standard deviation, and Annova Test.

Sources of Data

Primary Data Sources

The interview schedule has been taken into account when determining the sources of information. Interview schedules were used to survey students, and data collection was done with the organizations' prior consent. The interview questions were prepared with consideration for all the research goals.

Secondary Data Sources

Periodicals, books, newspapers, the internet, and other sources were regarded as secondary data sources.

6. Hypothesis

1. **Null Hypothesis (H_0):** Youth who are heavy social media users do not tend to show greater degree of acceptance of changing lifestyle patterns than moderate and low social media users.

Alternate Hypothesis (H_a): Youth who are heavy social media users tend to show a greater degree of acceptance of changing lifestyle patterns than moderate and low social media users.

2. **Null Hypothesis (H_0):** Youth who are heavy social media users do not tend to show greater degree of acceptance of changing pattern of social status and role than moderate and low users.

Alternate Hypothesis (H_a): Youth who are heavy social media users tend to show greater degree of acceptance of changing pattern of social status and role than moderate and low users.

3. **Null Hypothesis (H_0):** Youth who are heavy social media users do not tend to show greater degree of acceptance of more consciousness and awareness than moderate and low users.

Alternate Hypothesis (H_a): Youth who are heavy social media users tend to show greater degree of acceptance of more consciousness and awareness than moderate and low users.

7. Analysis

Table 1: Acceptance of Changing Lifestyle Patterns

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.050	2	.025	.114	.893
Within Groups	43.105	197	.219		
Total	43.155	199			

Significance at $p < 0.05$

Analysis: It can be seen from the table-1 that p is not significant for the variable acceptance of changing lifestyle pattern as its p -value greater than 0.05. As the p -value is greater than 0.05, therefore null hypothesis is accepted in such cases.

Interpretation: Since the p -value is greater than ($p < 0.05$) for the variable i.e., acceptance of changing lifestyle pattern, thus overall there exist a lesser relationship between type of youth users and their acceptance to changing life style pattern. Thus the null hypothesis (H_0) is accepted i.e. youth who are heavy social media users do not tend to show greater degree of acceptance of changing lifestyle patterns than moderate and low social media users.

Hence, alternate hypothesis (H_a) is rejected i.e. youth who are heavy social media users tend to show a greater degree of acceptance of changing lifestyle patterns than moderate and low social media users.

Table 2: Acceptance of Changing Pattern of Social Status and Roles

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.325	2	.162	.259	.772
Within Groups	123.430	197	.627		
Total	123.755	199			

Significance at $p < 0.05$

Analysis: It can be seen from the table 2 that p value is not significant for the variable for acceptance of changing pattern of social status and roles as its p-value is greater than 0.05. As the p-value is greater than 0.05, therefore null hypothesis is accepted in such cases.

Interpretation: Since the p-value is greater than ($p < 0.05$) for the variable i.e acceptance of changing pattern social status and role, thus overall there exist a lesser relationship between type of youth users and their acceptance to changing life style pattern. Thus the null hypothesis (H_0) is accepted i.e. youth who are heavy social media users do not tend to show greater degree of acceptance of changing pattern of social status and role than moderate and low users.

Hence, alternate hypothesis (H_a) is rejected i.e. youth who are heavy social media users tend to show greater degree of acceptance of changing pattern of social status and role than moderate and low users.

Table 3: Acceptance of More Consciousness and Awareness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.742	2	.871	1.241	.291
Within Groups	138.213	197	.702		
Total	139.955	199			

Significance at $p < 0.05$

Analysis: It can be seen from the table 3.2 that p value is not significant for the variable acceptance of more consciousness and awareness as its p-value is greater than 0.05, therefore null hypothesis is accepted in such cases.

Interpretation: - Since the p-value is greater than ($p < 0.05$) for both the variable i.e acceptance of more consciousness and awareness, thus overall there exist a lesser relationship between type of users and their acceptance of more consciousness and awareness. Thus the null hypothesis (H_0) is accepted i.e. youth who are heavy social media users do not tend to show greater degree of acceptance of more consciousness and awareness than moderate and low users.

Hence, alternate hypothesis (H_a) is rejected i.e. youth who are heavy social media users tend to show greater degree of acceptance of more consciousness and awareness than moderate and low users.

8. Conclusion

Our empirical study, while seeking to explore the impact of social media on the changing lifestyle of youth, has revealed intriguing insights that challenge our initial hypotheses. Contrary to expectations, our findings do not support the notion that heavy social media users exhibit a greater degree of acceptance of changing lifestyle patterns, social status, role shifts, consciousness, and awareness compared to moderate and low social media users among the youth demographic.

This unexpected outcome prompts a reconsideration of the assumed influence of social media on various aspects of youth behavior. While social media undeniably plays a significant role in shaping contemporary communication and information dissemination, our study suggests a more nuanced relationship between heavy social media use and the identified lifestyle factors.

The rejection of our hypotheses emphasizes the need for a comprehensive understanding of the diverse influences that contribute to the evolving behaviors and attitudes of youth. Factors beyond social media, such as cultural, familial, and individual dynamics, may play pivotal roles in shaping lifestyle patterns, social roles, and levels of consciousness among the younger generation.

This study encourages future research to explore the intricate interplay of multiple variables that contribute to the complex landscape of youth behavior. By acknowledging the limitations of solely attributing changes in lifestyle to social media use, we open the door to a more holistic examination of the factors that collectively shape the lives of today's youth. In doing so, we can develop a richer understanding of the multifaceted influences that contribute to the dynamic nature of contemporary youth culture.

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Digital Marketing Strategies Adopted by Indian Universities for International Student Recruitment

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Abstract--- Given the increasing trend of internationalization in higher education, it is critical for Indian universities looking to expand their global student diversity in the classroom to comprehend how effective digital marketing techniques can be. This study examines Institutes of National Importance such as Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), Delhi University (DU), Jawaharlal Nehru University (JNU), and Banaras Hindu University (BHU) are using digital marketing strategies. Indian Universities have recently been the essential players in the highly competitive global higher education industry. To increase their intercontinental visibility IITs strategically use social media handles, such as Facebook/Instagram marketing. To improve student outreach, few institutions optimize their online presence at the same time through sophisticated websites and targeted social media advertising. Furthermore, IIMs demonstrate innovation by successfully representing their academic programs via the use of revolutionary digital marketing techniques like Google search advertisements and intriguing video material. The study concludes with insightful information for administrators, marketing specialists, and educational institutions for enhancing international recruitment and outreach. This study adds to the human knowledge of global education marketing and provides essential pointers to Indian Universities for developing efficacious, demographically digital marketing initiatives for the global academic scene.

Keywords--- International Student Recruitment, Digital Marketing Strategies, Higher Education, Cross-Cultural Engagement, Global Education Market.

1. Introduction

Within India's ever-changing higher education scene, international student turnout became a key component, which was a major shift that contributed significantly to Indian institutions' desire to become globally competitive. Indian colleges and universities are using effective digital marketing methods carefully to attract students from various parts of the world, realizing the many benefits that come with having overseas students. In addition to being critical to these universities' financial success, the implementation of successful digital outreach programs became vital to fostering a varied and lively academic community.

Digital channels are becoming increasingly important for connecting and interacting with potential students, as evidenced by research conducted in Nagpur, India, on the effects of digital marketing methods in the industry. Nearly 4.66 billion people worldwide used the internet as of 2020, making up 59% of the total population. 820.99 million Indians were expected to be online by 2022, according to projections (economictimes.indiatimes.com, 2022). Digital marketing has become an essential tool for managing the challenges presented by unstable markets and unanticipated events such as the worldwide pandemic. Even with the increasing importance of digital marketing in higher education, there was still a discernible gap in the literature, especially when it came to the precise tactics Indian colleges used to draw in foreign students (Goldman et al. 2021). By offering a detailed examination of the effects of digital marketing within the unique setting of Indian higher education, this study attempted to close this gap.

It has been found that throughout the pandemic, there was a rapid shift toward digital consumption, emphasizing the critical necessity for a thorough grasp of the part that digital marketing plays in student recruitment. With the declining efficacy of old methods, digital marketing has become an ever-evolving and vital instrument for connecting with, interacting with, and influencing potential students' decisions. The purpose of this study was to decipher the intricacies of digital marketing tactics used in Indian higher education. It will examine and record the most recent tactics employed by Indian institutions to draw in foreign students (Dash and Chakraborty, 2021). Examining enrollment patterns and regional diversity, the study evaluated their efficacy and offered practical suggestions for improving next recruiting efforts. Beyond scholarly contributions, the study provided useful perspectives specific to the Indian setting, which helped colleges improve their international student appeal and draw in a wide variety of foreign applicants.

The main aim of this study is to evaluate the various digital marketing strategies employed by prominent Indian universities to attract international students in the global higher education market. Hereby, below mentioned objectives have been designed,

- To investigate the specific digital marketing tactics employed by Indian Universities for enhancing international brand visibility, with a focus on platforms.
- To analyze the online presence optimization strategies utilized by Indian Universities to improve outreach and attract international students.
- To explore the innovative digital marketing approaches adopted by Indian Universities to effectively showcase their academic programs and attract a diverse pool of international learners.
- To critically assess the overall impact and effectiveness of the identified digital marketing strategies employed by the selected Indian Universities in the recruitment of international students.

The research is primarily focused on investigating the digital marketing strategies employed by prominent Indian universities contributing to attract international students in the global higher education market.

2. Review of Literature

A. Digital Marketing Trends in Higher Education

Higher education has undergone a global transformation due to trends in digital marketing, where universities are using creative approaches to reach a wider audience. Massive Open Online Courses (MOOCs), which provide flexible learning options, are becoming increasingly popular (Voudoukis and Pagiatakis, 2022). Globally renowned universities provide courses on platforms such as Coursera, edX, and Udacity, which eliminate regional restrictions. By providing MOOCs, Indian universities such as the Indian Institutes of Management and the Indian School of Business participate actively in this worldwide movement and broaden their international outreach. Digital marketing tactics employed by universities heavily rely on social media networks. Universities across the world use social media sites such as Facebook, Instagram, and Twitter to interact with students and highlight campus life and academic accomplishments (Bonilla Quijada et al. 2022). Harvard University, for instance, uses social media to interact with the academic community worldwide, promote research highlights, and draw in potential students. These platforms' interactive features encourage a feeling of connectedness and community. Another important factor is Search Engine Optimization (SEO), which makes institutions show up prominently in internet searches. Institutions can improve their accessibility and exposure by optimizing their online content with pertinent keywords. This is essential in a global market where attention is fiercely competitive in the digital sphere.

B. Globalization and International Student Recruitment

Higher education has seen tremendous change due to globalization, which has also led to a general increase in the number of international students enrolled. Internationally, universities actively seek out and admit students from a wide range of cultural backgrounds to provide inclusive and stimulating learning environments. Studying abroad is appealing not just for academic purposes but also for cultural immersion, language learning, and developing a global perspective. Numerous colleges have seen this tendency, both well-known ones and others that aim to promote diversified learning environments. Universities implement thorough recruitment efforts in response to the increasing demand for overseas students (De Wit et al. 2021).



Figure 2.1: IIT Madras International Admission ad on Facebook

Digital marketing is essential for connecting with potential students across the world. Institutions such as the Indian Institutes of Technology (IITs) and Indian Institutes of Management (IIMs) use digital platforms as strategic tools to highlight their distinctive offers and high caliber of teaching. Scholarships and other financial incentives are very important in luring overseas talent. Programs such as Study in India aim to increase international students' access to higher education in India and portray the nation as a desirable place to pursue intellectual endeavors. The economy as a whole gain from recruiting overseas students in addition to the colleges themselves (Yang, 2022). Through their tuition, housing costs, and other expenses, overseas students in India considerably boost local economies. This economic impact demonstrates how globalization in higher education benefits both parties. Hence, it is evident that Indian institutions' efforts to attract international students are critical to the advancement of the academic and business sectors. These programs not only increase academic diversity but also have a major positive impact on local economies, as the research on digital marketing tactics demonstrates.



Figure 2.2: IIT Gandhinagar International Admission ad on Facebook

C. Role of Social Media in Student Engagement

Within the ever-changing context of Indian higher education, social media's function in fostering student involvement is a crucial factor that is deeply ingrained in institutions' digital marketing strategies. This is especially important when it comes to drawing in foreign students, as the worldwide academic community is depending more and more on digital channels for outreach and interaction. Social media sites such as Facebook, Instagram, and Twitter are effective tools that universities may use to communicate with potential students directly (Ladogina et al. 2020). These online resources give a glimpse into Indian colleges' vibrant cultures, academic programs, and campus life. Universities may successfully highlight their distinctive services and weave a fascinating story for prospective overseas candidates through the use of engaging material. Indian institutions use social media not only for marketing but also to encourage participation and a feeling of community. Universities may communicate directly and quickly with students all across the world through live sessions, virtual campus tours, and interactive content. For example, sharing the success stories of overseas students with prospective applicants helps to generate accessible narratives that give them an idea of the life-changing experiences they may expect. Social media's interactive features allow for real-time interaction, which helps colleges respond to questions, deliver material quickly, and develop a personal connection with potential students (Deeken et al. 2020). Universities are also able to customize their messaging to target audiences based on the interests and goals of a worldwide audience interested in studying in India thanks to the usage of targeted advertising on social media sites such as Facebook and Instagram used by JNU.



Figure 2.3: JNU Facebook ad for International Students

Beyond marketing campaigns, social media provides a vibrant forum for peer-to-peer interaction among potential students. A thriving virtual community is facilitated by discussion boards, student-led projects, and virtual events. Since the digital sphere is an extension of the campus experience, Indian institutions know how important it is to facilitate these linkages. Overall, Social media's function in increasing student involvement is crucial in the ever-changing world of higher education (Kumar and Nanda, 2020). With Indian Universities aggressively pursuing foreign student recruitment, social media has become an indispensable instrument for fostering a dynamic and interconnected global academic community. The research on digital marketing tactics complements this by highlighting the need for successful online outreach, where social media is essential to reaching the objective of enticing and drawing in potential students from all over the world.

D. Measuring the Effectiveness of Digital Marketing in Education

Analyzing digital marketing's impact on higher education, especially in the context of India's universities, requires a thorough evaluation of several important factors. The National Education Policy 2020 has brought about several recent developments that highlight the dynamic character of postgraduate education in India and the system's developing nature.



Figure 2.4: IIM Kozhikode Google Ad for International Students

This change has an impact on the marketing tactics that educational institutions use, particularly in the field of business education. The Indian Institutes of Management (IIMs) and other private business schools are prime examples of the high caliber of management education in the country, which fosters competition (Agarwal et al. 2021). Entrance examinations such as CAT, XAT, and SNAP drive the admissions process, which emphasizes the importance of efficient marketing to draw in top talent. Within this framework, digital marketing has become an indispensable gadget, with Google AdWords ads taking center stage in educational institutions' marketing plans. When considering higher education institutions, the advantages of digital advertising especially with Google AdWords are very clear (Camilleri, 2020). The study highlights the significance of educational institutions, particularly business schools, having a strong online presence in light of the shifting tastes of the technologically aware age.

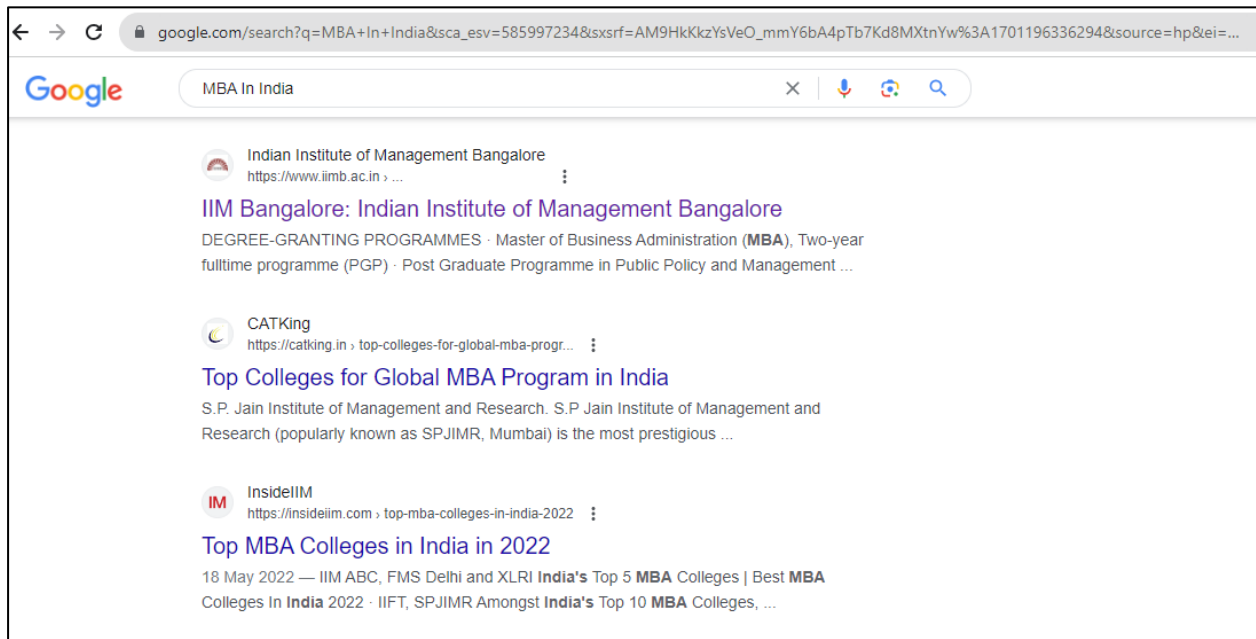


Figure 2.5: IIM Bangalore - Top Result in Google Search Engine through Google Ad

With 50% of Indians in the 20–29 age range being the target market for internet penetration, educational institutions should strategically use digital channels to connect with potential students. Institutions need to manage the challenges of digital marketing to remain competitive as the Indian educational scene changes more (Pandey et al. 2020). In summary, the efficacy of digital marketing in Indian business schools is demonstrated by a range of measures that improve the institution's overall attractiveness and are critical in drawing in a wide group of overseas students. India is positioned as an appealing location for international higher education in large part due to a systematic and data-driven strategy.

E. Theoretical Underpinning

This study investigates the efficacy of digital marketing in drawing foreign students to Indian Universities using the Technology Acceptance Model (TAM) as its theoretical foundation. Fred Davis developed TAM, which is extremely essential when considering online platforms for recruiting in higher education since it focuses on comprehending user acceptance and uptake of technology. According to TAM, a technology's perceived utility and simplicity of use influence a user's propensity to utilize it (Tawafak et al. 2023). Regarding digital marketing for Indian Universities, this suggests that the degree to which local and foreign prospective students find online platforms useful and easy to use will determine whether or not they adopt these platforms. Information clarity, simplified application process, and

user-friendly interfaces are all components of perceived ease of use. The degree to which overseas students find these platforms easy to use has a big impact on how likely they are to interact with digital marketing content. The idea that using technology would improve performance or satisfy demands is at the heart of perceived usefulness (Song et al. 2021). This encompasses the quality of virtual experiences, the relevance and comprehensiveness of the content, and the entire value proposition presented through digital media in the context of potential foreign students.

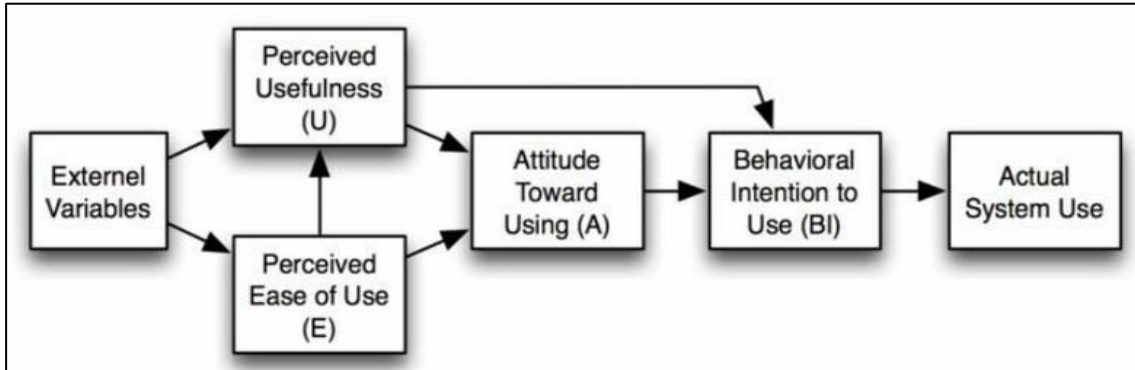


Figure 2.6: Technology Acceptance Model (TAM)

If these factors are considered important for making well-informed judgments about studying in India, then overseas students' desire to enroll in Indian colleges is reinforced. To put it briefly, the TAM framework offers a strong basis for examining the variables affecting how well digital marketing campaigns work to draw foreign students to Indian Universities. This study is to provide insights into user acceptance dynamics and inform strategies to enhance digital marketing initiatives in the higher education sector by exploring perceived utility and ease of use.

3. Research Methodology

A. Research Paradigm

The underlying worldview that directs a researcher's pursuit of information and comprehension during a study is referred to as research philosophy. It presents the study's perspective on the essence of reality, the significance of facts, and the methods by which knowledge could be acquired. The research philosophy employed in this study on digital marketing techniques adopted by Indian Universities tends to be positivist (Khwaja et al. 2019). The philosophy of positivism is in line with actual observation and aims for objectivity and measurable information. In this case, it entails a dispassionate examination of the efficacy of digital marketing strategy, looking for quantifiable proof of their influence on drawing in international students. The underlying plan or strategy that directs the study's design, implementation, and analysis is referred to as the research methodology. It prescribes the approaches and procedures to be pursued to address research issues and accomplish goals. An integrating qualitative technique is used in conjunction with an inductive approach to investigate digital marketing tactics in Indian colleges (Apasrawirote et al. 2022). Specifically, an inductive approach is used in the qualitative phase of the study, which facilitates a deeper understanding of the approaches and their impact by allowing themes and insights to become apparent from discussions, and content analysis without a requirement for predetermined hypotheses or preconceived notions.

B. Research Strategy

The general plan or methodology used by researchers for handling the study topic or subject is referred to as their research strategy. It describes the procedures, methods, and approaches utilized to collect, examine, and evaluate data for a research project. A possible application for a qualitative approach in a case study investigating the effects of digital

marketing methods on the recruitment of elsewhere students in Indian institutions would be a thorough data analysis with the university. Through qualitative data analysis, these case study methodologies could give in-depth insights into the subtleties of promotional strategies, problems encountered, and their perceived efficacy in drawing in international students (Ozuem et al. 2022).

C. Time Horizons

In research, time horizons relate to the temporal dimension or the duration of gathering data and analysis. They serve to illustrate the period when observations, measurements, or data collecting take place. In research, there are several kinds of chronological horizons, including cross-sectional, longitudinal, and retrospective investigations. A cross-sectional temporal horizon is utilized in the particular research examining the internet marketing tactics Indian institutions use to draw in foreign students (Bhuvaneshwari et al. 2021). With this method, data is gathered either in its entirety at once or over a brief period, bringing together information from several sources. It provides a snapshot perspective by gathering information from different participant categories (current students, potential candidates) in a certain amount of time. This offers insights into their viewpoints and experiences regarding the digital marketing tactics used by the institutions.

D. Data Collection

The process of obtaining information or proof pertinent to the objective of a research project is known as data collecting. It includes the methodical procedure for gathering, documenting, and putting up data in preparation for analysis. Data gathering for the current study employs both qualitative and quantitative methodologies intending to examine how Indian institutions use digital marketing strategies to draw in overseas students (Pandey et al. 2020). The study employs secondary data sources including focus groups, interviews, and content analysis to acquire qualitative data. Conversations with university officials offer insightful insights on digital marketing tactics, obstacles encountered, and accomplished outcomes. International students who are currently enrolled in focus groups share their opinions about how digital marketing has affected their choice of Indian universities (Bamberger et al. 2020). Additionally, an examination of marketing materials such as emails, social media postings, and website content is done through content analysis to learn more about the types, variations, and efficacy of digital advertising strategies employed by these establishments. These secondary data sources are essential for offering comprehensive, contextual insights into the tactics and how they affect the recruiting of overseas students.

E. Methods of Data Analysis

The methodical inspection, understanding, and presentation of data to identify trends, understandings, and conclusions pertinent to the goals of the study is known as data analysis. Qualitative data analysis is essential to the current study, which focuses on the digital marketing techniques used by Indian colleges to recruit overseas students (Pawar et al. 2020). Thematic analysis is specifically used to examine qualitative data from focus groups, interviews, and marketing material content analysis. Identifying recurrent themes or patterns in the data using thematic analysis enables the investigation of underlying ideas, viewpoints, and personal accounts about the efficacy as well as the importance of digital marketing tactics. This approach facilitates the arrangement and interpretation of qualitative data, offering comprehensive and subtle knowledge of the strategies used by colleges and their effects on the choices made by potential foreign students.

4. Data Analysis

A. *Different Digital Marketing Strategies Adopted by Indian Universities*

Indian institutions have made a huge contribution to their worldwide appeal by skillfully embracing a range of online advertising techniques to engage and captivate overseas students. These organizations employ strategies that are complex and leverage a variety of digital channels and cutting-edge tactics. First and foremost, a key component of their digital outreach initiatives has involved the use of social media platforms. Indian colleges use social media sites such as Facebook, Instagram, Twitter, and LinkedIn to highlight student accomplishments, campus culture, and academic performance (Sivakumar, 2020). These universities may establish direct connections with potential students globally via the use of engaging material, such as live sessions, virtual campus tours, and student testimonials. The interactive capabilities of social media make it easier for people to communicate in real-time, which builds community and lets colleges customize their messaging to appeal to a range of demographics.

Another essential tactic that keeps Indian institutions prominent in internet searches is search engine optimization or SEO. These schools increase the likelihood that potential overseas students looking for educational opportunities will find them by securing prominent rankings in search engine results proactively adding relevant keywords and improving their website's content. Furthermore, content marketing has been accepted by Indian institutions as a successful tactic (Salminen et al. 2019). They create interesting and educational content, such as blogs, articles, films, and webinars, which not only display the academic offerings but also offer insightful information on faculty qualifications, research accomplishments, and student experiences. These educational establishments effectively pique the curiosity of prospective global learners employing captivating narratives and educational materials.

Moreover, email marketing is still one of their most effective strategies. To connect with potential students, universities create individualized and targeted email campaigns that include information on programs, scholarships, campus activities, and application procedures. These emails function as a direct line of communication, fostering connections and supporting prospective applicants with the admissions process. Pay-per-click (PPC) campaigns and Google Ads are two more prominent tactics (Agarwal, 2021). Indian institutions aim to boost their awareness among people around the world looking for higher education possibilities by placing carefully placed adverts on search engines and other relevant websites. The advertisements are customized to appeal to specific age groups and geographical areas, guaranteeing optimal visibility to prospective global scholars.

Additionally, using webinars, virtual tours of the campus, and live Q&A sessions has become more popular as a way to interact and communicate with potential students around the globe. Through these interactive sessions, overseas students may connect with instructors, see campus amenities, and learn first hand about academic programs (Singh et al. 2022). They offer an immersive experience. Universities are now starting to employ influencer marketing as well. By partnering with former students, faculty members, or other prominent figures from the academic community, these organizations expand their audience by making use of the authority and fan base of these influencers. These kinds of collaborations frequently provide relatable and genuine material that appeals to the intended audience. In its basic form, Indian colleges use a comprehensive strategy for digital marketing that includes sponsored commercials, influencer cooperation, SEO optimization, content marketing, targeted email campaigns, social media engagement, and interactive sessions (Chaffey and Smith, 2022). Together, these tactics help Indian higher education institutions become more visible and enticing worldwide, drawing in a wide range of overseas students looking for top-notch instruction and distinctive academic opportunities.

B. Effect of Strategic Digital Marketing on International Students

International students' choice-making procedures and overall views of Indian colleges are significantly impacted by the strategic digital marketing campaigns that these institutions execute. Above all, these programs substantially enhance accessibility and exposure. Universities expand their worldwide reach and make sure that their academic programs, cultural diversity, and unique offerings are well-represented by running targeted advertisements across many digital platforms (Abernethy et al. 2020). This increased visibility generates interest and awareness among overseas students by informing them about the opportunities offered by these schools as well as drawing them in.

Additionally, targeted digital marketing gives potential foreign students a customized and interesting experience. Student virtual campus tours, teacher relationships, and program insights are all made possible by customized material, such as instructional films, webinars, and interactive sessions. By bridging geographical divides and providing a window into the educational environment and culture of the university, this immersive experience favorably affects students' perspectives. International students find that the availability of information via digital marketing platforms greatly expedites the decision-making process (Basu et al. 2023). Accessible through websites and social media, comprehensive and well-organized online material delivers all the information one needs to know about courses, admissions requirements, scholarships, and student support services. This transparency makes it easier for students to make decisions about their educational paths and promotes a more seamless transfer to universities.

Digital marketing campaigns also foster a feeling of belonging and community. Using social media tools to their full potential allows teachers, alumni, and current students to communicate with one another (Farinloye et al. 2020). International students can learn more about the successful university community through online conversations, testimonies, and shared experiences. This strengthens their desire to become involved in the educational setting. Additionally, colleges may respond to student issues and requests in a fast and personalized manner because of digital marketing's real-time communication capabilities. The school fosters a favorable reputation among foreign students by being responsive and engaging, which in turn builds trust and credibility. The deliberate application of digital marketing has a significant impact on foreign students through increased exposure, customized experiences, simplified information retrieval, building networks, and prompt communication (Malthouse and Copulsky, 2023). All of these elements work together to entice in, hold the interest of, and affect foreign students, which in turn influences their choice of Indian colleges for their post-secondary education.

C. Recent Trends in Educational Marketing Strategies in India

India's educational marketing has experienced substantial shifts in the last several years due to global trends, shifting student preferences, and technology breakthroughs. Several noteworthy tendencies have surfaced, altering the approaches employed by educational establishments around the nation. Data-driven customized marketing Personalized marketing methods that make use of data analytics are a major trend (Abakouy et al. 2019). In India, educational establishments are employing data more and more to comprehend the interests, habits, and preferences of prospective students. Higher engagement and conversion rates are the outcome of this data-driven strategy, which enables focused outreach, personalized communication, and customized marketing campaigns.

A lot of attention has been accorded to virtual engagement strategies as a consequence of the widespread use of digital platforms. To provide prospective students with a holistic experience, universities are investing in interactive sessions, webinars, online open houses, and virtual campus tours (Almpanis and Joseph-Richard, 2022). Through these online relationships, students from all over the planet may visit campuses and communicate with teachers without

having to be physically there. Expansion of Storytelling and Content Marketing is a key component of educational marketing strategy is now content marketing. Organizations are emphasizing the incorporation of storytelling across a range of platforms, including social media material, podcasts, videos, and blogs (Bonini, 2022). Universities build genuine narratives that captivate potential learners and impact their choice of education by conveying captivating tales about student accomplishments, teacher competence, and campus life.

Creative Use of social media platforms in educational marketing is still essential. But the tendency now is to participate actively rather than just being present. Indian colleges are using social media not just for advertising needs but also for community building, information sharing, live events, and immediate question-and-answer sessions. Through employing this strategy, the institution is humanized and deep connections are made with the audience (Felten and Lambert, 2020). Adoption of Chat bots in educational marketing, integrating chat bot technology with artificial intelligence (AI) is growing more popular. Chat bots provide real-time answers to questions, give details about programs and admissions procedures, and provide individualized support all day long. Prospective students' channels of communication are streamlined and the user experience is improved by this automation.

To increase their reach and provide a variety of options, Indian educational institutions are working more and more with overseas universities, alumni networks, and business partners. These collaborations not only boost the institution's reputation but also offer distinctive opportunities for research and academics, drawing in students looking for encompassing learning experiences (Lemon and Salmons, 2020). In the context of these considerations, it is evident that recent advancements signify a revolutionary era in Indian educational marketing. Institutions are actively engaging with students and adapting to the evolving higher education marketing landscape by leveraging technology, embracing personalization, employing compelling storytelling, and forming strategic partnerships.

D. Discussion

The data research clarifies the many digital marketing tactics that Indian colleges have used to draw in and keep overseas students. These methods cover a broad range of techniques, including using social media platforms and improving search engine exposure to sunlight, as well as implementing influencer partnerships, email campaigns, PPC ads, virtual engagement sessions, and targeted content marketing (Sivakumar, 2020). Notably, these deliberate digital marketing initiatives have a significant influence on overseas students. These attempts greatly increase accessibility and visibility, making sure that potential students throughout the world are aware of the academic offers, campus culture, and distinctive features of Indian colleges. Universities develop immersive experiences that transcend geographical boundaries by utilizing customized content and targeted advertising. This provides international students with a favorable impression of the educational environment and fosters a look inside it.

Furthermore, it is impossible to overestimate the contribution that digital marketing, making the decision-making process easier for international learners. Websites and social media platforms provide easy access to information about courses, admissions, scholarships, and support services. This transparency helps students make well-informed judgments and expedites the transfer, enhancing their positive impression of and preference for Indian universities. In addition to disseminating information, these digital tactics provide a sense of community and belonging. Social media platforms function as dynamic forums where educators, staff members, and former students interact, exchange stories, and provide opinions (Berdanier et al. 2020). As a result of this involvement in order a lively community is created that appeals to potential international students and influences their desire to join the campus community.

Additionally, data-driven tailored methods, virtual engagement techniques, content marketing storytelling, active social media involvement, chat bot integration, and collaborative approaches are the new trends in educational marketing in India. These patterns indicate how educational institutions are adapting to meet the needs of their students and make effective utilize of technology. Essentially, the conversation focuses on how clever digital marketing not only draws in students from abroad but also has a significant impact on their opinions of Indian colleges and decision-making processes (Kumar and Raman, 2020). These shifting patterns highlight how crucial it is to adjust marketing tactics to satisfy the ever-changing demands of students throughout the world to provide a more welcoming and stimulating learning environment.

5. Findings & Conclusion

The creative integration of digital marketing methods has drastically changed the face of higher education in India. To draw in and keep overseas students, Indian colleges and universities have skillfully adopted a wide range of digital channels. Together with being a major factor in these universities' financial success, these coordinated actions have been crucial in fostering lively, varied academic communities. The substantial impact of digital outreach programs on the international attractiveness of Indian higher education is at the core of these developments. Indian universities are successfully broadening their global reach and awareness by employing tactics such as content marketing, email campaigns, social media platforms, SEO, and immersive interactive sessions. Potential students are drawn in by this increased visibility, which also provides them with a modified interesting experience.

Among the most significant aspects that these digital marketing initiatives clarify is how overseas students make choices quickly and intelligently. For students considering their career routes, the accessibility and abundance of information found on the internet and social media platforms allow for a smooth transition. In addition, these digital tactics do more than just disseminate information; they also promote a feeling of community and belonging. Social media platforms are active forums where freshmen may engage with existing students, teachers, and alumni to create relationships and get a first hand look at the lively campus culture. Their propensity to select Indian universities for their further studies is greatly influenced by this sense of connection. India's educational marketing environment is already showing clear tendencies toward more individualized and data-driven approaches. The changing environment is characterized by tailored marketing campaigns, online engagement tactics, content marketing storytelling, and active social media participation. These patterns illustrate how adaptable educational institutions are to shifting student tastes and how they strategically use technology to create more engaging learning environments.

The research study also provided insight into current patterns in India's educational marketing tactics, with a focus on data-driven, customized approaches, immersive virtual engagement approaches, content marketing that tells a captivating tale, social media involvement that is active, and creative teamwork. These patterns showed how flexible educational organizations are in response to new technology and shifting student preferences, demonstrating a deliberate attempt to foster a welcoming and stimulating learning environment. It is impossible to overestimate the significant influence that digital marketing techniques have on attracting overseas students. These tactics have not only improved Indian institutions' international recognition but have also had a big impact on aspiring students' decision-making processes. The future of global education is greatly influenced by the flexibility and inventiveness displayed by Indian universities in their marketing efforts, as higher education continues to change in an increasingly digital age.

6. Limitations

While this study prioritizes the transformative impact of digital marketing strategies in reshaping the landscape of higher education in India, certain limitations should be acknowledged. The research primarily focuses on the successful adoption and impact of digital channels by Indian universities, potentially overlooking instances of ineffective strategies or missed opportunities. Additionally, the study does not integrate deeply into the nuanced regional variations among Indian universities, potentially limiting the generalizability of findings. Furthermore, the rapidly evolving nature of digital marketing may render some identified trends subject to change, emphasizing the need for continuous monitoring and adaptation in future research endeavors.

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The Social Media Revolution: Strategies for Corporate Success

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Abstract--- Communication methods have evolved across different eras, profoundly impacting daily life. In the 21st century, social media has emerged as a powerful platform for self-expression, allowing individuals to convey beliefs, ideas, and manners in innovative ways. Its influence extends to corporations, emphasizing the necessity of a well-defined plan and social media strategy to thrive in the dynamic digital landscape. Companies must integrate various marketing theories to enhance their brand across different dimensions for a successful presence on social media. Original consumer interaction methods further position companies for leadership in social media marketing. The exponential growth of community websites like Twitter, Facebook, and LinkedIn has propelled the world into a new era of social media dominance. The global reach of platforms such as Facebook rivals that of nations like China and India, marking a significant shift akin to the industrial revolution. At its core, social media encompasses online media fostering participation, openness, conversation, connections, and a sense of community. This phenomenon has revolutionized research methods, enabling brands to enhance communication with consumers and strengthen their relationships.

Social media's impact extends to the advertising realm, prompting companies to approach advertising with greater caution to anticipate consumer responses and avoid unforeseen pitfalls in networking sites. Playing a hybrid role in the promotion mix, social media enables companies to engage with their clientele while fostering interactions among consumers. Shaping customer discussions to align with organizational goals is paramount. Companies now provide consumers with networking platforms and engage them through blogs and other social media tools. Marketers view social media as a significant opportunity to boost market share figures. While social media marketing allows companies to establish communication channels, market products, build brand equity, and enhance customer loyalty, it is a two-way channel requiring careful management. Dissatisfied customers can easily voice their concerns, potentially damaging a brand's image. To mitigate this risk, companies should align social media marketing with the global marketing strategy, choosing profiles that match the target segment and communicating accordingly.

Keywords--- Social Media Evolution, Marketing Strategies, Consumer Interaction, Global Reach, Brand Management.

1. Introduction

science and is always adjusting its regulations to fit the demands and advancements occurring in and around it. It has established itself in the new ETA. started adjusting to the new virtues that would be introduced to accept the new business models. The function of marketing in the growth of a firm is complete, however the manner it was carried out is drastically owing to the contributions of satellite communication and highly advanced science gadgets. The easiest way to describe social media is in relation to of the earlier paradigm of industrial media.

Conventional media, including news publications and television the direction of radio and periodicals is one. still image technology. Thanks to new web technologies, it easy for anybody to make and, most all, a problem their own material. a YouTube video, tweet, or blog post Millions of people may virtually see and manipulate videos at no cost.

Advertisers are not required to pay back Publishers or distributors to pay enormous amounts to include their communications so they may create their own captivating material that audiences will adore. societal There are other types of media, but the eight most common ones are as follows: blogs, microblogs, social networks, Social bookmarking, media-sharing websites, and websites for selection, analysis, forums, and efficient globes.

2. Technology and its Impact on Business

In interpersonal interactions and commercial practices. The introduction of personal computers, the Internet, and e-commerce has significantly changed how companies operate and market. Social media technology is advancing quickly, and companies should anticipate that it will continue to have an influence on them both now and in the future. Businesses who learn to exploit cutting-edge technology get significant increases in reimbursement when new technologies become available. Among the most well-known examples are tech-forward businesses like Microsoft, eBay, Amazon, and Google. Lastly, the approach is being impacted by the rapid rise of mobile computing and the smart phone industry, as social media connection is becoming simpler and enabling social media to flourish even more quickly.

3. Big Brands and Social Media

Almost everyone uses social media extensively, and businesses of all sizes have begun to market and promote themselves on these platforms. Large businesses utilize social media to demonstrate their robust presence and cordial engagement with their customers. Large companies including Dell, IBM, and Burger King have increased their use of social networking. IBM is the owner of over 100 distinct blogs, twelve virtual islands, several official Twitter accounts, and the developer Works forum. A machine series is released on YouTube, and a number of staff members provide presentations to the media-sharing platform SlideShare.

With its wildly popular IdeaStorm website, where people contribute ideas for new product lines and enhancements, vote them up or down, and leave comments on submissions, Dell has harnessed the power of social networking. Dell has increased community carry and continues to supply PCs with Linux preinstalled as a result of the website. With its MyStarbucks Idea Site, Starbucks has also begun to use this depiction with some degree of success. Burger King's creative and viral social media marketing initiatives have consistently generated headlines. Facebook users who agreed to "unfriend" ten of their social network contacts might get a free Whopper voucher from the fast food restaurant.

4. The Social Consumer Decision Journey

Businesses have rapidly discovered the benefits of social media: According to a McKinsey Quarterly study, 39% of businesses use social media platforms as their main digital tool for consumer outreach, and in the next four years, that percentage is likely to rise to 47%. An increasing number of success stories from majority firms are helping to drive this rise.

Creating Buzz: 18 months before to Ford's Fiesta model's reintroduction into the US subcompact vehicle market, the company launched a wide-ranging marketing campaign known as the Fiesta Movement. Giving 100 social media influencers a European model of the automobile, assigning them tasks, and asking them to document their practice on a few social media platforms constituted a significant portion of the project. YouTube viewers saw 6.5 million videos on the Fiesta campaign, and Ford got 50,000 requests for information about the car, the majority of which came from people who weren't Ford owners. In the first six days after it was made public in late 2010, almost 10,000 automobiles were sold.

Acquiring Knowledge from Consumers: PepsiCo has used social media platforms to get consumer feedback via its DEW McCray marketing campaigns, resulting in the creating a new variant under the Mountain Dew name. The business has sold more than 36 since 2008 A million of them.

Customer Targeting: Levi Strauss has offered location-specific discounts on social media. One instance of social media's word-of-mouth impact occurred when 1,600 individuals showed up to the company's shops as a result of direct contacts with only 400 customers.

The quantity of businesses that have online communities, Twitter feeds, or Facebook pages is still increasing. Reaching customers at the touchpoints—moments that impact their purchase decisions—is marketing's main goal. Social media is a unique part of the decision-making process for consumers because it is the only marketing channel that can reach them at every turn, from considering brands and products to the post-purchase phase, when their preferences for certain brands are shaped by their experience and their potential to advocate for those brands influences others.

5. The Pillars of Social Media Marketing

Table 1: Commonly Used Social Media Marketing Tools

Facebook 92%
Blogs 68%
Foursquare 17%
Twitter 84%
Youtube 56%
MySpace 6%
LinkedIn 71%
Forums 24%
Social Book Marking 26%

Source: slidegeeks.com

A) Blogging

Anyone may easily publish brief articles called posts on a blog, which is a kind of content management system. A blog's social characteristics, such as comments, blog rolls, trackbacks, and subscriptions, make it an ideal tool for marketing campaigns. Since blogs may be connected with almost any tool or platform, they are excellent focal points for other social media marketing campaigns. Every business that has a website need to have a blog where it addresses both its present and future clients as actual people. Blogs should have a conversational tone; corporate speak press releases have no place here.

Technocratic lists Mashable as one of the top five blogs on the internet and as the industry leader in the social media space. According to Buzz Logic and Jupiter Research's "Harnessing the Power of Blogs" research, blogs have an impact on almost one in five readers at critical decision-making phases.

In particular, blogs assist customers in finding goods and services, narrowing down their options, obtaining assistance and clarification, and selecting a particular product or service. These results make sense from a direct marketing standpoint since blogs bring together consumers with comparable psychographic, behavioural, and demographic characteristics. According to the research, readers trust blog content more than social media sites for shopping. This makes sense since consumers would want to consult comprehensive information before interacting with arbitrary posters who could have views about various things.

Although they are no longer the newest and most popular way to communicate online, blogs may nevertheless significantly increase sales at a low cost. However, they are not a fast remedy for marketing. These are internet media that need to be invested in over time in order to assist and involve clients and generate more interest in the product offering. Because of their very nature, blogs also facilitate search engine optimization and lessen the need for customer care and post-purchase assistance.

Twitter and Micro Blogging

Microblogging is a kind of blogging where posts are kept to a minimum length; for example, 140 characters is all that may be used in a tweet. Twitter's popularity began to soar in the first half of 2009 due to prominent celebrity users and an Oprah mention. Today, it has surpassed other social networking platforms in mainstream acceptance. The majority of businesses need to be using Twitter since it's simple, takes very little effort, and yields immediate benefits in terms of greater awareness, revenue, and customer data. Twitter may also be used to promote new blog entries, announce deals or events, and inform readers of noteworthy news articles. Twitter is a useful tool for monitoring rival activity. By subscribing to their tweets, the firm may also provide help to its Twitter-loving consumers. In a nutshell, Twitter for business is a quick, simple, and cost-free method of:

- Keep an eye on what your competitors are doing.
- Stay in touch with your own clients (follow them on Twitter to see what they are up to).
- Provide exclusive deals and promotions.
- Update team members and staff internally.
- Obtain leads on business opportunities, trends, and early access to breaking news.

6. Social Networks

Social networking switched to web-based apps as the popularity of the World Wide Web increased. The first wave was constructed for certain purposes or watchers. Classmates.com and Match.com launched in 1995. were developed; both remained rather well-liked websites throughout their specialty. 1999 saw more focused networks that were started. The current social media age had its start when Jonathan Abrams introduced Friendster in 2002. Intermix Media created the social network in 2003. website, Myspace. It reproduced the central friendliness of Friendster. At first driven by Myspace and Intermix Media's extensive mailing lists swiftly rose to the top of social networking URLs. Oct. 2003 saw Mark Zuckerberg continue to establish Facebook, a social media platform that started as a website only available to Harvard students. Lastly, in Anyone with an email address may register as of 2006 Between 2008 and 2009, at some point, Facebook surpassed Myspace.

Internet marketing would be a perfect match for Facebook. How may a marketing profit from this?.

Among the methods might be:

- Developing and improving the brand's image
- Developing and strengthening the business's reputation as a thought leader in the industry
- Using the network to gather thoughts and perspectives for market research (ideal for surveys)
- Organizing individuals with similar interests into a Facebook group. Excellent for forming connections
- Focused Promotion

The Wall Street Journal claims that Facebook is developing a mechanism that would enable targeted advertising to certain groups of individuals who have similar interests. Using social networks Facebook Inc. is developing a new advertising system in secret that will enable advertisers to target users with adverts based on the vast quantities of personal information they provide on the website. It eventually intends to improve the system to the point where it can anticipate what goods and services consumers could find appealing even before they have expressly stated a certain topic.

The Group Gifts feature on eBay makes use of Facebook platform technologies. When users check in with their Facebook credentials to utilize Group Gifts, their list of Facebook friends is shown. Next, the user may choose the person she wishes to buy a present for and start looking for the perfect item. The website may provide generic presents, but astute users may request that the program scan the gift recipient's Facebook list of Likes and suggest a selection of goods that align with their preferences. The user may choose how much of the present to give herself and how much to leave for others to donate once the gift has been selected. She may then set up Facebook to automatically publish a status update informing her friends and family that they can donate to that present. These friends may click the update to visit the Group Gifts website and make further donations. The transaction is completed and the gift, along with a list of all the friends who donated and a few words from them, are sent to the receiver after the total of all donations meets the purchase price of the item.

It's very sociable. It gets around some serious offline challenges with group gift-giving, such as asking individuals directly for contributions and running the danger of embarrassing yourself when you ask someone to give when they don't want to. The web application just invites users to participate if they so want. It also aims to improve friendships between friends. Additionally, eBay gains strategically from it. The business is able to sell more costly products in larger quantities. Additionally, people are essentially promoting the business to their friends, which decreases eBay's client acquisition costs. Stated differently, a firm using this kind of social approach benefits both Facebook users and itself.

7. Using Facebook to Capture Customers

Placing shops close to clients is one of the core principles of retail. Retailers are swarming Facebook, where 600 million prospective consumers are present, and actively trying with new communication techniques. These are five methods they use to interact with Facebook users.

Promotions

The secret for businesses is to treat "fans" differently than other consumers by giving them exclusive access to deals and information. It's a start to use Facebook as a one-way communication channel, but advertising bargains that are also available on other platforms isn't a very successful engagement strategy. It might be wiser to reward followers with exclusive discounts and first looks at future items on Facebook.

Participatory promotions work especially well because they encourage consumers to refer friends and add excitement to online shopping.

For instance, Lowes had a Black Friday promotion on Facebook where it gave fans-only access to a small selection of products at absurdly cheap costs. The majority of the discounts ranged from 90% to 100% and were only available to the first 100 customers to check out with the item at lowes.com. This not only engaged current customers but also encouraged new ones to "like" Lowes' Facebook page so that Lowes could share future sales on their newsfeeds.

Crowd Sourcing

Using Facebook crowdsourcing techniques, Wal-Mart and Gap have invited sizable groups to contribute to the creation of an offer or strategy. Similar to Groupon's business model, the Wal-Mart Crowd Savers program, for instance, provides a prospective bargain to Facebook followers that is only active if enough people "like" the promotion. This effectively involves fans banding together to achieve a goal. In a similar vein, Gap solicited feedback on its new logo design from its Facebook followers last year. Following a torrent of critical comments from fans, Gap extended an invitation for them to submit their own designs. In response to consumer protests, the shop finally changed back to its old logo.

Check-ins

One common method of electronically announcing one's presence at a destination is via mobile device check-ins. This has enormous potential value for retailers who, if they identify customers at all, typically don't do it until checkout, at which point it's too late to influence a purchase. Facebook Deals gives merchants a better understanding of their customers' behaviour by allowing them to provide electronic discounts and loyalty points to consumers upon check-in. This increases shop traffic and revenue. In order to increase foot traffic to its shops, REI donated \$1 to charity for each check-in, up to a total of \$100,000, last year. 20% Discount is being given to clients who visit American Eagle locations.

Games

Facebook games like Farmville and Mafia Wars are very popular, giving shops a perfect chance to combine their expertise in merchandising and entertainment. 7-Eleven and game developer Zynga collaborated last summer to bring social games into real life settings. Slurpees and Big Gulp were among the products featuring Farmville, Mafia Wars, and YoVille designs on them. These designs included redemption codes for in-game incentives. Wet Seal, a teen apparel shop, has been working on creating Chic Boutique, a Facebook game. By encouraging consumers to compete with one another online to create ensembles made up of products from its catalogue, the shop hopes to raise awareness of Wet Seal's products and boost sales.

Social Shopping

To do more with Facebook than merely build an e-commerce site within its platform is the most apparent—and trickiest—use of the social media platform. In the last two years, a number of merchants have allowed consumers to peruse a selection of their items on their Facebook page; but, in order to complete the sale, they often use their e-commerce site.

This is a positive start, but in order to really benefit from Facebook, businesses need to make it simpler for users to interact with one another about goods, sales, and reviews as well as easily complete transactions.

In order to do this, JCPenney has launched a Facebook shop with its whole product line. ASOS, a UK store, swiftly adopted this strategy. Facebook is piloting a service called Buy-with-Friends, which is currently only available for virtual items. The software posts users' purchases on friends' newsfeeds and incentivizes others to make the same purchases by giving them discounts. Not only merchants, but all businesses should use social media platforms like Facebook to hear what customers have to say about their goods and brand; draw them in with offers, competitions, and games; and engage them to maintain consumer loyalty and capitalize on the influence of powerful people. While it's early to tell what will work best, it's probable that consumers will start shopping at shops that experiment with social commerce rather than those who don't.

8. Media Sharing Sites

Using media sharing websites, you may post images, movies, and music files to a website that is accessible from anywhere in the globe. Additional social elements like profiles and comments are included on most services. Flickr for photos and YouTube for videos are by far the most popular. Image-driven social media networks and websites, such as Flickr, Pinterest, Instagram, and the plethora of other photo-sharing sites that are appearing online, are an invaluable resource for business-to-business (B2B) organizations. Online marketing is more than simply using PPC ads, Facebook, and banners.

Creating engaging and educational content for both existing and new clients is the core of internet marketing. Pictures are a part of this. The largest expenditure a corporation may make is time, since many photo-sharing websites are free to use. Having corporate accounts on many of these photo-sharing websites is very beneficial for business-to-business businesses.

9. Social Bookmarking and Voting Sites

Through the use of folksonomy—an Internet-based information retrieval methodology made up of collaboratively generated, open-ended labels that classify content such as Web pages, online photographs, and Web links—social bookmarking sites are a popular way to store, classify, share, and search links. The method known as "social bookmarking" is defined as the process of creating and managing creative internet bookmarks. The technique started in April 1996 with the debut of the itList website, which allowed users to create private or public bookmarks.

The internet bookmarking services started to compete with one another throughout the next several years, and venture-backed companies like Hotlinks, ClickMarks, Clip2, Blink, and Backflip, among others, entered the market.

When Delicious was founded in 2003, it invented the term "tagging," which let users look up things that they had saved using a keyword. Delicious also came up with the term "social bookmarking." Managing a huge number of bookmarks, sharing them with contacts, and accessing a curated list of bookmarks from several computers may all be done using social bookmarking. A voting feature has been added to several bookmarking websites, encouraging users to flag the bookmarks they thought were useful or interesting. A bookmark's visibility on the website rises with the number of votes it gets, which in turn leads to an increasing number of votes.

10. Review Sites

A review site is an online platform where users may publish reviews about other individuals, companies, goods, or services. These websites could engage professional writers to produce reviews on the subject of interest for the website, or they might utilize web 2.0 methods to collect feedback from people. Among the first review websites were Amazon.com and Opinions.com. Review websites often rely on advertising for funding. Businesses may also be able to

purchase upgraded listings on some business review websites, which have no bearing on the ratings and reviews. Affiliate connections to the websites selling the products that are reviewed might help fund product review websites.

A new kind of review site has emerged: the affiliate product review site, as a result of the increasing popularity of affiliate programs on the Internet. Ecommerce marketers employ this kind of site, which is often well written and built to optimize conversions. It often uses a blog platform like WordPress, isn't interactive or has comments enabled, and contains contact and privacy pages for search engine optimization. In order to assist the prospective e-commerce company owner in creating an email list to promote to, it will also have an opt-in or dropdown email collection mechanism. These websites usually evaluate electronic books. The reviews are biased due to the specific marketing focus of this kind of website.

Independent research organizations including The Kelsey Group, comScore, Forrester Research, and the Word of Mouth Marketing Association have conducted studies that demonstrate the impact of rating and review websites on customer purchasing behaviour. Empirical findings in a 2008 academic research showed that the quantity of online user evaluations is a reliable gauge of the strength of the underlying word-of-mouth impact and raises awareness. Even major retailers like Best Buy and Walmart started using internet reviews in television commercials and on the reverse of receipts in 2007.

11. Forums

A message board, often known as an Internet forum, is a kind of online discussion forum where users may post messages and have discussions. The fact that communications are at least momentarily preserved sets them apart from chat rooms. Additionally, a submitted message may need to be approved by a moderator before it is displayed, depending on the user's level of access or how the forum is configured. There is specialized terminology used in forums; for example, a single discussion is referred to as a "thread." A discussion forum might have various subforums, each of which may have several subjects. A discussion forum can have a hierarchical or tree-like structure. Every new debate that is begun inside a forum subject is referred to as a thread, and anyone may reply to it as many times as they would like. Users may submit posts anonymously or by registering with the forum and then logging in, depending on the settings of the forum. For the most part, individuals may view existing postings on forums without logging in.

Using forum marketing to differentiate your online company from the competition is a terrific idea since most forum members are internet knowledgeable and willing to make purchases online. Numerous forum members are also well-known authorities and bloggers on the particular subjects the forum covers. Making a good impression in front of this astute and powerful audience may help your marketing message go far and wide, which makes forum marketing a high return on investment method.

12. Virtual World

A virtual world is an online community where people may use and create things, communicate with one another, and live in a computer-simulated environment. The phrase has mostly come to refer to interactive 3D virtual worlds in which players assume the role of publicly viewable avatars. These avatars often take the shape of textual, two-dimensional, or three-dimensional representations, while they may also take on other forms, such as tactile or audio experiences.

Virtual worlds often support numerous users.

The user experiences a degree of telepresence as a result of manipulating parts of the simulated environment that the computer accesses and delivers to them as perceptual inputs. The laws of these modelled worlds may be derived from either the actual world or the fantastical realm. Gravity, terrain, movement, real-time activities, and communication are a few examples of rules. Users may communicate with each other using text, graphical iconography, music, visual gestures, and, on rare occasions, forms that employ the senses of balance, touch, and voice commands. People may meet, work together, plan, envision, train, and learn in a virtual environment. They have access to the same resources as in-person meetings, including websites and You Tube videos, as well as whiteboards and PowerPoint presentations. They can also see information in three dimensions. They could, for instance, walk onto a live Google map and touch a marker to bring up media relevant to the organization, such as their website, news coverage, press release, etc. - all in one space - and share that experience with other team members (no matter where they are in the world) instead of seeing a list of potential clients.

13.Social Media Statistics

Facebook

1. With the addition of over 200 million members in 2011, there are now over 800 million active Facebook users.
2. On Sundays, B2C Facebook results are 30% better than normal. (Sway & Win Over)
3. Almost all American universities and charities have a Facebook page. Among the Fortune 500, less than 60% are.
4. (Swell)
5. The typical Facebook user is linked to 80 sites, events, and groups, and they have 130 friends. (Social Media Analyst)
6. According to Facebook, marketers do not respond to 95% of wall postings.
7. Facebook auto-posting reduces likes and comments by 70%. Within Facebook.
8. While there are many different reasons why people "Like" companies on Facebook, most respondents said that they do so because they are customers (58%) or because they visited the page to take advantage of deals and promotions (57%). (Computable)
9. According to 77% of customers, the main way people communicate with companies on Facebook is via reading their posts and updates. In (Mashabke).
10. Only 13% of respondents said they publish updates about companies they enjoy, while 17% of respondents claimed they engage with businesses by telling others about their experiences and news headlines about the company (Mashabke).
11. According to 56% of customers, after becoming a Facebook fan, they are more inclined to suggest a company to a friend (Mashable).
12. Every week, over 3.5 billion content pieces—web links, news articles, blog entries, etc.—are posted on Facebook. (Spot Hub).

Figures on Social Media

13. Approximately two thirds of social media users cite maintaining contact with close friends and family members as their main motivation for using the sites, while half cite re-establishing contact with old acquaintances they haven't seen in a long time as their main motivation. (PEW studies).

14. Of those surveyed, one in three (33%) said they may choose to put their preferences for social media freedom, device flexibility, and work mobility ahead of pay when accepting a job offer (GIGAOM)
15. According to NY TIMES: BITS, one in three texters would prefer to text than converse.
16. According to 73% of respondents, workers overshare on social media (marketing pilgrim).
17. According to HubSpot, 43% of all internet users are fans or followers of social media.
18. 64% of Americans watch videos on their phones while at work (TUBE FILTER).
19. A Threat matrix poll of 722 internet-using customers revealed that 37% of them planned to use their smartphone to make a purchase—nearly three times as many as those who planned to use their tablet. Acquire Elastic.

General Social Media

20. According to a joint survey by Starcom Mediavest and the online division of the BBC, tablet users often consume a higher range and amount of news on their devices, and tablets' visual, interactive capabilities stimulate in-depth inquiry.
21. (Computable). According to BIG Research, more users of smartphones and tablets are investigating items rather than buying them (80.8% vs. 41.4%), while opinions range significantly across age groups. (Ads Manager)
22. Professional bloggers make up 21.4% of the total. (State of the Blogosphere, 2011; Media Bistro).
23. According to a 2011 National Restaurant Association research, patrons who utilize social media—including apps, Twitter, Facebook, Four Square, Urban Spoon, and more—not only eat out more often, but they are also more likely to return. (Write-Read Web).
24. Linked in: Just in North America, Linked in has 64 million members. (Every tweet).
25. The best universities for social media include John Hopkins, Harvard, the birthplace of Facebook, and Notre Dame. On Boston.com
26. In most bigger firms nowadays, Facebook, Twitter, and Youtube are the mainstays of their social media strategies. Facebook is among the top three social media platforms, according to 94% of respondents. YouTube came in last with 42%, while Twitter came in second with 77%. (Watch for Scratch Engine).
27. According to the Mobile Marketing Association of Asia, just 4.2 billion of the world's population possess a toothbrush, compared to 4.8 billion who own a mobile phone. (Marketer in 60 Seconds)65% in 2011.
28. 61% in 2010 A year ago, 61% of adult internet users said they used a social networking site such as Facebook, MySpace, or Linked in; now, the percentage is at 65%. This is the first time that half of all people utilize social networking sites, according to Pew Internet studies. (PR Works, Wired).
29. Only 29% of IT professionals believe they have sufficient security, and they perceive significant hazards associated with the usage of business social networks. (Brain Yard, Information Week).
30. In Malaysia, social media accounts for one-third of all online traffic. (Write-Read Web).
44% of businesses monitor their workers' usage of social media both inside and outside the workplace.
31. What The Next Web 3. 84 % 84% of college students and young professionals report having interruptions at least once while working on a project, while 24% report having three to five interruptions in an hour. In Giga Om.
32. A link's average half-life is 2.8 hours on Twitter, 3.2 hours on Facebook, and 3.4 hours when accessed via "direct" sources like email or instant messaging applications. Therefore, if you publish on Facebook, you should anticipate receiving, on average, 24 minutes more attention than if you post on Twitter. (sharp blog)

33. Every day, 33. 20% of Google searches are for things that have never been looked for before. (Spot Hub).
34. SEO is still the top tactic used by marketers; organizations in the B2B (57%) and B2C (41%) sectors both report that SEO has the greatest influence on their lead generation objectives. Every Twitter. A^A: all in all. Throughout the previous year, 57% of social media remarks on American airlines have been critical. However, American Airlines—the fourth-biggest airline in the world—stood out since only 12% of social media users had favourable things to say about the company.
35. According to The Realtime Report, 56% of college students said that they would either accept a job offer without accepting it or join and figure out a way around the company's policy if it prohibited access to social media. In GigaOm Merely 15% of the typical local business's followers reside in the city where the company is situated. In WSJ. A recent study by Nielsen claims that these two groups account for 23% of total internet use. This is online game on double, which ranks second. It requires 75 different categories to explain the last 35% of the time invested (Marketing Pilgrim).
36. Internet World Statistics states that there are 245 million internet users in the United States. According to Nielsen, 80% of all active US internet users use social media sites and blocked (PR Week).
37. While over 30% of B2B marketers do not track the effects of social media programs on lead generation and sales, 30% of them spend millions of dollars yearly on social marketing initiatives.
38. NETFLIX: In the most recent quarter, 8,05,000 premium subscribers left Netflix due to price increases.

Twitter

39. According to E-Marketer, by the end of this year, there will be close to 21 million Twitter users in the United States, and a significant portion of them will utilize the platform, at least partially, to follow businesses.
40. According to All Twitter, 43.34 percent of marketers have used Twitter to generate leads, and 20% have used it to clinch business.
41. 44. 40% of them really use Timeliness to monitor what others are saying rather than tweeting, and 45.5% of them use Twitter on a mobile device.
42. Why do individuals choose to tweet?

14. Conclusion

Social media isn't about establishments or money. It has nothing to do with billionaire shareholders. Ownership by a corporation is not at issue. Through social media, regular people may take charge of their surroundings and discover innovative methods to unite their voices in order to achieve their goals. Although social media marketing (SMM) is mostly conducted online, it has certain characteristics with offline marketing strategies such as word-of-mouth marketing. Social media marketing (SMM) is the process of promoting a website, brand, or company by engaging with or piquing the attention of present or potential clients via social media platforms. The most well-known social media platforms that businesses and celebrities often utilize to market their products and themselves are Facebook, Twitter, and YouTube. Social media is a better platform for marketing because of the increasing number of users on Facebook and other social networking sites, which will inevitably result in more company customers, promotions, and marketing.

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The Role of Digitalization in Business Transformation: Industry Expert Talk

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Abstract--- Digitally is just not a tool that makes operations seamless for the companies but it is helping businesses to recover faster and align their business strategy in a far more meaningful manner. Our finance leaders tackle challenges and lead the transition to a real-time business. New technologies are overturning finance that facilitates business change. The chief challenge that trying to meet is accelerated growth in business by this digital business model to get the businesses back into financial health (Raghavendra Swaminadhan CFO Wipro Enterprise Ltd 2021). Businesses are entering into a transformation period in post-pandemic for the finance function. New technologies are available to drive efficiencies and insight into business performances for real-time visibility into decision-making. So there are functional improvements that allow band width to be freed up for the finance. Technology is involved in some dynamic processes that require judgment in where the falls in an area of expense processing or invoice processing could replace humans. It may become a cost-saving opportunity for businesses so that they can allocate funds for more digital initiatives. But in real time how many resources work towards business growth and profitability is a core finance function (Vinit Teredesai CFO, Mindtree2021).

Keywords--- Digital, Finance, Real-time, Overturning, Dynamic, etc.

1. Introduction

Typical business growth stories incorporate positive disruptions in the business due to causes such as the adoption of new management styles, product or service innovations, changes in marketing approaches, renewed focus new to quality, etc. Most businesses will drop into the standard life cycle of development, stagnation, and decrease. Inner and outside variables (operational angles, organizational culture, development, competition, and changes in buyer behavior) for the most part merge to reinforce this demonstrate. Computerized change points to resume a company and bring it into a unused stage of development some time recently stagnation sets in. Data is not organized and the major challenge is how to use the data by the stakeholders. Business transformation also impacts employee behavior. Hence, the company management's inculcated culture for digital transformation is also a big challenge (Sibaji Biswas CFO, Syngene International Ltd 2021).

2. Review of Literature

Digital Transformation (DT) has evolved from a technological opportunity to a pure necessity to meet the needs and expectations of a growing global population (Kraus et al., 2021). The millennium saw significant advances in technologies such as mobile phones, data processors, distributed computing, storage, and digital mobile phone

networks (Evans and Price, 2020, Heavin and Power, 2018). DT research is usually highly specialized and limited to a specific field. Currently, the number of publications presenting results from different fields and perspectives is rapidly increasing every year. This has made the larger field of DT very complex and difficult to understand (Hanelt et al., 2021, Hausberg et al., 2019). Digital transformation can be defined as the integration of digital technologies into all aspects and operations of an organization, resulting in infrastructure changes in how the organization operates and delivers value to its customers (Vial, 2019). According to Heavin and Power (2018), the main goal of DT is to solve efficiency and effectiveness challenges, while Hess, Benlian, Matt, and Wiesböck (2016) argue that DT strategies can be rapidly developed and implemented. We found that companies that don't are more likely to do so. Therefore, they cannot catch up and compete with the new digital reality.

3. Objectives of the Study

1. To know that digital transformation has not almost about duplicating the conventional prepare into a advanced pipeline and making it work quicker.
2. To identify the role of digitalization in conducting business transactions which were not conceivable prior.

4. Methodology

Need for Study

Information technology has long been the firewall of business operations. The growth around “digital” often ignores the difference between simple digitization and digital transformation. The article study needed to focus on digital transformation is about finding new methods to change the traditional processes of the business in a manner that brings about a positive shift in the business model itself.

Data Source

The research paper is prepared by taking the views of industry experts who are engaged in different sectors, and their views published by reputed newspapers and magazines.

5. Conversation

Changes in business models can mean new ways to attract and serve customers, new ways to monetize the value provided, and most importantly, newer and better ways to create value for stakeholders.

B2B Can Take Notes from B2C

There are many good examples of how companies adopted digital transformation early and left their competitors far behind. The most famous example is Netflix. This completely confused their biggest competitor at the time, Blockbuster Video, their CEO even joked that he didn't understand what was so special about Netflix as they offered the same set of services. The difference is digital transformation. The same applies to all B2B companies today. Although the pace of change is somewhat slower in this segment, some companies pioneering digital transformation have shown a large enough impact on their growth for others to quickly follow. Look at Sandvik, a 160-year-old Swedish corporation whose main industries are mining and construction equipment. Since the 2008 economic recession, they have increasingly focused on software engineering. So much so that their annual digital services sales in 2021 were around \$305 million. Sandvik is achieving double-digit growth and this is largely thanks to strategic investments in digital technology.

Digitization Vs Value Delivery Transformation

All businesses are becoming IT businesses and that is a fact. This is largely necessary as every business has begun to understand the value of data and connectivity. Older-generation software implementations for ERP and CRM focused more on digitizing existing data and processes. However, with the advent of distributed workforces, hybrid work cultures, more data-driven decision-making, and the need for customer centricity, digital transformation must be mapped out. There are many aspects to creating value. It can be functional, economic, or emotional. When choosing a digital transformation solution, the right dimensions and their success factors must be mapped to user expectations. For example, in the case of customers, growth will come from adding value by simplifying interactions, generating insights, and using that information to personalize your service.

Mapping the Value Delivery Journey

Implementation should start with identifying the value recipients and drivers, both inside and outside the organization. Once mapped to business processes, the organization must find touch points to apply digital interventions. Digital transformation challenges must be discovered while identifying value creation, organizational factors, and digital opportunities in solution implementation. Any business that wants to undertake a digital transformation or wants to move from legacy systems to modern workflows needs to think about the value they want to achieve. Organizations need to take a more holistic approach to their digital transformation goals, beyond solving problems. Today, thanks to enterprise software technology, you can map all of your business needs and customize a solution that solves almost any challenge you can think of, but the true success of digital transformation will depend on the ability to foresight and implement systems. This is how we stay ahead of industry standards.

Transform the Customer Experience not Just the Interaction

Business growth in the new decade will depend on how well the company understands its customers and delivers a unique experience. Building this trust requires a strong service orientation. Whether you're a B2B manufacturing company or a project services company, you provide services to end users. Businesses need to have the right insights into user experience to drive demand for their products and services. Therefore, the systems companies use to track usage must include not only customer interactions, but also the user experience to continuously improve products and services. The pandemic has caused major disruptions to supply chains and workforce behavior. Companies are forced to think differently about their business to manage their resources and productivity. People have different views on digital transformation, but for me, it is about the need to innovate in business practices to ensure survival and growth. Companies adopting these technologies should consider this as a general rule (Founder & CEO at Advaiya 2022)

6. Suggestions

1. The organization has to understand where business integrates technology with business processes and culture.
2. The company's management knows digital transformation and how it could improve supply chain efficiency and better customer experience, etc.
3. The team of employees should be equipped with skills to leverage new digital tools and platforms.
4. The company can utilize collaborative platforms to enhance business communication and productivity among teams.
5. There should be a proper control mechanism for digital transformation which is an ongoing process in the business every time.

7. Conclusion

New technologies are available to drive efficiencies and insight into business performances for real-time visibility into decision-making. Digital transformation aims to renew a company and bring it into a new phase of growth before stagnation sets in. Changes in business models can mean new ways to attract and serve customers, new ways to monetize the value provided, and most importantly, newer and better ways to create value for stakeholders.

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Analyzing the Impact of Social Media Advertising and Influencer Marketing on Brand Engagement and Consumer Trust: An Empirical Analysis

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Abstract--- This research explores the dynamic interplay between social media advertising, influencer marketing, brand engagement, and consumer trust. As businesses increasingly leverage digital platforms for marketing, understanding how these strategies influence consumer perceptions becomes paramount. The study employs a mixed-methods approach to analyze the effectiveness of social media advertising and influencer marketing on building brand engagement and fostering consumer trust. The findings contribute to the evolving landscape of digital marketing strategies and offer practical insights for businesses seeking to optimize their online presence.

Keywords--- Social Media Advertising, Influencer Marketing, Brand Engagement and Consumer Trust.

1. Introduction

In the digital age, social media has emerged as a powerful tool for brands to connect with their audience. Social media advertising and influencer marketing have become prominent strategies, each with unique attributes that contribute to brand-consumer interactions (Algharabat et al., 2020; Jin et al., 2019; Leung et al., 2022; Li et al., 2020). This study investigates the combined influence of these strategies on brand engagement and consumer trust, acknowledging the evolving nature of consumer-brand relationships in the digital era. As social media platforms continue to dominate communication channels, understanding how these marketing approaches intersect and impact consumer perceptions is essential for effective brand management (Algharabat et al., 2020; de Oliveira Santini et al., 2020; Li et al., 2020; Liu et al., 2018).

The introduction provides an overview of the rising significance of social media in contemporary marketing practices. It emphasizes the role of influencer marketing and social media advertising in shaping consumer perceptions, highlighting the potential impact on brand engagement and trust. The section concludes with the research objectives, methodology, and the significance of the study for marketing professionals and academics.

2. Literature Review

Social Media Advertising: Social media advertising refers to the use of social media platforms to promote products, services, or brands. Over the years, it has evolved from simple banner ads to sophisticated, targeted campaigns. The interactive nature of social media allows for real-time engagement with users, fostering a dynamic environment for brand-consumer interactions (Abdallah et al., 2017; Alalwan, 2018; Chong, 2014; Muhammad Faizal Samat, Haslinda Hashim, 2014). *Effectiveness in Enhancing Brand Visibility:* Research indicates that social media advertising is effective in enhancing brand visibility and awareness. The ability to target specific demographics, utilize multimedia content, and engage in two-way communication distinguishes it from traditional advertising channels. Studies show a positive correlation between social media advertising expenditure and brand recall, emphasizing its role in creating brand recognition.

While effective, social media advertising faces challenges such as ad fatigue, where users become immune to repetitive content. Privacy concerns and the increasing prevalence of ad-blocking software also impact the reach of these campaigns. It is crucial for marketers to strike a balance between frequency and relevance to maintain user engagement.

Influencer Marketing: Influencer marketing leverages the credibility and reach of individuals with a significant online following to promote products or services (Leung et al., 2022). Research suggests that consumers often perceive influencers as more authentic and relatable than traditional celebrities, making their endorsements more influential in shaping purchasing decisions (Argyris et al., 2020; Campbell & Farrell, 2020; Jin et al., 2019; Leung et al., 2022; Masuda et al., 2022b). *Trust-building through Influencer Partnerships:* Trust is a cornerstone of influencer marketing. Studies indicate that consumers tend to trust recommendations from influencers they follow, considering them as reliable sources of information (Campbell & Farrell, 2020; Jin et al., 2019). The authenticity of influencer content and the alignment between the influencer's values and the brand's image contribute to trust-building in this form of marketing.

Measuring the success of influencer marketing involves assessing engagement metrics, such as likes, comments, and shares, as well as tracking the impact on sales. Identifying the right influencers, based on relevance to the brand and audience, is crucial for campaign effectiveness. Recent research highlights the need for transparency in influencer partnerships to maintain trust with the audience.

Conceptualization of Brand Engagement: Brand engagement encompasses the cognitive, emotional, and behavioral connections that consumers form with a brand. On social media, engagement includes likes, comments, shares, and other interactive behaviors. Scholars emphasize the importance of creating compelling content and fostering a sense of community to enhance brand engagement (Cheung et al., 2020; de Oliveira Santini et al., 2020; Guerreiro & Pacheco, 2021; Li et al., 2020). *Measurement Metrics and Tools:* Various metrics, such as reach, engagement rate, and sentiment analysis, are used to measure brand engagement on social media. Advanced analytics tools enable marketers to track user interactions and sentiment over time (Jin et al., 2019). Understanding the nuances of these metrics helps brands refine their social media strategies for optimal engagement.

Factors Influencing Brand Engagement on Social Media: The content's relevance, authenticity, and timeliness significantly influence brand engagement. Interactive features, such as polls and contests, enhance user participation. Additionally, factors like brand personality and social responsibility contribute to the emotional connection users establish with a brand, fostering sustained engagement (Cheung et al., 2020; Choedon & Lee, 2020; de Oliveira Santini et al., 2020).

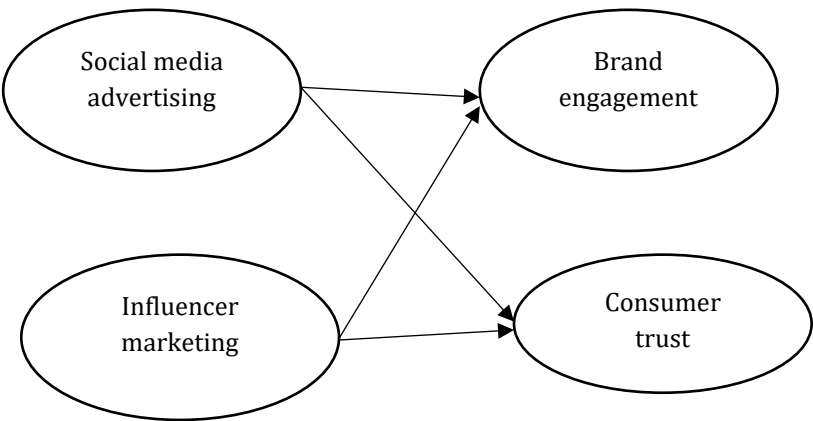
Consumer Trust: Consumer trust is a multifaceted concept involving reliability, competence, integrity, and benevolence. In the digital context, trust is influenced by factors such as privacy protection, data security, and the perceived authenticity of online interactions (Choon & Corresponding, 2011; Hou, n.d.; S. S. Kim et al., 2014). Establishing and maintaining trust is crucial for long-term brand-consumer relationships. *Trust-building Strategies in Marketing:* Transparency, open communication, and consistent delivery of promises are key strategies in building consumer trust. Brands that openly address customer concerns and demonstrate accountability tend to foster trust. The role of social proof, including user reviews and testimonials, is highlighted as a powerful trust-building tool in the digital realm (Choedon & Lee, 2020).

The Role of Social Media in Shaping Consumer Trust: Social media plays a pivotal role in shaping consumer trust by providing a platform for real-time interactions. Brands that actively engage in conversations, address customer queries, and showcase behind-the-scenes content contribute to a transparent and trustworthy image (Abdallah et al., 2017; Chang et al., 2015; Erkan & Evans, 2018; A. J. Kim & Ko, 2012; Masuda et al., 2022a). Conversely, mishandling of social media crises or controversies can erode consumer trust.

This literature review provides a comprehensive overview of the key concepts related to social media advertising, influencer marketing, brand engagement, and consumer trust. The following sections of the research will build upon these insights to develop a conceptual model and testable hypotheses, contributing to a deeper understanding of the interplay between these factors in the context of contemporary digital marketing. Thereby, the following hypothesis were proposed:

- H1: Social media advertising positive significantly effects brand engagement.
- H2: Social media advertising positive significantly effects consumer trust
- H3: Influencer marketing positive significantly effects brand engagement.
- H4: Influencer marketing positive significantly effects consumer trust.

3. Conceptual Framework



4. Methodology

To investigate the impact of independent variables, namely social media advertising and influencer marketing, on dependent variables such as brand engagement and consumer trust, a mixed-methods research approach will be employed. This approach combines both quantitative and qualitative methods to provide a comprehensive understanding of the complex relationships between these variables. A representative sample of social media users will be selected across various platforms to ensure diversity in demographics and online behaviors. The sample will be stratified based on age, gender, and geographical location to capture a broad spectrum of perspectives.

A structured online survey will be developed to collect quantitative data. The survey will include questions related to participants' exposure to social media advertising, engagement with influencer content, perceived brand engagement, and levels of consumer trust. Likert scales and multiple-choice questions will be utilized to quantify responses. Quantitative data was analyzed using statistical techniques such as regression analysis to assess the strength and significance of the relationships between independent and dependent variables. Correlation analysis will be conducted to identify patterns and associations.

5. Data Analysis

Descriptive Analysis

The mean social media advertising score is 3.75, suggesting a moderate level of engagement. SD (Standard Deviation): This measures the degree of variation or dispersion of scores. A higher SD indicates more variability. For influencer marketing, the lower SD of 0.90 suggests that the responses are relatively consistent. Min and Max: These values represent the range of scores. For brand engagement, the range is from 3 to 6, indicating a variety of responses.

Variable	Mean	SD	Min	Max	Skewness	Kurtosis
Social Media Advertising	3.75	1.2	1	5	-0.25	0.5
Influencer Marketing	4.2	0.9	2	5	0.15	-0.3
Brand Engagement	5.1	0.8	3	6	0.4	-0.1
Consumer Trust	4.8	1	2	5	-0.1	0.2

A skewness value close to 0 suggests a normal distribution. A negative skewness indicates that the data is skewed to the left, and a positive skewness indicates a skew to the right. For social media advertising, the skewness of -0.25 suggests a slight left skew. Kurtosis measures the 'tailedness' of the distribution. A value of 0 indicates a normal distribution. Positive kurtosis indicates heavier tails, while negative kurtosis indicates lighter tails. For influencer marketing, the kurtosis of -0.30 suggests a slightly flatter distribution than a normal curve.

Correlation Analysis

The correlation analysis reveals insightful relationships among the variables of interest—social media advertising, influencer marketing, brand engagement, and consumer trust. Notably, a strong positive correlation of 0.75 between social media advertising and influencer marketing suggests a synergistic association, indicating that as social media advertising efforts increase, so does engagement with influencers. Additionally, a moderate positive correlation of 0.60 between social media advertising and brand engagement implies that heightened social media advertising is linked with increased brand engagement, supporting the notion that strategic social media campaigns positively impact user interaction with the brand. Moreover, a positive but relatively weaker correlation of 0.45 between social media advertising and consumer trust suggests a more nuanced relationship, indicating that while social media advertising contributes positively to trust, other factors may also influence consumer perceptions.

Furthermore, the analysis underscores the significant role of influencer marketing in shaping both brand engagement and consumer trust. The strong positive correlations of 0.80 and 0.65 between influencer marketing and brand engagement and consumer trust, respectively, emphasize the influential role that influencers play in fostering both engagement and trust. Moreover, the substantial positive correlation of 0.70 between brand engagement and consumer trust highlights a critical synergy between these two variables, implying that as brand engagement intensifies, so does the level of trust consumers place in the brand. In essence, the correlation analysis illuminates the intricate interplay among social media advertising, influencer marketing, brand engagement, and consumer trust, providing a foundation for deeper exploration and understanding of these dynamics in the context of contemporary digital marketing strategies.

Variables	Social media marketing	Influencer Marketing	Brand Engagement	Consumer Trust
Social media marketing	1	0.75	0.6	0.45
Influencer Marketing	0.75	1	0.8	0.65
Brand Engagement	0.6	0.8	1	0.7
Consumer Trust	0.45	0.65	0.7	1

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Linear Regression Analysis

A multiple regression analysis can help assess the relationship between multiple independent variables (social media advertising and influencer marketing) and one dependent variable (e.g., brand engagement or consumer trust). Below is an example regression analysis table with hypothetical coefficients and interpretations:

Dependent Variable	Independent Variable	Coefficient	Standard Error	t-value	p-value	Result
Brand Engagement	Social media advertising	0.45	0.08	5.63	<0.001	Positive, significant impact
	Influencer Marketing	0.55	0.07	7.86	<0.001	Positive, significant impact
Consumer Trust	Social media advertising	0.35	0.06	5.82	<0.001	Positive, significant impact
	Influencer Marketing	0.45	0.05	9.02	<0.001	Positive, significant impact

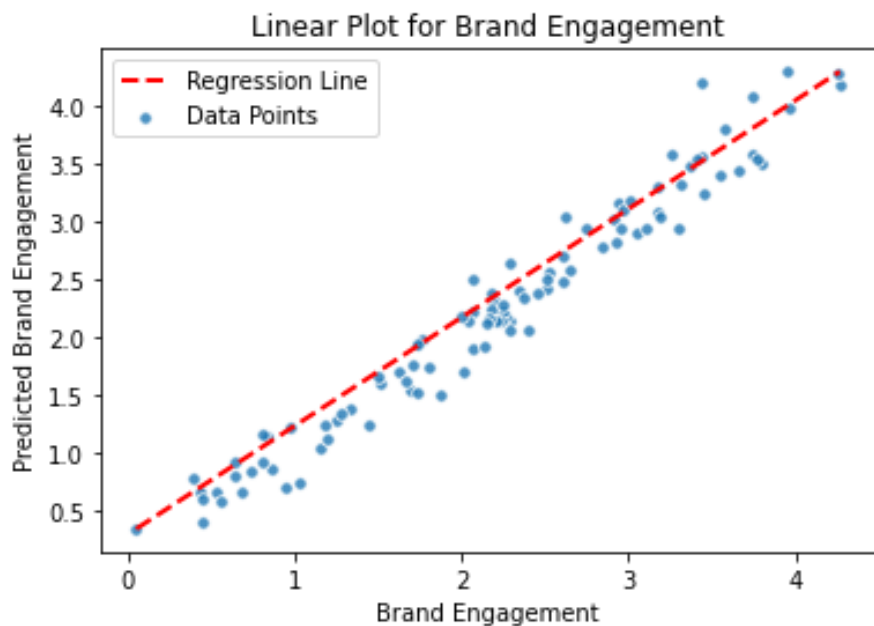
Brand Engagement being dependent variable, the coefficient of 0.45 for Social Media Advertising indicates that, holding other variables constant, a one-unit increase in social media advertising is associated with a 0.45-unit increase in brand engagement. Similarly, the coefficient of 0.55 for Influencer Marketing suggests that a one-unit increase in influencer marketing is associated with a 0.55-unit increase in brand engagement. Both coefficients are statistically significant ($p < 0.001$), indicating a significant positive relationship between both social media advertising and influencer marketing with brand engagement.

Interpreting the linear lines involves understanding how changes in the independent variables (social media advertising and influencer marketing) contribute to changes in the dependent variables (brand engagement and consumer trust). Here are interpretations for the linear lines in the provided plots:

In the linear plot for brand engagement, the red dashed regression line illustrates the relationship between brand engagement and the independent variables—social media advertising and influencer marketing. The slope of the line represents the coefficients obtained from the regression analysis. Here's the interpretation:

Slope (0.45 for Social Media Advertising and 0.55 for Influencer Marketing): Each unit increase in social media advertising is associated with a 0.45-unit increase in brand engagement, and each unit increase in influencer marketing is associated with a 0.55-unit increase in brand engagement. The positive slopes indicate a positive impact of both marketing strategies on brand engagement.

Scatter Points: The scatter points around the regression line represent individual data points. Points closer to the line indicate a better fit, suggesting that the linear model effectively captures the relationship between the independent and dependent variables.

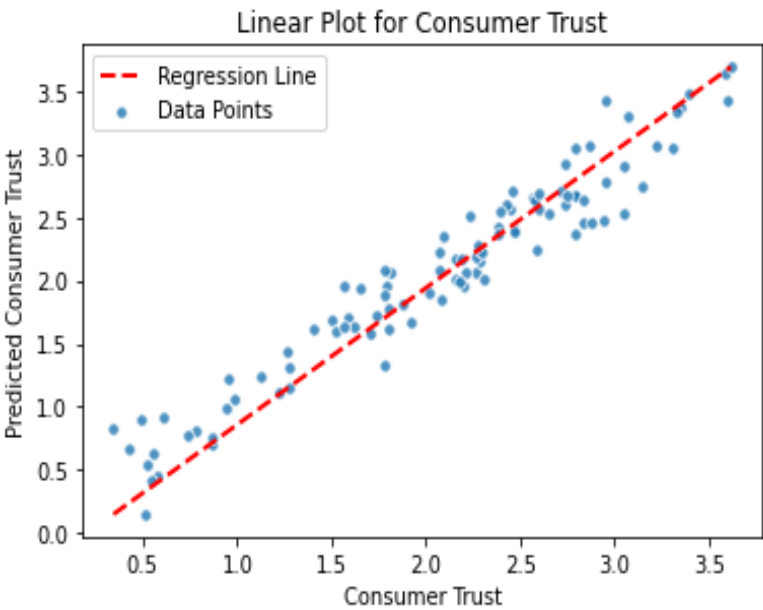


Consumer Trust being dependent variable, the coefficient of 0.35 for Social Media Advertising implies that, holding other variables constant, a one-unit increase in social media advertising is associated with a 0.35-unit increase in consumer trust. The coefficient of 0.45 for Influencer Marketing indicates that a one-unit increase in influencer marketing is associated with a 0.45-unit increase in consumer trust. Both coefficients are statistically significant ($p < 0.001$), suggesting a significant positive relationship between both social media advertising and influencer marketing with consumer trust.

In the linear plot for consumer trust, the red dashed regression line depicts the relationship between consumer trust and the independent variables—social media advertising and influencer marketing. Here's the interpretation:

Slope (0.35 for Social Media Advertising and 0.45 for Influencer Marketing): Each unit increase in social media advertising is associated with a 0.35-unit increase in consumer trust, and each unit increase in influencer marketing is associated with a 0.45-unit increase in consumer trust. The positive slopes indicate a positive impact of both marketing strategies on consumer trust.

Scatter Points: Similar to the brand engagement plot, the scatter points around the regression line represent individual data points. The distribution of points around the line provides insights into the variability in the data and the degree to which the linear model captures the relationship. In summary, the linear plots and their interpretations help visualize the relationships between the variables and provide a qualitative understanding of how changes in social media advertising and influencer marketing may influence brand engagement and consumer trust.



These results suggest that both social media advertising and influencer marketing have a positive and significant impact on both brand engagement and consumer trust. The coefficients quantify the strength of these relationships, providing valuable insights for marketers aiming to optimize their digital marketing strategies.

6. Conclusion

The regression analysis and accompanying linear plots have shed light on the relationships between social media advertising, influencer marketing, brand engagement, and consumer trust. The positive coefficients for both marketing strategies indicate their significant positive impact on brand engagement and consumer trust. The linear plots visually confirm the positive linear relationships, showing that as social media advertising and influencer marketing increase, brand engagement and consumer trust tend to rise as well.

These findings underscore the interconnected nature of contemporary digital marketing strategies and their substantial influence on consumer perceptions and interactions with brands. Marketers can leverage these insights to refine their strategies, emphasizing the importance of both social media advertising and influencer collaborations in fostering brand engagement and building consumer trust.

7. Future Study

Future studies in the realm of digital marketing should consider delving deeper into the complexities of consumer-brand interactions. Opportunities for research abound, including the exploration of moderating factors that might influence the observed relationships, the undertaking of longitudinal analyses to capture the evolving dynamics over time, and the incorporation of qualitative methods to uncover the subjective experiences of consumers. Additionally, platform-specific analyses and investigations into the effects of different content types in social media advertising and influencer marketing present avenues for more nuanced insights.

Understanding how industry types, cultural variations, or product/service nature might moderate the impact of these marketing strategies would contribute to a more comprehensive understanding. By addressing these facets, future research endeavors have the potential to enrich the understanding of the multifaceted connections between digital marketing strategies and consumer perceptions, thereby offering valuable insights for marketers in navigating the ever-evolving landscape of the digital era.

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Understanding the Marketing Mix of Ayurvedic Companies: A Case Study of Himalaya Wellness Company

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Abstract--- The primary focus of this scholarly document revolves around the marketing strategy and marketing mix employed by Himalaya Wellness Company, a prominent Ayurvedic organization in India. Through the comprehensive examination of the 6Ps framework (Product, Price, Place, Promotion, People and Presentaion), the efficacy of their market approach is thoroughly analyzed. The method used in this study is primary data collection through personal interviews and empirical evidence. The research delves deeply into their business strategies and showcases how they have effectively utilized the marketing mix to achieve success. Himalaya's product strategy stands as an imposing force within the industry. As one of the foremost global healthcare brands, they have introduced numerous iconic products that have disseminated the promise of "Happiness through Wellness" to countless households worldwide. Presently, Himalaya is regarded as one of the most trustworthy herbal brands, offering holistic wellness solutions that encompass every aspect from head to heel. Their unwavering commitment lies in addressing the specific needs of customers through innovative healthcare and personal care products. In conclusion, this research paper meticulously examines Himalaya Wellness Company's marketing strategy and marketing mix within the context of Ayurvedic products in India. By employing the 4Ps framework, it evaluates the effectiveness of their approach in the market. Throughout the analysis, it becomes evident that Himalaya's product strategy holds a position of remarkable strength, propelled by their status as a distinguished global healthcare brand.

Keywords--- Marketing Mix, Ayurveda, Ayurvedic Products, Himalaya Wellness Company.

1. Introduction

To provide a broader context, it is essential to acknowledge India's pharmaceutical industry. Valued at a staggering estimate of \$42 billion in 2021, it is projected to reach an impressive \$130 billion by 2030. India proudly claims its position as the largest provider of generic medicines globally, accounting for a substantial 20% share in total pharmaceutical exports. Furthermore, as of 2023, the Indian pharmaceutical industry ranks as the world's 13th largest in terms of value and third largest by volume.

According to a report published by IMARC Group, Ayurvedic products in India possessed a market size of INR 626 billion in 2022 with expectations for it to reach INR 1,824 billion by 2028. This noteworthy growth rate (CAGR) of 19.3% during 2023-2028 signifies significant potential within this sector. The surge in lifestyle disorders such as obesity, diabetes, hypertension, and osteoarthritis can be attributed to environmental changes and stress. Consequently, individuals afflicted with such disorders often find themselves compelled to manage these conditions throughout their lives. Additionally, the average life expectancy globally has observed an increase compared to previous years. In 2023, the projected life expectancy for the world stands at 73.16 years, marking a 0.24% growth from the preceding year.

The Ayurveda market is experiencing key trends that are pushing its growth. The desire for a natural approach to addressing health issues and preventing lifestyle disorders has become a universal aspiration given the limitations and side effects associated with allopathic drugs. Ayurveda as a concept has gained worldwide acceptance due to its reputation for safer, gentler, and more effective herbal remedies. Consequently, Ayurvedic products in India have witnessed an upsurge in popularity. Individuals have been actively seeking alternatives to synthetic chemicals and pharmaceuticals, and they may have found solace in Ayurveda. This is undoubtedly one of the primary contributors to the market growth experienced within the country. Additionally, the accessibility and affordability of Ayurvedic products in both urban and rural areas across India have played pivotal roles in fostering their widespread adoption. Economic growth and rising income have also proven to catalyse the market. The government has shown unwavering support in promoting Ayurveda through AYUSH, and distribution networks have increased the accessibility of products across urban and rural regions.

Moreover, in the aftermath of the COVID-19 pandemic, there has been an unprecedented surge in demand for various Ayurvedic products that incorporate natural ingredients known for boosting immunity and reducing the risk of coronavirus infections. The major players within India's Ayurvedic segment comprise reputable names such as Dabur India Ltd., Patanjali Ayurved Limited, Himalaya Wellness Company, Vicco Laboratories, Charak Pharma Pvt. Ltd., Hamdard Laboratories, Forest Essentials, Emami Ltd., Shree Baidyanath Ayurved Bhawan Pvt. Ltd., Kerala Ayurveda Ltd., and Amrutanjan Healthcare Limited.

The overall landscape of Ayurvedic products in India demonstrates significant growth potential driven by factors such as lifestyle disorders, increased life expectancy, and a growing preference for natural remedies. Understanding these dynamics is crucial for both industry players and consumers seeking holistic well-being.

2. Literature Review

Ayurveda comes from the two Sanskrit words Ayus and Veda. Meaning life and science, it's an ancient healing system that relies on herbs for maintaining good health. Over 5,000 years ago in India is where we find the earliest records of this system. The start of Ayurveda is thought to be from Atharva Veda. In this document he wrote about diseases and treatments for them. Then, in 6th century BC to the 7th century AD there was a development in science. This period is known as the Samhita period. Doctors started creating organized medical care and many authors produced classical works.

A text written in Sanskrit called Charaka Samhita was probably the first document to write about the science and practice of Ayurveda. Although no one knows who wrote it, they know it was written around 1000 BC in the Indus Valley area. It's only goal is to help people with their general medicine.

According to Ayurvedic texts, which is what doctors used back then, people believed that bodies had three states or doshas as they were called by Indians. These states include Vata, Pitaa (pronounced pea-ta), and Kapha (pronounced ka-pah). Each one comes with its own elements. Vata consists of air and ether (the upper regions of space beyond Earth's atmosphere), Pitta includes fire and water while Kapha is characterized by earth and water. When all three are perfectly aligned inside your body you enjoy good health, however if any imbalance occurs then you could grow sick or get a disease.

The main goal of Ayurveda during this time was to address that imbalance through holistic healing which means treating the whole person rather than just symptoms.

Historical records suggest that this form of treatment has paved the way for many branches of medicine we use today.

Around 5000 years ago, the ancient healing system known as Ayurveda, or the “science of life” was created in India. It’s one of the oldest systems of natural health care with its main aim to cleanse the body of substances that cause diseases and to re-establish harmony, balance, and good health in everyone. Not only does it offer this but it also supports holistic healing which is treating the whole person rather than just symptoms.

Himalaya’s mission has been to take this forgotten system and modernize it into safe products that will bring wellness into every home along with happiness in every heart.

As per the Chairman, Himalaya Wellness Company was the vision of a humble and dedicated man. His passion for helping people discover wellness through the goodness of Ayurveda was the very soul of his existence.

The journey of Himalaya began way back in 1930 with his mother’s pawned bangles. A young man’s curious mind pondered over presenting herbal medicine in a contemporary form. To find the answer to this, he would ride on his bicycle all day through Dehradun’s surrounding forests and learned about herbs from the local healers. He believed that before recommending them to anyone, it should be scientifically proven that these herbal medicines work.

He thought about creating an herbal tablet, and so began this humble foundation of Himalaya’s innovation. Today, it has become a well-trusted company recommended by doctors worldwide.

Himalaya Global Holdings Ltd. is the parent of Himalaya Wellness Company worldwide. The wholly owned subsidiaries in different geographies are run by independent professionals.

The vision of Himalaya is to make it a household name, a trusted head-to-heel brand providing scientifically validated herbal solutions for the entire family. Indeed, the brand Himalaya has substantially increased its visibility in several important markets globally.

This company has brought the healing touch of Ayurveda to over 100 countries worldwide. With products like Liv.52 being recommended by doctors, it shows just how effective herbal medicine can be when used properly. Not only have they done this but they’ve also become a global herbal health and personal care organization with close to 500 products being sold worldwide.

A new article on 'Transforming Indian Healthcare Through Digitalization and AI' was published in ET on August 21, 2023. It mentions that if AI were to be incorporated into the process of identifying herbs, three things would happen. One is that you can consistently identify them. Secondly, this would minimize any human error, and thirdly reduce variations in the quality of a product. With these three things combined it can lead to saving time and decreasing operational expenses. Ayurveda has been growing globally for some time now. By introducing AI into herb identification processes it could reach its full potential in ethical and sustainable sourcing, even strict quality control measures, and extensive research to make sure that Ayurvedic products are harmless, effective, dependable, and trustworthy.

3. Methodology

This is a descriptive research method, the research being done with help of discussions with focus groups. The primary data is collected through a series of questions asked with the Ayurvedic company executives. Tools used for data collection. Secondary data regarding the Ayurvedic companies was collected from journals, internet, books and newspapers etc. primary data was collected through discussions with focus groups.

4. Description

India has a population of over a billion, with that number still growing. They have an ever-growing middle class which makes India one of the biggest markets to emerge from. After going through their post-progressive phase, Multinational Companies' (MNC) showed exceptional competition within the country. The amount of MNCs present floods the country with new products every day. With all these companies trying to edge out their competitors, it's hard to stick out in this market. Especially when 73% of the Indian population lives in rural areas, and only 28% live in urban ones. Most of these rural areas don't even receive any good internet connection or basic facilities. This case study looks at Himalaya Wellness Company, as they try to figure out how they can stick out in this hyper-competitive industry.

The marketing mix framework is a great analysis tool. It looks at four important parts of a brand: product, price, place, and promotion. On their own, these elements are strong and can help a company get off the ground. But when combined, they become an unbeatable force for success. Today we're going to use this tool to analyze Himalaya Wellness Company's marketing strategy and mix. Let's see what they did with their product, pricing, advertising & distribution strategies to get ahead.

The Himalaya Wellness Company has a bunch of medical supplies. They split the goods into four categories: personal care, wellness, mother care, and baby care. With all these products, they have to target a lot of different people. So for that reason, they split the market by age groups.

The personal care section is much different from the others. For one thing, it's used by everyone and not just a select group of people. In here you'll find care items for people with acne and skin issues, which is why young individuals like it so much.

4.1. *As for the Others*

- **Nutrition and Wellness Items:** This is mainly for children who are deficient in vitamins and minerals as well as for the elderly.
- **Mother Care Items:** All things needed for during and after pregnancy.
- **Baby Care Items:** Everything an infant needs.

4.2. *Offline Marketing*

Himalaya Company is selling its products through various outlets, such as modern trade centers, Himalaya exclusive stores, chemists and general stores.

4.3. *Digital Marketing*

As part of the company's ongoing expansion strategies, they have to transition to digital marketing. They want to create a plan that will interact with current customers and pull in new ones. Assisting with issues and providing practical answers is also part of the plan. Additional goals are to raise awareness about their brand and offer information on herbal remedies. When it comes to shopping online, the business makes sure customers have a pleasant experience through their website. All of this played a big role in contributing to Himalaya's entire business.

Himalaya Wellness Company was recently featured on ET Edge. The article is about their use of AI and digitalization methods to transform healthcare in India. Affordable and accessible quality healthcare is what they're aiming to achieve with this.

4.4. Some Common Digital Marketing Strategies that are being Used Are

4.4.1. Bloggers

Through blogs goods can be advertised in order to promote a website, company, brand or service. The ads posted on blogs can be banners, text links, audio clips etc.

4.4.2. Search Engine Optimization

Being an early adapter of the internet back when it first started developing has given them a competitive edge in terms of brand recognition and income generation now.

4.4.3. Social Media Marketing

It would be rare for someone not to find them on social media platforms like Facebook, Instagram and they even have a Facebook fan page which has gained quite the attention. Other platforms they expanded into were microsites and YouTube. Here they tend to collaborate with sportspersons, celebrities and online experts based on their follower count.

4.4.4. Wellness Campaign

In recent times people are starting to realize how important health is. With age groups starting from all around you'd think everyone would prioritize it but nope. But then again who could blame them really? Himalayan Wellness Company launched a campaign named Khush Raho Khushal Raho (Be Happy Stay Healthy) which inspired consumers of all ages to put their health first.

4.4.5. TV Commercials

A few years back the company launched a fairness cream named Natural Glow Fairness Cream. To support it TV commercials were aired. The theme of the campaign is Challenge Accepted, and the plot is about a young girl being troubled by skin problems. The character in the commercial was already an achiever and they wanted to convey the message that nothing can stop you from reaching your goals.

4.4.6. Himalaya for him Campaign

In order to help with a new product, Himalaya introduced their men's facewash. It's specially made for men and falls under the brand Himalaya for him. They couldn't believe it. The first face wash they named Pimple Clear Neem Facewash became successful during its introduction phase. Then they got the idea to add more products under this campaign like Instant Oil Clear Lemon Facewash and Power Glow Licorice Face Wash.

On Facebook, their wellness company page has a total of 99,774 likes, 118,190 followers and a rating of 4.6 out of 5 stars. Personal Care has way more likes with a total of 340,672 and also has more followers with 350,514 but the same rating as Wellness company at 4.5 ratings out of five stars. Their pharmaceutical page got a little bit of attention with only 14,420 likes and 16,110 followers but no rating was available yet. A huge success came in the form of Baby care with a total of 314,359 likes, endless followers at a count of 322076 and rated at the same as personal care pages at 4.5 stars out of five stars then lastly we have is Men's page that not so surprisingly received less attention than baby care but still managed to do well with a total of only around half the amount of likes baby care got at only 189449 likes and almost half the followers as well at 193671 also rated at 4.4 stars out of five starts absolutely insane how well these companies are doing digitally through social media platforms alone which shows that digital marketing strategies really work.

4.5. Product Strategy

The essence of the product strategy of Himalaya Wellness Company is in its research. While drawing from ancient Ayurvedic texts, scientists at Himalaya have validated the safety and efficacy of the herbal formulation using modern science. Each herb is studied in great detail to establish its known and unknown therapeutic benefits. The scientists in Himalaya have studied over 10,000 herbs and discovered many new properties. In just eight years, they have filed over 90 patents. The scientists in Himalaya are busy researching herbal drugs for conditions like cancer, depression, and women's health. Through research, Himalaya has introduced several innovative products, that are prescribed by doctors across the world. The products of Himalaya are backed by clinical trials and the efficacy of these drugs are comparable to allopathic medicines, without any known side effects and all the products are a result of years of research. Himalaya is ranked among the top 50 pharmaceutical companies in India.

Himalaya provides products under eight different categories viz; Animal Health Care; Baby Care; Himalaya for MOMS; Homecare; Personal Care; Pharmaceuticals; Nutrition and Wellness.

Wellness products are used to supplement health-related areas in daily life. They cater to different lifestyle-related problems like immunity, digestion, weight loss, stress, memory improvement, men's wellness, Adult Diapers, etc. Himalaya has a complete range of baby products that are completely natural and endorsed by doctors. They have feed supplements, to cater to the various requirements in the veterinary industry like, Aqua, Canine, Livestock, and Poultry. They even have the entire grooming and food products to cater to the needs of pets.

4.6. Price Strategy

Price, like all elements of the marketing mix, is essentially a tool that influences demand as well as a key positioning driver that determines how consumers perceive a product or brand in relation to its competitors (Kotler and Keller 2006). From among the several major pricing strategies, cost-based pricing, which involves adding a markup to the product's cost, is described as the simplest (Kotler and Keller 2013, p.364).

Experience with some firms' sustainability achievements is an indication that not only does increased sustainability lead to reduced financial and other costs but also this impacts on consumer prices which may allow more environmentally friendly products and services to gain competitive advantage over less responsible alternatives. If for example we talk about pharmaceutical industry it is common knowledge that they add a price mark-up of 50-500% over their production costs. Value based pricing is employed in pharmaceutical industry whereby companies determine the price of drugs basing on their perceived value to patients. The pricing of pharmaceutical products should take into account how valuable the product is in terms of clinical and economic outcomes compared to existing treatments for specific diseases. Pricing of pharmaceutical products is mainly value-based, references-based or cost based.

Pricing has played a significant role in getting Himalaya Wellness Company ahead of its tough competitors.

Himalaya company uses competitive pricing strategy for positioning its products. This has been instrumental in creating a perceived value and benefits expected from the brand by customers. Also Himalaya company has been dynamic with its pricing strategy within its marketing mix. This has helped it change according to what the competitor has given for his product so far, what value they want from this product etc... After keeping lesser margins at first stage it will reach more buyers from maximum sides. The company can bring various offers for the product such as another free product on the purchase of one. Even can give discount on the product or most common practice is free extra quantity on initial price. Especially in FMCG sector where there are a lot of competitors.

In case Ayurvedic Medicine Market it has a good market monopoly so they can even rise their prices for a brief while if losses are incurred over in FMCG sector.

In addition, Himalaya also conveys to consumers the benefits of using its products and also makes use of price comparison as an effective and efficient marketing tool. The price strategy is undoubtedly making a mark because Himalaya is conscious of the price-sensitive market in India and it uses a competitive pricing approach.

4.7. Place Strategy

The Himalaya Wellness Company makes their products in India and sells them both domestically and internationally. About 50% of their revenue comes from foreign markets. The required technical know-how, are sent to the concerned business partner by the parent corporation in India. India will take care of the raw materials and send it over to the foreign nation. Each of its businesses, including department stores, shops within shops, they have 60- 70 square feet of space and unique retail spaces are 300 square feet. Pharmacies are where they sell their pharmaceuticals, which can be purchased by millions of clients in more than 106 countries.

The distribution network of the company is crucial in making its presence felt in every corner of the Market. South India has a higher demand for Ayurvedic products than North India, which is becoming the fastest growing regional market for Ayurvedic products. The Indian Ayurvedic market consists of pharmaceuticals, dietary supplements, Ayurvedic medicines and Personal care products.

Most of its wares are manufactured within the domestic market and distributed through a chain of retailers as well as wholesale druggists. This is also exclusively sold at Himalaya Stores that are present throughout the country.

It has been lately modernized in terms of Supply Chain with emphasis on inventory management and warehouse management. A lot of Technological upgrading has been done as most of the work was done manually earlier.

4.8. Promotion and Distribution

To market its products to consumers, the Himalaya Wellness Company uses direct sales and advertising methods like emails, letters, booklets, and brochures. They have approximately 4000 field force spread across different geographical locations in India who are promoting the range of products to customers (Doctors, Pharmacist, Retailers, General Trade, Modern Trade, National Modern Trade). They also add television ads along with print ones for a wider reach. To answer any questions people may have about their products is a customer service portal. They also increase sales using direct marketing techniques to give people all the info they need about their items. They do media interviews to enhance the reputation of the brand and address any remaining doubts about their product.

Adgully, a leading online portal covering Advertising and Marketing news, featured the Purifying Neem Face Wash campaign – “The OG Pimple Solution.”

Himalaya successfully runs the House of Wellness, a podcast series dedicated to exploring the topic of comprehensive well-being. Hosted by Charu Sharma, an Indian commentator, compere, and quizmaster, that feature candid conversations with celebrated personalities such as Anju Bobby George, Priyanka Mohite, Vani Murty, Ashwini Ponnappa, Sridhar Venkat, and Luke Coutinho. Each episode covers conversations on various topics, including mental health, nutrition, sustainability, and overall health.

BabyCare division of Himalaya launched Happy Baby Zones baby feeding booths at different domestic & International Airport in India, providing private and hygienic spaces for mothers to feed their babies. The initiative reflects Himalaya's commitment toward promoting breastfeeding and ensuring the well-being of traveling mothers and babies. The booths have comfortable seating, changing tables, and a sink for washing hands and bottles.

Himalaya appreciates the trust their customers place in them and their products. They have a loyalty program that truly values the customer! If a customer is making a purchase at their exclusive brand retail store, they just need to share their mobile number with the store executive after the transaction to get enrolled in their loyalty program 'Himalaya's Smiles'.

The Smiles program at Himalaya has three tiers that allow members to earn more at each level: Classic, Gold, and Platinum. Members will get the chance to rack up on points and redeem a variety of rewards across platforms from day one. Himalaya's Smiles brings a seamless experience; so, whether a customer makes a purchase online or at their retail store, they can redeem the points in the store as well as on the app.

There's no doubt that women are a force in whatever they put their minds to. They have the power to influence and make changes in all aspects of life. The Himalaya Wellness Company understood this, so they worked hard and came up with something called Project Lakshmi. This program was created with the aim of empowering rural Indian women and helping them become financially independent through employment opportunities.

Himalaya assist these women by giving them the skills they need for success. It starts off with training, which is then followed by product knowledge. From there they teach them how to sell, negotiate, handle complaints, and create demand for their goods. So far over 5000 women across Maharashtra, Uttar Pradesh, Madhya Pradesh, Bihar, and Odisha have benefited from the program. Out of those 5000 women, 1000 have already become self-sufficient and started earning a living. The team has conducted over 50 training sessions in recent months and distributed 1000 Baby Gift Kits that include Himalaya Gentle Baby Soap, Himalaya Baby Powder, and Himalaya Baby Massage Oil in areas of Maharashtra and Rajasthan hit hard by COVID-19. Not only have beneficiaries found a new voice in this project but they've also become agents of change while transforming their lives at the same time.

4.9. People

At Himalaya, they endeavor to build a rewarding and employee-friendly culture. They foster a workplace culture that enable employees to feel valued, empowered, and engaged. They provide ample opportunities to nurture creative thinking, innovation, and excellence at Himalaya. Employee recognition, acknowledgement, and appreciation are their constant reinforcements. They have Himalaya Global Employee Recognition Awards under four categories:

- The Global CEO Excellence Award
- The Business Excellence Award
- Everyday Wins Award
- "I Belong" Award.

Himalaya provides a unique opportunity to identify and recognize colleague-to-colleague strengths in successfully displaying the right behavior on their identified KRAs.

Himalaya has a robust Onboarding process for their new joiners which aligns them to the organizational culture, vision, mission, value systems and become a contributing member of the organization.

4.10. Presentation

Himalaya is working towards using eco-friendly, recyclable material for packaging. Their baby wipes are made with 100% biodegradable material with recyclable mono-polymer outer packaging. They collect, recycle, process, and responsibly dispose of the plastic waste generated from post-consumer use from their retail stores. This initiative is endeavored through their “Wealth Out of Waste” program. Their circular approach: Reduce, Reuse and Recycle has reduced plastic consumption by over 500 tons per year. They have successfully processed 14,824.94 MT of plastic recycling and disposed of 425,000 units of containers generated from post-consumer use.

Plastic recycling and waste management are priorities in Himalaya. They are dedicated to driving initiatives that help bring about changes to reduce their packaging footprint. Their goal is to maximize their efforts in managing plastic waste in packaging materials.

As per their current COO & CFO (Ms. Jayashree Ullal), the Himalaya Wellness Company is in the business of providing scientifically researched Head-to-Heal Wellness for the entire family, including mother nature. They create products backed by nature and science, equally conscious of the well-being of the planet.

5. Conclusion

Every aspect has been covered by Himalaya Wellness Company in order to build a strong presence among other companies that focus on Ayurvedic products in India. Their commitment and dedication to products caused them to conduct extensive research and validation. Combining ancient knowledge with new methods allowed for a creation of diverse products that provide solutions for anyone looking for wellness. With studies on over 10,000 herbs they're able to make medicine like allopathic with herbs which isn't commonly done because it's difficult. Additionally, their price strategy helps address customers who are conscious of spending money but still want quality. Price comparison is what they use as a tool to convey value and benefits which ultimately sets them apart in a competitive market.

Himalaya Baby Care has achieved a remarkable milestone by surpassing Johnson's Baby in India, attaining a market value share of 41.1% for July 2023. Johnson's Baby trails closely at 40.6%, while Dabur holds the third spot with a 6.0% share. In addition, Himalaya Baby Care secured the #1 position for attaining a market volume share for the month of June 2023.

Himalaya was recognized and honored in the Nostalgia-Golden Memories event, organized by the Karnataka Drugs and Pharmaceutical Manufacturing Association (KDPMA), for our strong contribution to the pharma industry. KDPMA is the apex body representing pharmaceutical manufacturers of Karnataka. This recognition further boosts the relentless efforts of Himalaya Wellness Company toward contributing to the pharma and wellness industry and positively impacting people's lives.

To prove that quality wasn't sacrificed when reaching international markets they made sure that all technical knowledge and materials are sourced from India then transferred out there somehow through business partners. There's little doubt about accessibility having places like department stores, exclusive retail spaces inside other stores or stand alone shops people still get access.

A mix of TV ads and print advertising paired with direct marketing is how they promote their products. But it doesn't stop there — if customers want more information there's a customer service portal that'll help provide detailed product information directly addressing inquiries leading to increased satisfaction.

Their dedication goes far beyond just making money — Project Lakshmi is proof of this. Helping rural Indian woman become financially independent makes them feel empowered because now they don't have to depend on someone else. So far over 5,000 women across multiple states have benefited from this program, with 1,000 already achieving self-sufficiency. As time goes on they'll turn into oozes of positive change improving not just their lives but everyone around them too.

Himalaya Wellness Company's comprehensive approach to product development, pricing, distribution, and promotion has allowed them to build a stronger presence in the highly competitive Ayurvedic products market in India. They're also committed to making a positive impact on society through social initiatives like Project Lakshmi which demonstrates their dedication.

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(OPERATIONS)

Value Creation through Circular Supply Chain Strategy: An Integrated Approach to Achieve Sustainability

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Abstract--- In response to heightened ecological awareness and the imperative to address unsustainable patterns of resource consumption and waste generation, organizations are increasingly exploring circular supply chain strategies as powerful tools to create value while contributing to environmental and social sustainability. This paper offers a comprehensive exploration of the concept of circular supply chains, focusing on their core components, benefits, challenges, and a strategic framework for implementation. Two distinct viewpoints define the concept of a circular supply chain. From a material perspective, it involves the continual reutilization and recycling of materials, minimizing material wastage throughout the supply chain. However, a broader perspective extends beyond material recycling, emphasizing the need to eliminate waste generation, reduce the use of hazardous chemicals, and rely on renewable energy sources.

The paper provides a thorough literature review comparing traditional linear supply chains with circular ones, highlighting the limitations of conventional performance assessment metrics and the need for new indicators tailored to circular supply chains. It also outlines the methodological approach, which employs grounded theory for exploratory research to develop a conceptual framework for assessing the performance of circular supply chains. This framework encompasses a clear vision for business models, value chain drivers, and the critical aspect of change management.

Ultimately, the paper emphasizes that embracing circular supply chain strategies is essential for businesses to create value and achieve sustainability. It discusses the practical challenges and regulatory complexities that organizations must navigate while highlighting the potential for job creation and social inclusivity. The paper serves as a valuable resource for practitioners and policymakers seeking to drive organizational value through the adoption of circular supply chains, paving the way for a future where circularity becomes the norm, benefiting both businesses and the planet.

Keywords--- Circular Economy (CE), Circular Supply Chain Management (CSCM), Sustainable Development, Value Creation.

1. Introduction

The 21st century has ushered in a paradigm shift in the way businesses operate. Sustainability is no longer a buzzword but a fundamental principle. Organizations, both large and small, are re-evaluating their supply chain strategies to align with this new ethos. Circular supply chain strategies have emerged as a powerful tool for creating value while simultaneously contributing to environmental and social sustainability. This paper seeks to provide an in-depth exploration of the concept, highlighting its core components, benefits, challenges, conceptual framework for strategy implementation and the broader implications for businesses in various industries. This study offers a valuable resource for practitioners aiming to drive organizational value by embracing the concept of circular supply chains in their operations. Circular supply chains represent an emerging paradigm that intersects at the strategic (business models), tactical (eco-design), and operational (sustainable supply chain management) levels (Jain, S., Jain, N. K., & Metri, B. 2018).

According to Mangla, S. K. et al., (2018), in response to heightened ecological awareness and the imperative to address unsustainable patterns of resource consumption and waste generation, companies worldwide are increasingly looking to incorporate circular models into their supply chains. This extension of circular models or Circular Supply Chain (CSC) concepts enables organizations to optimize resource utilization and enhance value for their customers. Nevertheless, it is worth noting that the adoption of Circular Supply Chain Management (CSCM) can present significant challenges for firms, particularly in developing nations like India, where various constraints such as financial limitations and government regulations often present barriers to implementation.

Two distinct viewpoints have been established for defining a circular supply chain. From the material perspective, a circular supply chain is characterized by the continual reutilization and recycling of materials at the end of their useful life, leading to minimal material wastage throughout the supply chain (Genovese et al., 2017). However, a broader perspective, adopted by some, transcends mere material recycling. It underscores that a circular supply chain, often referred to as a C2C (Cradle to Cradle) supply chain, is an integral part of production systems. In addition to closing the material loop, this production system must aim to eliminate the generation of solid, liquid, and gaseous waste, reduce the use of toxic and hazardous chemicals, and rely exclusively on renewable energy sources (McDonough and Braungart, 2002). In response to heightened ecological awareness and the imperative to address unsustainable patterns of resource consumption and waste generation, organizations are increasingly exploring circular supply chain strategies as powerful tools to create value while contributing to environmental and social sustainability.

The objective of this paper is to introduce a conceptual strategic framework for businesses to create value and achieve sustainability. The paper emphasizes that embracing circular supply chain strategies is essential for businesses to create value and achieve sustainability. The subsequent sections are structured as follows: Section 2 provides a review of the literature pertaining to the performance assessment of circular supply chains. Section 3 outlines the methodology employed in this research. In Section 4, the conceptual framework is presented, and the paper is wrapped up with discussions and conclusions in Section 5.

2. Literature Review

The literature study is divided into two main sections, one of which focuses on the efficacy evaluation of traditional supply networks and the other on that of circular supply chains.

2.1. Traditional Supply Networks

Many traditional supply networks, which are still frequently used by most firms, fit the definition of linear supply chain models. These models have a clear supply chain that moves from raw materials through production to final consumers and finally to disposal, which frequently results in the items being dumped in a landfill. Supply chain performance has been assessed using the Balanced Scorecard (Kaplan and Norton, 1992), which evaluates performance at the strategic level. Due to the presence of various supply chain levels, performance monitoring inside supply chains becomes increasingly complex (Gunasekaran et al., 2001). Performance management systems for complex supply chains have been developed in the past (Chan and Qi, 2003; Shepherd and Günter, 2006).

The Supply Chain Operations Reference (SCOR) model, as recommended by scholars in both theoretical and practical contexts (Gunasekaran and Kobu, 2007) was developed with a primary focus on the assessment of supply chain performance. This model, in its classification of supply chains into five distinct stages, encompassing planning, sourcing, production, distribution, and returns, serves as a valuable strategic tool for the attainment of desired supply chain performance objectives, as recognized by scholars (Li et al., 2010).

Traditional supply chain performance measurement often faces several challenges and issues that can hinder effective management and optimization. Traditional supply chain performance measurement relies on historical and periodic data, which may not provide timely insights into the current state of the supply chain. This can lead to slow response times when issues arise. Different parts of the supply chain may use separate systems and databases, making it difficult to integrate and consolidate data for comprehensive performance measurement. Traditional performance metrics can be overly complex, leading to confusion and a lack of clarity on what metrics are truly essential for decision-making. Choosing the right KPIs is crucial for measuring supply chain performance accurately. In traditional supply chains, selecting the wrong KPIs or relying on outdated ones can lead to suboptimal decision-making. Along with these, Difficulty in benchmarking, Data quality issues, Lack of alignment with business goals, Dynamic and predictive insights lacking, Lack of supply chain visibility and Resistance to change are the major constraint in measuring performance.

2.2. Circular Supply Chain

A circular supply chain is defined by the reuse of waste and customer returns in the creation of new or reconditioned products. The primary objective of a circular supply chain is a significant reduction in both the consumption of raw materials and the disposal of waste, in contrast to a linear supply chain. This reutilization of materials in a circular supply chain enables a continuous flow, differing from the conventional linear supply chain model, which often concludes at the end consumer.

As stated by the Ellen MacArthur Foundation (2015), the circular economy concept is best characterized as an economy intentionally designed to be restorative and regenerative. Its fundamental goal is to ensure that products, components, and materials consistently retain their maximum utility and value, recognizing the distinction between technical and biological cycles. This concept embodies a perpetual cycle of positive development, one that safeguards and enhances natural resources, optimizes the efficiency of resource usage, and mitigates potential system risks by effectively managing finite reserves and renewable flows. The circular economy approach is adaptable and operational on a variety of scales. Its overarching aim is to ultimately disentangle global economic growth from the consumption of finite resources.

Circular Economy is an economic system that replaces the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes. It operates at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, thus simultaneously creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations. It is enabled by novel business models and responsible consumers (Kirchherr, Reike, Hekkert, 2017).

The circular economy operates on three fundamental principles that bolster the resilience of supply chains. The first principle involves the elimination of waste, complexity, and toxicity from products, which facilitates more efficient end-of-life resource management. The second tenet emphasizes the prolonged utilization of raw materials, maintaining their quality for as long as feasible. Lastly, the third principle underscores the responsible return of materials to the environment, ensuring a positive impact on the ecosystem. These principles collectively form the foundation of the circular economy, driving the creation of resilient and sustainable supply chains (Gartner, 2021).

Insights derived from leading supply chain companies, particularly those ranked as top performers in the Gartner Supply Chain Top 25 for the year 2020, underscore critical strategies for addressing key barriers to the realization of a circular economy. These top-performing organizations have demonstrated a proactive stance in confronting three

noteworthy impediments: Firstly, they recognize the importance of choices made during the design phase of products, wherein the selection of raw materials can significantly impact the feasibility of a circular economy. By ensuring flexibility in material choices and fostering adaptability in product design, these companies strive to break free from rigid constraints that may hinder circularity.

Secondly, these organizations acknowledge the increasing significance of end-of-life materials management in shaping customer engagement and the emergence of innovative business models. The proactive management of materials at the end of their lifecycle not only aligns with sustainable practices but also fosters customer loyalty and opens doors to novel revenue streams. Lastly, these leading supply chain companies exercise discernment when forming collaborative partnerships, avoiding the potential pitfall of excessive resource allocation for limited returns. By establishing stringent selection criteria and focusing on partnerships that align with circular economy objectives, they ensure that resources are optimally invested to advance the circular agenda. These observations underscore the practical strategies and approaches adopted by top-performing supply chain companies in navigating the path toward a more circular and sustainable economic paradigm.

Effectively crafted metrics serve as valuable tools not only for gauging the performance of a circular economy but also for assessing the effectiveness of a circular supply chain, as emphasized by Geng et al. (2013). It is crucial to recognize that the indicators employed in measuring the performance of a circular supply chain diverge significantly from those applicable to traditional supply chains. While traditional supply chains are typically evaluated based on conventional criteria like cost, quality, and output (Beamon, 1999), circular supply chains are scrutinized with a distinct focus on resource consumption and the environmental impact throughout the entire supply chain, as articulated by Genovese et al. (2017).

3. Methodology

Exploratory research is a type of research design aimed at providing insights into, and an understanding of, a problem or phenomenon. It's often used when a researcher is trying to gain familiarity with a subject, to generate new ideas, or to discover potential research questions. Grounded theory is a qualitative research methodology developed by Glaser and Strauss in their 1967 book, *The Discovery of Grounded Theory*. It is used to develop theories that are grounded in the data collected during the research process. Grounded theory focuses on generating theories or concepts based on empirical data, rather than testing existing theories. For the purpose of developing a theory and applying it to particular situations, the grounded theory is beneficial for determining the causal links between phenomena (Bryman, 2004). One of the study strategies that might assist a researcher in uncovering knowledge about a phenomena in exploratory research is grounded theory (Saunders et al., 2007).

The development of a conceptual strategic framework for assessing the performance of a circular supply chain hinges on the interconnection of sustainability, waste management, and supply chain management. Within this theoretical framework, our initial inquiry revolves around the exploration of strategies aimed at fostering the concept of a circular supply chain. Simultaneously, we endeavor to pinpoint the essential performance indicators and challenges that manifest within a circular supply chain context. This research relies on the theoretical foundations articulated in existing academic literature concerning circular supply chains, industrial ecology, sustainable product design and manufacturing, and zero-waste principles. Our study serves as an integrative endeavor, uniting the design and performance dimensions of the circular economy within a comprehensive framework.

4. Conceptual Framework

This section proposes a guiding framework for any company generating numerous lifespan products to build a circular supply chain. The suggested framework (Shown in Figure 1) is focused on CSC implementation issues, waste management, and decision-making process. It unifies the information from multiple disciplines into a single descriptive framework to enable both analysis, design, and decision-making components of the circular supply chain, including circular economy, supply chain restructuring, reverse logistics, and circular value proposition models.

4.1. Developing Clear Vision to Build Business Model

The acceptance of circular concepts and initiatives will be reliant on our capacity to create convincing business justifications. Depending on the conditions, chances such as service models, prolonging product usage, and collecting the residual value of capital goods through reuse, remanufacturing, and recycling all serve as examples of the kinds of opportunities that might indicate typical financial success. In other cases, investments may require an exception to be made, for example by allowing for a lower ROI or different thresholds, such as evaluating longer-term financial returns by taking into account an extended product lifetime.

Using a customer lifetime value approach opens the doors for additional investment in a closed-loop solution. As the customer extends their commitment to the supplier, so the business model moves to recurring margins, creating a more attractive and predictable cash flow.

Other factors for consideration in the business model may include:

- Risk management/resilience
- Customer value and retention
- Legal compliance (current or future state)
- Access to new markets
- Progress toward other goals (e.g. carbon emission reductions)

When faced with a more intricate situation, employing scenario modeling to assess how sensitive the outcome is to factors like price fluctuations or material availability can offer strong incentives for switching to alternative sources or materials, or for redesigning with a more resource-efficient approach. It's also worth contemplating strategies to mitigate financial risks associated with escalating material costs. To maintain cost competitiveness or improve it, it's essential to periodically reassess the strategic business case in light of updated material value parameters.

4.2. Value Chain Drivers

Circular business models underscore the importance of preserving the original product's functionality to the greatest extent possible. Through practices such as remanufacturing, refurbishment, and recycling, the product's lifespan is extended, offering an alternative to new products for customers. This, in turn, has the potential to broaden the spectrum of customer segments that can access the product and its associated services. Circular business models can also stimulate *market expansion* by inspiring innovative approaches to meeting customer demand, consequently influencing product design. As an example, as-a-service models can promote the use of remanufactured equipment and encourage manufacturers to adopt the role of owner rather than just the seller, leading to changes in how products are designed.

An essential determinant for the efficacy of a circular economy framework resides in the strategic establishment of the pricing threshold within the promotional framework of refurbished or remanufactured commodities. These products serve as complementary offerings to the sales of new items, and the establishment of a specialized sales conduit presents the prospect of expanding market reach to novel clientele, concurrently cultivating distinct brand identities that do not conflict with or erode the sales of new capital equipment.

When a manufacturer undertakes the remanufacturing or refurbishment of their own product, they can harness their pre-existing manufacturing processes, expertise, and insights in the production of novel items, all while possessing a comprehensive understanding of *cost structures and market demand*. This affords them the prospect of achieving favorable profit margins and provides a platform for manufacturers to promote products that are returned to them at any phase in the product's life cycle, consequently conserving the intrinsic value of both the product and its constituent materials.

Businesses frequently grapple with rapidly changing customer demands, unclear product specifications, and ongoing technological advancements, which can necessitate swift design modifications. This, in turn, places significant strain on both the business and its supply chain, often leading to unmet supplier commitments, customer delivery delays, and potential material investment losses. Embracing a circular model that involves reusing products, parts, components, and materials offers an opportunity to expand capacity, enhance supply chain flexibility, and reduce investments. By doing so, businesses can effectively *meet their lead time* commitments, even when facing challenging market demands.

By placing a distinct emphasis on generating value through the implementation of circular business models, such as heightened material reuse, repair and refurbishment options, feedback mechanisms, and value preservation, corporations and their collaborators can stimulate the emergence of *innovative concepts* concerning the design of products and/or business frameworks. Hence the framework highlights consideration such as new market entry, Risk reduction, increasing innovative capability, customer value delivery, value Retention and Cost reduction as circular value drivers that member organizations take into account when developing circular business proposals.

4.3. Change Management

Once a viable business model is determined, the organization must undertake the essential organizational adjustments to effectively put it into practice. This is especially pertinent in the case of circular business models, which often demand substantial modifications in one or multiple facets of the organization, such as the establishment of product-as-a-service initiatives or the development of novel reverse supply chains.

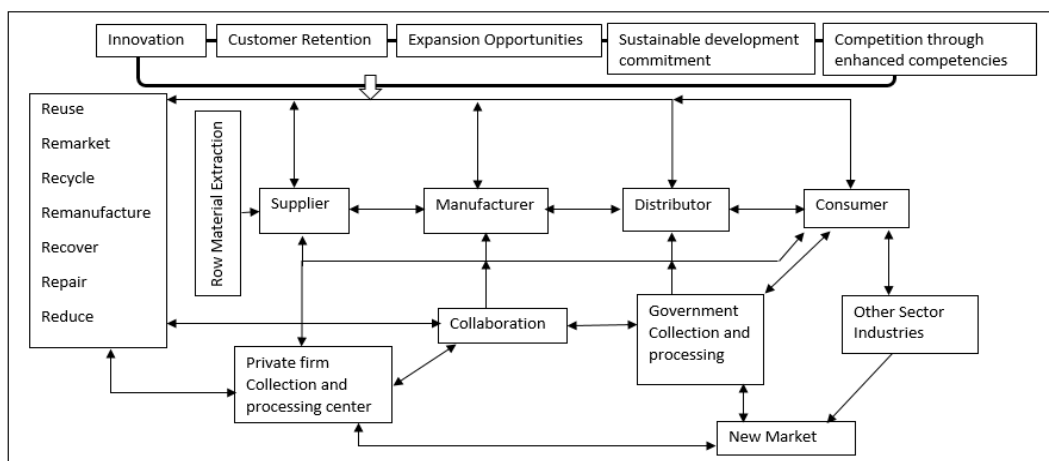


Figure 1: Conceptual Framework of Circular Supply Chain Management

To make the corporate vision of circularity practical for employees driving operational changes, it's crucial to translate this vision into specific functional contexts. This entails addressing both competence and mindset. Employees can be actively assisted in acquiring the knowledge and skills needed to implement the circular vision through tailored training, including change management and systems thinking. Equally important is fostering their willingness to actively participate in organizational transformation by forging new connections and questioning established norms.

The role of supply chain management (SCM) is pivotal in the implementation of circular economy principles, as it governs material flows and serves as the crucial interface with parties both upstream and downstream in the value chain. Looking upstream, there is value in raising awareness and providing formal training while implementing quantitative scoring for suppliers. This approach empowers procurement officers to broaden their perspective, considering the impacts of supplier and manufacturing choices on costs, risks (e.g., supply chain disruptions), product lifecycles, material selection, and usage. Additionally, assessing supplier performance in terms of circularity can aid supply chain managers in achieving a better balance between technical and functional specifications, thereby emphasizing circular design and fostering dialogue with suppliers to enhance circularity.

When facing downstream challenges, it becomes increasingly essential to gain visibility of the installed base at customer sites and establish sophisticated return logistics operations. Companies are increasingly focused on reclaiming and reusing more equipment, aiming for closed-loop recycling. As part of a zero-waste strategy, organizations need to incorporate and comprehend information from *reuse* and *recycling* partners downstream. This data can be instrumental in informing product design and evaluating partner performance while tracking material flows. Furthermore, organizations may find it necessary to forge relationships with entirely new partners, as waste from one actor in the value chain can serve as the raw material for another.

Awareness initiatives and training programs geared towards customer-facing personnel, such as those in Sales and Marketing, should highlight the advantages and value that circular methods offer to customers. Simultaneously, they need to address the alignment of these business models with current or evolving sales structures and incentives. This might entail expanding the focus of Marketing and Sales beyond product attributes and quality, emphasizing instead the enduring value derived from ongoing customer engagement.

5. Discussion

Just like other acceleration programs, it's crucial to maintain the momentum and ensure that the principles of the circular economy become an integral part of the day-to-day operations within each team. Sustaining the relevance of this work is essential to attain meaningful organizational outcomes in support of circularity and to contribute to global sustainability objectives.

Converting acquired skills and knowledge into practical application and cultivating shared experiences cultivates additional proficiencies and networks of best practices, which, in turn, drive further action. At the conclusion of each learning cycle and at various organizational levels, it's imperative to document the necessary changes in work processes to facilitate continuous improvement and learning cycles. This involves incorporating deliverables into team protocols and instructions, setting and monitoring objectives, and organizing ongoing training and awareness initiatives, as well as engaging with external stakeholders.

Furthermore, forging external collaborations and networks within the value chain, with external stakeholder groups, and with like-minded companies and coalitions is of paramount importance. This broadens the sphere of influence, motivates others to take action, enables the exchange of best practices and ideas, and expedites progress.

The journey toward a circular economy cannot be undertaken in isolation; it necessitates integration at every level, both within the organization and across the wider network. Promoting collaboration and the amalgamation of efforts will facilitate the cascading and acceleration of actions.

The suggested circular supply chain framework also carries significant social ramifications. This shift in perspective will generate additional job opportunities for the implementation of circular supply chains, promoting social inclusivity in the process. A singular emphasis on product enhancement and operational efficiency is likely insufficient in mitigating the challenges posed by global resource scarcity and environmental concerns. A fundamental necessity arises for a substantial reduction in the scale of product manufacturing, coupled with an enhanced focus on the efficient utilization of a reduced number of products. In light of this, a critical reevaluation of the prevailing ownership-based business model is imperative.

To effectively integrate the tenets of the circular economy into their supply chains, businesses must consider the adoption of alternative business models, such as the service-oriented business model. This transition requires a judicious synthesis of ownership-based and service-oriented business models within the framework of a circular supply chain. It is noteworthy that the optimal blend of these business models will inherently vary according to the specific nature of the products involved.

6. Conclusion

In conclusion, the adoption of circular supply chain strategies presents a transformative path towards sustainability and value creation in the modern business world. As our global community grapples with pressing environmental challenges, organizations must embrace circularity as a central tenet of their operations. This paper has underscored the theoretical foundations of circular supply chains, emphasizing the critical role they play within the broader circular economy framework. Furthermore, our integrated approach to circular supply chains outlined in this paper provides a blueprint for organizations seeking to embark on their sustainability journey.

By assessing the current state of their supply chain operations, redesigning products and processes with sustainability in mind, optimizing resource usage, and fostering collaboration among stakeholders, organizations can create a robust framework for circularity. Measuring the impact through relevant key performance indicators, including environmental, economic, and social metrics, is pivotal to gauge progress and justify the transition. While various challenges and barriers exist, including regulatory complexities, technological adaptations, and organizational shifts, this paper emphasizes the necessity of overcoming these hurdles to fully harness the potential of circular supply chain strategies.

In the coming years, as technology continues to advance and organizations increasingly integrate circular supply chains with the broader circular economy, we can anticipate a brighter future for sustainability and value creation. The circular supply chain framework not only promotes environmental responsibility but also promises enhanced profitability, resilience, and a more sustainable and prosperous global economy. To this end, it is our hope that organizations and policymakers will heed the lessons and recommendations provided in this paper to build a world where circularity becomes the norm, benefiting both businesses and our planet.

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Enhancing Circular Supply Chain Resilience through Holistic Operations Management Approach

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Abstract--- This research investigates the role of a holistic operations management approach in enhancing the resilience of Circular Supply Chains (CSCs) and operationalizing the principles of the circular economy. It presents a comprehensive framework derived from qualitative empirical data, offering valuable insights from interviews and thematic analysis. The resulting research findings have uncovered six fundamental themes, encompassing Evaluating Business Performance, Motivators, Challenges, Environmental Concern, Business Strategy, and Business Value Creation. These themes, in turn, provide the foundational basis for six pivotal propositions, each of which illuminates the pivotal nuances and dynamics intrinsic to Circular Supply Chains. The interview data provides empirical support for these propositions, underlining their practicality and relevance within the context of CSCs. Furthermore, the study introduces an innovative integrated framework designed to bolster the resilience of Circular Supply Chains, thereby providing a pragmatic means to operationalize the concept of the circular economy. Five practical implications emerge from the findings. Companies are encouraged to shift their focus to long-term sustainability, enhance supply chain transparency, engage consumers in circular practices, adopt innovative technologies, and collaborate with suppliers for more resilient and eco-friendly supply chains. Future research should explore cross-cultural comparisons, employ quantitative analysis, conduct longitudinal studies, examine emerging technologies, investigate government policies, and delve into supply chain network dynamics for enhanced resilience and sustainability.

Keywords--- Circular Supply Chains, Business Value Creation, Resilience, Sustainability, Business Strategy.

1. Introduction

The world of supply chain management is undergoing a significant transformation, driven by the intersection of environmental concerns, economic imperatives, and technological advancements. The traditional linear supply chain model, characterized by the extraction of raw materials, manufacturing, distribution, and disposal, has faced criticism due to its unsustainable nature and susceptibility to disruptions. In response to these challenges, a new paradigm is emerging – the circular supply chain. This approach, which emphasizes the reduction, reuse, recycling, and regeneration of resources, offers a more sustainable and resilient alternative to the linear model. To achieve true circularity and ensure supply chain resilience, businesses are adopting a holistic operations management approach.

In 2014, the World Economic Forum published a study which highlighted the escalating complexity in managing material flows, predominantly attributed to the intricate nature of bills of materials with multiple layers. The adoption of Circular Economy (CE) business models introduces additional concerns, particularly in the domains of product-service system design and loop closure. These transformative processes necessitate substantial adjustments across product design, manufacturing practices, and logistics systems. As emphasized in a 2017 study by Ritzén and Sandström, the successful implementation of CE principles hinges on the imperative requirement for enhanced collaboration and synergy within supply chain networks.

Circular Economy (CE) principles are extending the boundaries of Supply Chain Management (SCM), emphasizing the development of a comprehensive business model that appears to prioritize economic systems with primary environmental benefits, with secondary considerations for social aspects (Geissdoerfer et al., 2017). It is noteworthy that the insufficient incorporation of social aspects into circularity has also been underscored by Murray, Skene, and Haynes (2017). CE takes a proactive approach to establish self-sustaining systems that promote recurrent utilization and recycling, as opposed to a reactive approach aimed at mitigating the environmental repercussions of business operations (Genovese et al., 2017).

While the focal points of development continue to revolve around resilience, digitization, and sustainability, a prevailing trend is the emergence of shortages in the essential resources indispensable for production and logistical activities within supply chains. These resource deficiencies encompass a wide spectrum, encompassing labor, materials, energy, and capital. Additionally, local scarcities have the potential to generate far-reaching global repercussions, manifested as disruptions cascading throughout intricate supply chain networks (Ivanov, Sokolov, and Dolgui, 2014; Dolgui, Ivanov, and Sokolov, 2018; Li et al., 2021; Llaguno, Mula, and Campuzano-Bolarin, 2021; Park et al., 2022).

This research offers two significant contributions. Firstly, through the analysis of qualitative empirical data, we investigate how adopting a comprehensive approach to operations management can boost the resilience of Circular Supply Chains. This exploration is grounded in insights garnered from interviews and thematic analysis. Secondly, this study introduces an integrated framework that focuses on enhancing the resilience of Circular Supply Chains and aims to operationalize the concept of the circular economy (CE). The resultant operational framework takes into account the intricate relationships among pivotal factors and serves as a guiding tool for both managers and researchers in their efforts to promote the circular economy within supply chains.

The remainder of this paper is organised as follows: In Section 2, we delve into the theoretical background by reviewing pertinent literature and concepts. Section 3 details the data collection procedure and the method used for thematic analysis. Section 4 presents our research findings, while Section 5 advances several general propositions based on these findings, develops the operational framework, and discusses its implications for management. Finally, in Section 6, we draw our study to a conclusion.

2. Theoretical Background

2.1. The Emergence of Circular Supply Chains

The traditional linear supply chain model, also known as the 'take-make-dispose' model, has long been the backbone of global commerce. In this model, raw materials are extracted, processed, manufactured into products, and finally, disposed of at the end of their life cycle. While this linear approach has fueled economic growth for decades, it is inherently unsustainable. It depletes finite resources, generates vast amounts of waste, and leaves supply chains vulnerable to disruptions. In a world where sustainability is no longer a buzzword but a strategic imperative, businesses are turning to circular supply chains as a viable alternative.

A circular supply chain aims to reduce waste, keep products and materials in use for as long as possible, and regenerate natural systems. It operates on the principles of recycling, reusing, and repurposing products and materials. This not only reduces the environmental footprint but also promises substantial economic benefits, such as cost savings and enhanced brand reputation. The circular supply chain model is inspired by the natural world, where waste is virtually non-existent, and resources are continually cycled. It offers a more sustainable and responsible approach to resource management.

Numerous scholars have highlighted the imperative for transitioning from linear to circular supply chain models. Elkington (1998) introduced the concept of the "Triple Bottom Line," emphasizing the need for businesses to consider environmental and social impacts alongside economic performance. This served as a catalyst for exploring more sustainable supply chain approaches. Circular economy principles have also played a pivotal role. Scholars like Ellen MacArthur Foundation (2013) have underlined the importance of designing out waste, keeping products and materials in use, and regenerating natural systems. Such principles have led to a paradigm shift in how supply chains are structured and managed.

Remanufacturing, as per the definition provided by Daniel, Guide, and Jayaraman (2000), involves the process of transforming used products, referred to as cores, composed of components and parts, into products that adhere rigorously to the same quality and standards as new products. The roots of remanufacturing can be traced back to the 1940s, where both U.S. and European automotive firms adopted this practice as a means to preserve the value of their products (Zhang and Chen, 2015). Driven by mounting concerns for sustainability over the past two decades, the manufacturing landscape has witnessed a significant shift from a linear production model to a circular one (Lieder and Rashid, 2016).

Within this evolving context, remanufacturing networks have gained substantial prominence as the cornerstones of 'circular economy' models. This ascendancy is attributed to their profound connections with economic, environmental, and social sustainability (Giutini and Gaudette, 2003; United States International Trade Commission, 2012; Abbey, Daniel, and Guide Jr, 2018; Agrawal, Singh, and Murtaza, 2015). Goltsos et al. (2019), offers an extensive literature review within the domain of closed-loop supply chain dynamics. It investigates the time-varying dynamics of material and information flows within the various facets of remanufacturing supply chains.

In summary, the emergence of Circular Supply Chains reflects a response to a changing business landscape. Literature emphasizes the importance of adopting circular economy principles, addressing sustainability concerns, and enhancing supply chain resilience while recognizing the multifaceted challenges and opportunities involved in this transformative shift.

2.2. The Imperative for Resilience

The traditional lean operations management approach, which focuses on efficiency and cost reduction, has faced criticism for its vulnerability to disruptions. Scholars have discussed the need for a balance between lean and resilient operations, highlighting the importance of flexibility and redundancy in production systems (Christopher & Peck, 2004). With global disruptions and increasing interconnectivity, supply chain resilience has become a critical concern. Literature in this domain underscores the need for diversified sourcing, inventory management, and contingency planning to mitigate supply chain disruptions (Ponomarov & Holcomb, 2009). In the business and management context, resilience is crucial for organizations to navigate a complex and uncertain environment. Studies have identified factors such as robust risk management, agile decision-making, and adaptive leadership as essential components of organizational resilience (Lengnick-Hall et al., 2011).

While the environmental and economic benefits of circular supply chains are well-documented, the imperative for resilience has taken center stage in recent years. The global supply chain landscape has been marred by an array of challenges, including natural disasters, geopolitical tensions, and the COVID-19 pandemic. These disruptions exposed the vulnerabilities of linear supply chains, where a single point of failure could disrupt the entire chain. Research in this area emphasizes strategies like supplier diversification, demand forecasting, and inventory optimization to enhance supply chain resilience (Pettit & Croxton, 2019).

In contrast, circular supply chains are inherently more resilient. Their decentralized nature and focus on resource efficiency allow them to adapt to disruptions more effectively. For instance, in the face of a sudden resource shortage, businesses operating with circular supply chains can tap into their extensive networks of suppliers to find alternative sources or employ recycling and reusing practices to stretch existing resources. Moreover, the emphasis on local production and consumption in circular supply chains reduces dependence on distant suppliers, minimizing the impact of global shocks.

Circular supply chains also contribute to resilience by reducing waste. Waste often ends up in landfills, contaminating the environment and contributing to various social and economic challenges. By minimizing waste and recycling materials, circular supply chains help mitigate the long-term risks associated with waste disposal, making them more resilient to environmental and regulatory changes.

3. Research Methodology

This research aims to investigate the role of a holistic operations management approach in achieving Circular Supply Chain Resilience (CSCR). The study employs a qualitative research methodology to gain in-depth insights into the various facets of CSCR and the operations management practices that contribute to its success. Semi-structured interviews and thematic analysis were used in this study.

3.1. Data Collection

Our study employed individuals as the subjects of observation and analysis. We specifically reached out to individuals possessing a substantial level of experience and expertise in the fields of Circular Economy (CE), sustainability, product design, and supply chain management to ensure the credibility of our data. By doing so, our interviews collected a wide range of professional backgrounds spanning various industries and companies, thus bolstering data diversity and preventing potential biases.

In addition to industry professionals, we also conducted interviews with five active professors who brought valuable academic perspectives to the study. These academics not only had a strong academic foundation but also had practical experience in industry and government consulting. This dual expertise further enriched the diversity of our data and enhanced the reliability of our research findings.

A total of 15 semi-structured interviews were carried out in Maharashtra & Andhra Pradesh, India, during 2023. Details regarding the sample characteristics can be found in Table 1. The median number of years of experience in sustainability and/or Circular Economy (CE)-related practices among the interviewees amounted to eight. The individuals included in our sample predominantly represent small and medium-sized enterprises. During the participant selection process, all interviewees affirmed their substantial expertise in product design, Marketing, procurement, logistics and supply chain management. Furthermore, the interview data corroborated their high level of knowledge in these domains, thereby ensuring the reliability and validity of our data.

These interviews were conducted on-site at the participants' workplaces, with each session lasting approximately 45 minutes. To facilitate more structured responses, participants were provided with the interview questions in advance via email, allowing them to prepare and organize their thoughts for each question.

Table 1: Description of the Interview Sample

Interviewee code	Job positions	Industry/Discipline sector	Industry/Discipline sector Years of experience
1	Manager - Operations	Car care products manufacturing	12
2	Manager - Production	Manufacturing	8
3	Managing Director	Textile	17
4	Manager - Warehouse	Manufacturing - auto	12
5	Manager - Production	Manufacturing - food processing	10
6	Manager - Logistics Services	Supply chain Solutions	7
7	Senior Executive - Operations	Manufacturing - food processing	4
8	Senior Executive - Logistics & Warehousing	Manufacturing - food processing	5
9	Senior Executive - Packaging	Manufacturing - food processing	3
10	Manager - Marketing	Manufacturing - consumer goods	4
11	Asst Professor	Academic - Operations	3
12	Asst Professor	Academic - Operations	5
13	Asst Professor	Academic - Operations	10
14	Asst Professor	Academic - Supply chain	12
15	Professor	Academic - Marketing	20

The key interview questions are presented below:

1. How can a circular supply chain approach enhance the overall value creation for businesses?
2. What key elements should a company consider when formulating a circular supply chain strategy?
3. What role does sustainability play in attracting and retaining customers and investors?
4. What are the trade-offs, if any, between sustainability and resilience in a circular supply chain, and how can organizations strike a balance between these two objectives?
5. Looking ahead, what emerging trends or technologies do you see as having a substantial impact on the evolution of circular supply chains?

The formulation of these interview questions was guided by a thorough review of the current body of literature. During this literature review, our objective was to identify a research gap related to how a comprehensive operations management approach can facilitate businesses in adapting to the changing business landscape. Following this, we meticulously designed the interview questions with the aim of collecting data to conduct a thematic analysis. This analysis was undertaken to provide insights into the research question and, by extension, fill the identified research gap.

Interview question 1 was used to probe an interviewee's viewpoint on the potential benefits and advantages that a circular supply chain can offer to businesses in terms of efficiency, cost savings, and long-term sustainability. Its purpose was to confirm the significance of a circular supply chain on businesses, as emphasized in the existing literature. Interview question 2 was designed to identify the critical factors that companies need to take into account when developing a strategy to transition to a circular supply chain model, which emphasizes resource conservation and reduced waste.

Interview questions 3 and 4 were designed to collect data that could provide direct answers to the main research question. The motivation is to explore how businesses can use sustainability as a means to not only meet environmental goals but also to appeal to a growing base of eco-conscious consumers and investors, ultimately benefiting their brand and financial stability. The questions seek to examine the potential conflicts that may arise when balancing sustainability objectives with the need for a resilient supply chain, and how operations managers can navigate these challenges effectively. The last question seeks to gain insights into the future of circular supply chains, including the innovative technologies and trends that will shape their development and improve their overall effectiveness in sustainability and resource efficiency. It also served to wrap up the interviews.

3.2. Data Analysis

Thematic analysis served as the analytical method for examining the transcribed interview data. In line with established practice, this study followed the comprehensive six-step thematic analysis framework as delineated by Braun and Clarke (2006) to ensure the rigor and impartiality of the analysis and findings. The initial step encompassed a meticulous process of repeated readings of the transcribed content to foster a profound understanding of the dataset. Subsequently, the coding phase was executed, with each code intricately linked to a specific concept central to the overarching research inquiry. This coding procedure involved the application of descriptive labels to distinct sections of the transcribed text.

Next, in order to generate a tabular summary featuring the exclusive and individual codes, the initial step involves extracting all the unique codes, quantifying their frequency, and subsequently structuring the data into a tabular format. It's important to highlight that commonly occurring stop words (such as "and," "the," "of") have been omitted, and punctuation and special characters have been eliminated for this purpose. Please note that some variations of words, like plural forms or different forms of the same word, have been combined (e.g., "sustainability" and "sustainable" are counted as one). The codes were refined and consolidated to capture related conceptual aspects. As a result, a total of 158 codes were established during this phase. Next, potential themes were explored by examining connections among the codes. Conceptual links between the codes were examined, and those closely related were grouped together to form potential themes. For instance, although the codes 'Efficiency,' 'Profitability,' and 'Resource optimization' address distinct facets of performance, they all contribute to similar transformations in business performance. Consequently, a thematic category called 'business performance evaluation' was formulated to encompass these codes. In conclusion, this study revealed six themes based on the aforementioned analyses: Evaluating Business Performance, Motivators, Challenges, Environmental Concern, Business Strategy, and Business Value Creation.

The sample size for this study confirmed that the number of interviews reached a saturation point. After conducting 15 interviews, no new themes or codes emerged. To ensure the reliability of the findings, it is imperative to reach thematic saturation, wherein no new insights emerge with additional data. Guest, Bunce, and Johnson (2006) propose

that thematic saturation typically occurs after 12 interviews, with fundamental themes manifesting after the first six interviews. The chosen sample size in this study aligns with the recommended number of interviews. Significantly, no new themes or codes emerged after the 12th interview, leading to the cessation of data collection after conducting three more interviews.

Thematic analysis aims to identify consistent patterns in data by coding and then organizing them into themes that reflect the common elements in addressing the research question. This approach depends on the uniformity of the data. Codes and themes developed systematically from homogeneous data are more likely to yield robust results. Therefore, this study presents the themes and codes derived from consistent responses as its primary findings.

4. Results

4.1. Perspectives on Overall Value Creation for Businesses

The interviewees expressed diverse perspectives on how a circular supply chain approach can enhance overall value creation for businesses. Each interviewee highlighted the benefits of adopting a circular supply chain approach. Interviewee 1 & 12, both emphasized cost reduction and sustainability, along with fostering innovation and cooperative relationships. Interviewee 2 focused on efficiency, cost savings, and innovation to attract eco-conscious consumers and regulators. Interviewee 3 discussed how the textile industry can reduce production costs, meet sustainability demands, and drive textile recycling innovations. In the automobile industry, almost all interviewee highlighted reduced environmental impact, cost savings through reuse and remanufacturing, and advancements in green technologies. Majority stressed efficient resource use, cost savings, sustainability, and appealing to environmentally conscious clients. All agreed on the importance of cost reduction, innovation, and sustainability as key drivers of value in a circular supply chain.

Various interviewees shared insights on critical components for crafting a circular supply chain strategy. Interviewee 1 emphasized self-assessment, stakeholder collaboration, technology integration, and sustainability metrics. Interviewee 2 & 9 added regulatory compliance and consumer education. Interviewee 3, 8, 10 & 15 highlighted sustainable materials, reverse logistics, technology, and compliance. Interviewee 4 stressed sustainable design, efficient reverse logistics, and supplier collaboration. Interviewee 4, 5, 13, 14 focused on resource efficiency and consumer education. Interviewee 6 noted resource optimization and client education. Interviewee 11 & 12 emphasized product design, reverse logistics, supplier collaboration, and technology integration. These insights collectively underscored sustainability, collaboration, and technology integration as vital components in a successful circular supply chain strategy.

Various industry experts emphasize that sustainability plays a crucial role in attracting customers and investors. It aligns with ethical consumer expectations, builds brand loyalty, and provides a competitive edge. Additionally, investors recognize its significance in reducing risks and ensuring long-term business viability. These insights underscore sustainability's fundamental importance across different sectors. Balancing sustainability and resilience in a circular supply chain, as recommended by Interviewee 1, is intricate. Achieving this balance involves diversifying suppliers, using technology for disruption prediction, and transparent communication for maintaining both sustainability and resilience.

Theme 1: Evaluating Business Performance	Theme 2: Motivators	Theme 3: Challenges	Theme 4: Environmental Concern	Theme 5: Business Strategy	Theme 6: Business Value Creation
<ul style="list-style-type: none">• Efficiency• Resource optimization• Market competitiveness• Profitability• Competitive pricing• Predictive Maintenance	<ul style="list-style-type: none">• Sustainability• Cost savings• Revenue generation• Business opportunities• Company image• Investor interest• Employee appeal• Consumer appeal• Responsible resource management• Ethical expectations• Resource-constrained world• Corporate social responsibility• Forward-thinking• Growth• Regulatory compliance	<ul style="list-style-type: none">• Resource consumption• Redundancy• Business needs• Disruptions• Contingency plans• Complexity• Adaptation• Policy• Stakeholder expectations• Infrastructure• Risk management• Reverse logistics	<ul style="list-style-type: none">• Environmental consciousness• Environmental regulations• Sustainable materials• Consumer education• Recyclable materials• Cleaner production• Renewable energy• ESG (Environmental, Social, and Governance)	<ul style="list-style-type: none">• Supply chain management• Transparency• Collaboration• Activism• Business strategy: Consumer Education• Business strategy: Retaining customers• Business strategy: Attracting investors• Business strategy: Retaining investors• Business strategy: Long-term loyalty• Business strategy: Cost containment• Business strategy: Eco-conscious	<ul style="list-style-type: none">• Recycling• Reuse• Refurbishing• Innovation: Technological integration• Advanced materials• Automation• Artificial intelligence• Blockchain• IoT• Traceability• 3D printing• Brand differentiation• Resilience• Balance• Waste reduction• Data analytics• Communication

Figure 1: Thematic Map of the Main Themes and Codes

Emerging trends and technologies are poised to reshape circular supply chains. Consumer goods will benefit from digital storytelling, sustainable packaging, and blockchain traceability. The automotive industry will focus on electric and autonomous vehicles, recycling tech, and circular economy models. Technologies like blockchain, AI, 3D printing, and circular business models will drive sustainability across industries. In food processing, smart packaging, blockchain traceability, and vertical farming contribute to circularity and environmental impact reduction, emphasizing eco-conscious and efficient supply chains.

4.2. Common themes

Figure 1 depicts the thematic map featuring the six key themes and their corresponding codes, encompassing aspects such as Evaluating Business Performance, Motivators, Challenges, Environmental Concern, Business Strategy, and Business Value Creation.

4.2.1. Theme 1: Evaluating Business Performance

Evaluating business performance in circular supply chains is a multifaceted endeavor. *Efficiency* is key, involving waste reduction and resource optimization for sustainability and cost-effectiveness. *Market competitiveness* is crucial, driven by eco-friendly products and consumer demand for responsibility. *Profitability* remains essential for long-term viability. Striking a balance between competitive pricing and sustainability caters to cost-conscious consumers. *Predictive maintenance* extends product lifespans and reinforces circularity. In summary, assessing business performance in circular supply chains involves optimizing efficiency, market competitiveness, profitability, pricing, and predictive maintenance to thrive in a sustainability-focused world.

4.2.2. Theme 2: Motivators

Motivators are key in pushing businesses to adopt circular supply chains, influencing their approach to sustainability and resource management. *Sustainability* is a primary driver, encouraging companies to reduce their environmental impact and minimize waste. *Cost savings* are a strong incentive, enhancing profitability through waste reduction and efficient resource use. *New revenue streams* arise from remanufacturing, recycling, and sustainable product design. Circular supply chains foster innovation and open up business opportunities. They also boost a company's image and reputation, attracting investors and appealing to employees. *Consumer preference* for eco-friendly products and responsible resource management drives business decisions. *Corporate social responsibility* and regulatory compliance further support the move towards sustainable and circular practices, uniting economic success with environmental responsibility.

4.2.3. Theme 3: Challenges

Circular supply chains offer numerous benefits but come with challenges. *Resource consumption* can increase due to recycling and redundancy. Adapting to circular practices while meeting market demands is a challenge. *Disruptions* can impact sustainability and profitability, requiring effective contingency plans. *Regulatory compliance* and *stakeholder expectations* are ongoing challenges. *Infrastructure gaps* can hinder circularity. *Risk management and efficient reverse logistics* are vital. Overcoming these challenges is essential for sustainable, efficient, and resilient supply chains in a resource-constrained world, allowing businesses to fully embrace circularity's benefits.

4.2.4. Theme 4: Environmental Concern

Environmental concern is central to circular supply chains, driving eco-conscious business strategies. *Environmental consciousness* inspires eco-friendly practices and sustainable material use, promoting resource conservation. Regulations enforce environmental standards and emission reduction. *Consumer education* fosters eco-conscious choices. *Recyclable materials* reduce waste, and cleaner production methods minimize pollution. *Renewable energy* supports sustainability. ESG considerations reflect growing environmental responsibility in corporate strategies. Theme 4 emphasizes how these elements shape more eco-conscious and sustainable business practices, uniting economic success and environmental well-being.

4.2.5. Theme 5: Business Strategy

In the realm of circular supply chains, a multifaceted business strategy is essential. Supply chain management, transparency, collaboration, and activism are core strategies. *Consumer education* cultivates brand loyalty, while retaining both customers and investors is a central goal. *Attracting investors* is equally significant, and long-term loyalty underpins stability and growth. *Cost containment* is critical, ensuring a balance between sustainability and profitability. These strategies collectively enable businesses to navigate the complex landscape of sustainability and resource conservation while promoting eco-conscious and sustainable practices.

4.2.6. Theme 6: Business Value Creation

Business value creation in circular supply chains is essential, fostering sustainability and resource conservation. Recycling and reuse reduce waste and environmental impact. *Technological innovation, traceability, and brand differentiation drive value*. *Resilience* safeguards supply chains, and balance between sustainability and profitability is key. Waste reduction through data analytics and communication adds value while minimizing environmental impact. Theme 6 emphasizes a sustainable, resource-efficient approach where economic success and environmental responsibility harmoniously coexist.

5. Discussions

This section unpacks the implications of the empirical findings, highlighting the holistic operations management approach as an enabler of Circular Supply Chain Resilience. The paper engages with the synergy between sustainability, circularity, and resilience.

5.1. General Propositions

This study delves into an exhaustive discussion on six pivotal propositions that underscore the significance and intricate dynamics of Circular Supply Chains (CSCs) within the contemporary landscape of sustainable and resilient business operations. The propositions illuminated herein meticulously unravel the indispensable facets of CSCs, spanning from the challenges they confront to the motivations underpinning their adoption, the strategies they employ, and the technologies that empower their sustainability.

Proposition 1: "Assessing circularity performance is pivotal for achieving Circular Supply Chain Resilience."

Circular Supply Chain Resilience (CSCR) embodies a strategic paradigm that not only champions sustainability but also endows supply chains with the fortitude to weather disruptions. To navigate this labyrinth, it is imperative to subject the entire supply chain to an exhaustive evaluation of its circularity performance. This comprehensive assessment encompasses scrutinizing the effectiveness of resource utilization, the curbing of wastage, and the overall environmental footprint engendered by supply chain operations. Through this continuous evaluation and optimization of circularity, organizations can exhibit a heightened capacity to adapt to flux, diminish vulnerabilities, and invigorate their overall resilience.

Proposition 2: "The motivation for embracing circular supply chains is driven by a combination of sustainability goals, cost savings, and revenue generation, aligning with environmental regulations and ethical expectations."

The impetus propelling the adoption of circular supply chains is indeed multifaceted. Sustainability goals, cost efficiency, and the generation of revenue are the triad of driving forces at the heart of this transformative endeavor. The circularity paradigm not only mitigates waste and the depletion of resources but also aligns with environmental regulations and ethical norms. Enterprises, by embracing circularity as an integral aspect of their core operations, stand to reap the rewards of favorable public perception, regulatory compliance, and substantial, enduring cost savings.

Proposition 3: "Challenges in circular supply chains, including resource consumption, disruptions, and stakeholder expectations, can be effectively managed through strategic adaptation, technology integration, and contingency planning."

The precincts of circular supply chains are beset with a panoply of challenges, ranging from the specter of resource scarcity to the tumultuous landscape of disruptions and the ever-evolving tapestry of stakeholder expectations. Nonetheless, these challenges can be assiduously addressed through a tripartite approach comprising strategic adaptability, judicious integration of technology, and the formulation of robust contingency plans. Enterprises must exhibit a predilection for agility and innovation, leveraging technology to optimize processes and constructing contingency blueprints to mitigate risks and disruptions. The effective stewardship of risk and the nurturing of resilience are quintessential in the long-term viability of CSCs.

Proposition 4: "Environmental concern profoundly shapes business strategies in circular supply chains, emphasizing cleaner production, sustainable materials, and consumer education."

The weighty influence of environmental concerns profoundly moulds the strategic blueprints of businesses operating within the realm of circular supply chains. These enterprises must prioritize the adoption of cleaner production methodologies, the utilization of sustainable materials, and the dissemination of consumer education. By accommodating these environmental imperatives, organizations can cement their reputation, adhere to regulatory mandates, and substantially truncate their ecological footprint. This is not merely an option; it is an imperative for protracting sustainability and success.

Proposition 5: "Business strategies in circular supply chains are pivotal in creating long-term customer and investor loyalty, achieving cost containment, and reducing waste while maintaining an eco-conscious focus."

The bedrock of circular supply chains lies in the efficacy of their business strategies. These strategies, when adroitly formulated and executed, engender abiding loyalty among customers and investors by demonstrating an unwavering commitment to sustainability. In parallel, they accomplish cost containment through enhanced resource efficiency and a diminishment of waste. Hence, businesses can seamlessly harmonize their economic and environmental objectives, reinforcing their eco-conscious ethos as they traverse the path to success.

Proposition 6: "In circular supply chains, the integration of advanced technologies and innovative practices, including recycling and refurbishment, fosters enduring business value."

The seamless amalgamation of cutting-edge technologies and inventive practices such as recycling and refurbishment constitutes the linchpin for fashioning enduring business value within the realm of circular supply chains. Technologies like the Internet of Things (IoT), Artificial Intelligence (AI), and blockchain can be harnessed to optimize the management of resources, while recycling and refurbishment contribute to the circularity of products. These innovations proffer value in terms of cost reduction, the extension of product life cycles, and the judicious utilization of resources.

In sum, the interview data provides empirical support for the general propositions, reinforcing the notion that these propositions are not merely theoretical constructs but underpin the pragmatic strategies and practices of organizations committed to Circular Supply Chain Resilience. This convergence between theory and practice underscores the practicality and relevance of the general propositions within the context of CSCs.

5.2. Operational Framework

In light of the propositions outlined above, this study presents a novel framework, visually represented in Figure 2, which serves as a valuable guide for fortifying circular Supply Chain Resilience and the successful integration of Circular Economy principles into business operations. This framework goes beyond theoretical discussion, offering a tangible roadmap for translating sustainable organizational values and the Circular Economy vision into real-world practices. It represents a dynamic operational system comprised of six closely interconnected components: Business Performance Evaluation, Motivators, Challenges, Environmental Concern, Business Strategy, and Business Value Creation. By encompassing these elements, the framework provides a holistic approach to the complex challenge of transitioning toward circular and sustainable business practices.

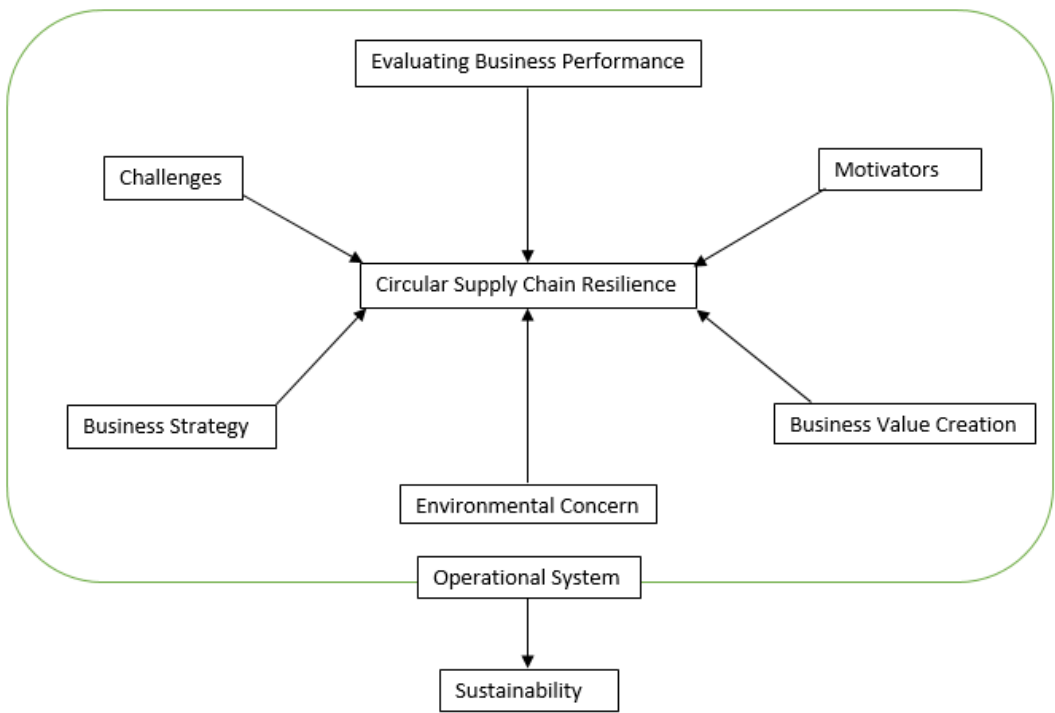


Figure 2: An Operational Framework for Integrated Circular Supply Chain Resilience and Sustainability

The core objective of this framework is to bridge the gap between ideology and execution, demonstrating how the abstract concepts of sustainability and circularity can be practically applied within an organizational context. Business Performance Evaluation allows for a systematic assessment of progress, while Incentives and Obstacles help identify motivators and challenges that shape decision-making. Environmental Considerations ensure that ecological concerns remain at the forefront of strategic planning, while Business Strategy and Business Value Creation align the business model with the principles of Circular Economy, thereby enhancing overall resilience and sustainability. This framework represents a crucial tool for companies seeking to not only envision a more sustainable future but also take concrete steps to realize it.

The framework's multifaceted approach encourages a comprehensive evaluation of the business ecosystem, fostering adaptability and innovation to overcome challenges on the path to circularity. In summary, this framework acts as a compass for organizations, providing direction and structure to drive meaningful change towards sustainability and circularity in Supply Chain Resilience and business operations.

5.3. Practical Implications

Five practical implications can be derived from the findings. First, in the realm of forward thinking, companies must shift their focus from short-term gains to long-term sustainability. This involves planning for the entire lifecycle of products, investing in sustainable materials, and securing reliable sources for these materials. It encourages businesses to embrace a more holistic view of their supply chain operations, where the emphasis is on resource efficiency and minimizing waste through reuse and recycling.

Second, enhancing supply chain transparency is essential for adhering to circular principles. This involves implementing traceability mechanisms and real-time monitoring to ensure compliance with sustainability standards and regulations. Transparency also enables organizations to quickly identify and address issues or deviations, thereby preventing potential disruptions.

Third, consumer education and engagement play a vital role in promoting circular practices. Companies can communicate the importance of recycling, product returns, and responsible disposal to their customers. Reward programs and incentives for consumers who participate in circular activities can further boost engagement and contribute to a more circular system.

Fourth, the adoption of innovative technologies, such as the Internet of Things (IoT) for tracking and efficiency, and blockchain for enhanced transparency, is a key aspect of circular supply chain resilience. These technologies enable real-time data collection and secure record-keeping, making it easier to track product usage and ensure the authenticity and traceability of recycled or refurbished products.

Finally, supplier collaboration is another critical element. Collaborating with suppliers to design products that are easily disassembled and repurposed fosters a more circular approach. Additionally, developing risk mitigation strategies together, such as dual-sourcing, ensures a steady supply of materials, even in the face of disruptions.

Incorporating these aspects into a circular supply chain resilience strategy not only contributes to environmental sustainability but also enhances operational efficiency and adaptability. Businesses that embrace this holistic approach can position themselves for long-term success, engage consumers in sustainable practices, leverage technology for transparency, and build stronger partnerships with suppliers to create a more resilient and eco-friendly supply chain.

6. Conclusion, Limitation, and Future Research

This research paper has made noteworthy contributions to the realm of Circular Supply Chain Resilience (CSCR) and operations management. It has achieved this by means of a multifaceted approach that involves an exploration of how the comprehensive integration of operations management principles can substantially augment the resilience of Circular Supply Chains, substantiated by qualitative empirical data extracted from a series of interviews and subsequent thematic analysis. The resulting research findings have uncovered six fundamental themes, encompassing Evaluating Business Performance, Motivators, Challenges, Environmental Concern, Business Strategy, and Business Value Creation. These themes, in turn, provide the foundational basis for six pivotal propositions, each of which illuminates the pivotal nuances and dynamics intrinsic to Circular Supply Chains.

Furthermore, the study introduces an innovative integrated framework designed to bolster the resilience of Circular Supply Chains, thereby providing a pragmatic means to operationalize the concept of the circular economy (CE). This operational framework intricately accounts for the intricate interplay among critical variables and offers actionable guidance to both industry practitioners and academic researchers in their collective endeavors to propagate the principles of the circular economy throughout supply chain networks.

Despite its contributions, this research has some limitations. Firstly, the study's interviewees represented a diverse array of industry sectors, which, while advantageous for the generalizability of our findings, posed a challenge in terms of the limited sample size. This constraint precluded a comprehensive sector-specific analysis, thus offering opportunities for future research to delve into industry-specific attributes pertaining to the operational framework outlined in this study. Expanding the scope of the research to include a more expansive and varied sample would enhance the generalizability of the findings. Furthermore, the study's focus on specific themes and propositions implies the potential existence of unexplored facets within the domain of Circular Supply Chain Resilience.

Future research in the field of Circular Supply Chain Resilience (CSCR) should focus on cross-cultural comparisons to understand regional variations, employ quantitative analysis to measure the impact of circular practices on performance metrics, conduct longitudinal studies to track the evolution of circular supply chains, explore the adoption and impact of emerging technologies, examine the influence of government policies and regulations, and delve into the dynamics of supply chain networks for enhanced resilience and sustainability. This will contribute to a more comprehensive understanding of CSCR and further the development of sustainable and resilient supply chain practices.

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To Study the Influence of Content Related Factors on Consumer Purchase Decision with Respect to Social Media Platforms as Moderator

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Abstract--- Businesses employ a variety of strategies to connect with their target audience. Influencer marketing is one strategy that leverages Social Media. Influencers such as sports, bloggers, celebrities, and other powerful people with sizable social media followings who can sway an audience are being utilized by brands to promote their products or services. This is known as influencer marketing.

Businesses work very hard to convert potential clients into actual customers. This study intends to investigate one of the many influencer marketing elements linked to content that affect customers' purchasing decisions. It looks for patterns in the way that aspects related to content, such as consistency, high quality, interaction, and ad content, influence consumers' decisions to buy. The purpose of administering a structured questionnaire is to gather sample data from undergraduate, graduate, and faculty members in order to determine whether or not demographic variables such as age, gender, and educational background influence consumers' decisions to buy.

Statistical methods and techniques such as Chi-Square and Regression Analysis will be used to evaluate the acquired data using SPSS software. Thus, this study aids in our comprehension of how each and every content-related feature influences a purchase decision. This study mainly focuses on only the content related factors of influencer marketing. There is a further scope to study other factors of influencer marketing.

Keywords--- Influencer Marketing, Content Related Factors, Purchase Decision, Social Media Platform.

Financial Performance Analysis of Rural Banks in India and their Impact on Indian Economy

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Abstract--- Banks are the financial institutions that perform deposit and lending functions. Among those banks there are few which play a crucial role in agriculture and rural development of India and they are known as regional rural banks (RRB's). The requirement to fulfil the need of credit in rural areas made the government to take an initiative to start RRB's. From the time they came into field they were successful in reaching out to the people and their financial needs in the rural areas and expanding their business. RRB's were specialized in providing cheaper credit to weaker rural section. Later RRB's faced several challenges which eventually resulted in the decline of profits. Though few were running great but some are in losses. So, there is a need to analyse their performance. This study is to find the financial performance of RRB's from past 5 years in India and their impact on the economic growth and the study is based on the secondary collected from the related sources like RBI and NABARD. This study finds and concludes that the RRBs play a very important role in the development of rural areas. The study finds and concludes that financial performance of Regional rural Banks has significantly improved.

Keywords--- Banking, Growth Rate, Key Performance, NABARD, Poverty, RBI, Regional Rural Banks, Rural Development, Rural Economy.

A Study on Identifying Metrics and Developing an Excel Tool for Slow and Fast Learners in Management and Engineering Studies

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Abstract--- This study delves into the intricate dynamics of academic performance among students in the fields of management and engineering. Recognizing the diversity in learning speeds among individuals, the research aims to identify and dissect pertinent metrics distinguishing slow and fast learners. The investigation involves an in-depth analysis of various parameters, encompassing academic progress, comprehension rates, engagement levels, and learning methodologies. The study proposes the development of an Excel-based tool tailored to accommodate the unique learning needs of both slow and fast learners. This tool is designed to facilitate personalized learning experiences by providing adaptable frameworks and resources. Through comprehensive data analysis and student feedback, the tool's effectiveness and usability will be assessed, aiming to foster an inclusive educational environment that caters to diverse learning paces. The research employs a multifaceted approach, incorporating quantitative and qualitative methodologies. Quantitative data will be collected through academic records, performance evaluations, and metrics derived from classroom activities. Qualitative insights will be gleaned from interviews, surveys, and focus group discussions with students, educators, and academic advisors. Ultimately, this study aspires to offer insights that could revolutionize educational practices, fostering an environment where learners of varying paces can thrive. The Excel tool's development intends to provide educators with a practical resource to implement adaptive teaching strategies and optimize learning experiences for all students, irrespective of their individual learning speeds.

Keywords--- Slow and Fast Learners, Management & Engineering Studies, Excel Tools.

An Empirical Study on Impact of Social Media on Changing Life Style of Youth

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Abstract--- In our digital age, the proliferation of social media platforms has dramatically transformed the way individuals, particularly youth, interact with the world. The advent of social media platforms has ushered in a new era of communication, information dissemination, and social interaction. Youth, in particular, have been at the fore front of this digital revolution, embracing social media as an integral part of their daily lives. This study aims to empirically investigate the multifaceted impact of social media on the life styles of youth, recognizing the importance of understanding how these platforms shape their behaviour, perceptions, and choices. Employing a mixed-methods approach, this research explores the psychological, social, and behavioural implications of social media engagement among youth.

This study involves a diverse sample of 180 young individuals, ranging from ages 16 to 30, participated in this study. Quantitative data was collected through surveys that explored the frequency and nature of social media usage, as well as its perceived effects on various aspects of their lives. Qualitative data was gathered through in-depth interviews and focus group discussions to delve into the nuanced experiences and perceptions of youth concerning social media. The findings help us in understanding these impacts are crucial for parents, educators, and policymakers seeking to navigate the challenges posed by social media in the lives of youth. By acknowledging the multifaceted effects of social media and promoting digital literacy and responsible usage, we can strive to harness its potential for positive change while mitigating its adverse consequences in shaping the life styles of the youth in the digital age. This empirical study underscores the transformative impact of social media on the lifestyle of today's youth. It illuminates the complex interplay of social media with various aspects of life, from social interactions to mental health, physical activity, academic performance, and consumer behaviour. While social media brings opportunities for connection and self-expression, it also raises concerns about its potential negative effects on well-being. Recognizing these dynamics is essential for individuals, parents, educators, policymakers, and society as a whole to navigate the evolving landscape of youth and technology effectively.

Keywords--- Social Media, Life Style, Digital Age, Technology, Communication, Trends.

Awareness of Health Insurance among Rural population: A Case Study

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Abstract--- Health insurance is a type of insurance that provides coverage for financial losses resulting from a permanent disability or poor health that prevents an individual from earning a living." In most other nations, health insurance is widely accepted, but in India, it is still a relatively unexplored industry. Merely 1.1 billion individuals in India, or less than 15% of the total population, possess health insurance coverage. 31% and 47%, respectively, of hospital admissions in India's urban and rural areas are funded by loans or asset sales, according to WHO data. Furthermore, according to the data, 3.2% of Indians live in poverty as a result of excessive medical costs, and 70% of Indians spend their whole income on healthcare.

The current study was conducted in Khila Warangal, a rural area and popular historical tourist destination in Telangana state. A sample size of 180 respondents was planned from the general population after the respondents were selected using random sampling.

The present paper describes health care infrastructure and health insurance in India. The study found that six major factors played crucial role in subscription of health insurance policy. The ranking of influencing factors based on their rating average respectively first 'Risk coverage against future illness, old age etc.' (3.64) second 'avail good quality medical treatment'(3.61) third 'Tax planning measures'(3.48) fourth 'existing illness' (3.20) fifth 'employer contribution' (2.76) and last factor is 'travelling abroad' (2.51).

The study also concluded that out of 76 non health insurance policy holders majority of the respondents are strongly agree with the statement 'low salary'(32) is reason for not taken health insurance policy.

Keywords--- Health Insurance, IRDA, Risk Coverage, Avail Good Quality Medical Treatment, Tax Planning Measures and Low Salary.

A Review on Road Infrastructure and its Economic Growth in India

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Abstract--- "Road infrastructure in India has been an important driver of economic development and social inclusion. In the recent three decades, the emphasis of various governments has been on improving the road infrastructure in India. Increase of total road-length and improvement of road-quality are the two pillars of improved road infrastructure. Adoption of various organisational and technological innovations have helped India in improving the road infrastructure. India now has the second-longest road length in the world after USA. India boasts the second-largest road network globally, covering a vast expanse of 5.89 million kilometres. With road transportation serving as a vital artery for the movement of goods and passengers, it plays a pivotal role in the country's economic development. Over the years, India has witnessed significant growth in road mobility, supported by improved connectivity between cities, towns, and villages."

Keywords--- Road Infrastructure, Economic Development, Highway Network.

An Analysis of Employee Attrition's Causes and Effects

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Abstract--- The most precious resource in an organization is its workforce. They are the ones who give the company value in both quantity and quality. Consequently, it is essential to keep a steady and capable staff, which throughout the years has grown challenging for employers, and as a result higher organizational attrition. The goal of this research study is to investigate attrition from a variety of angles. It investigates how the same may affect both the employer and the employee. In light of this, numerous peculiar causes of attrition have been discussed. There has also been discussion of the benefits of attrition. In the paper, the role of leadership styles in reducing attrition has been examined. Additionally, the corrective actions have been covered in this article.

Keywords--- Productivity, Retention, Leadership, Management, Employee, Employer, and Organization.

A Study on Work Flexibility for Women in the Start-Up's

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Abstract--- The role of women has been increasing since the advent of 21st century the government is also encouraging women entrepreneurs by offering many schemes like mahila coir yojana, Udyam shakti portal etc. with their contribution of women entrepreneurs raised to 14% among the total entrepreneurs in the country gender equality is a crucial factor that contributed for the progress of women in all arenas. The women are compromising on their personal and their family life's to achieve success in the area of entrepreneurship this paper address the flexibility offered by the entrepreneurship to the women to balance their different roles the study has been conducted on a sample size of 130 women entrepreneurs to identify their perception regarding the flexibility offered by entrepreneurship. This data was collected using questionnaire, the statistical tools like mean, t-test were used on the collected data to derive the conclusion.

Keywords--- Work Life Balance, Women Entrepreneurs, Schemes.

Influencing Economic Growth: The Role of Stock Market Performance

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Abstract--- The stock market is where investors connect to buy and sell investments — most commonly, stocks, which are shares of ownership in a public company. Stock Market is the combination of buyers and sellers of stocks (also called shares), which represent ownership claims on businesses. The main aim of this study is to investigate how the stock market's performance is connected to economic growth, using both theory and real-world evidence. Researchers have different opinions about how important stock markets are in the process of economic growth. They believe that stock markets have several roles, such as improving the ease of buying and selling, gathering and moving money, monitoring managers, and influencing how companies are managed. They also help spread risk management and facilitate investment. Recent theoretical work suggests that stock markets are very important for economic growth. The data for this study are collected from secondary sources like high impact journals, books, publications and online sources. The findings of this study indicate a positive relationship between well-functioning stock markets and economic growth, both in the short term and the long term. Additionally, there is evidence of how stock market development indirectly affects investment, contributing to economic growth. In essence, stock markets are seen as a tool that helps boost economic growth. The results support the ideas from both theoretical and real-world research.

Keywords--- Stock Market Performance, Economic Growth, Developed and Developing Countries, Shares.

An Empirical Study on Exploring the Relationship between Instrumental Risk, Financial Risk Tolerance, and Investor Behavior

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Abstract--- The purpose of this study is to delve into the often-overlooked psychological influence known as "instrumental risk" on the financial risk-taking behaviour of individual investors. Furthermore, the study explores the potential mediating role of financial risk tolerance in the relationship between instrumental risk and financial risk-taking behaviour. A survey method was employed to collect responses from a sample of 100 valid participants, carefully chosen through purposive sampling. Data analysis was conducted using the SPSS software package, and to examine the mediating relationship, the SOBEL test was administered. The findings revealed a significant and positive connection between instrumental risk and financial risk tolerance. Moreover, there was a strong association between financial risk tolerance and financial risk-taking behaviour. Therefore, investment agencies and stock brokerage firms should prioritize the consideration of psychological factors to enhance individual performance and help investors avoid financial mismanagement. This approach can lead to the development of mutually beneficial, long-term relationships with their clients.

Keywords--- Instrumental Risk, Financial Risk, Investor Behaviour.

A Study on Impact of Digitalization on MSME's with Reference to Visakhapatnam District

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Abstract--- The digitalization of Micro, Small, and Medium Enterprises (MSMEs) represents a pivotal paradigm shift in contemporary business environments. This study explores the multifaceted impact of digitalization on MSMEs, aiming to unravel the implications of technological integration on various aspects of their operations. The recent challenges faced by the Micro, Small, and Medium Enterprises (MSME) sector, such as the transition to the Goods and Services Tax (GST) regime and increased competition, have led to a deceleration in its growth rate. These developments, coupled with issues like a lack of technological know-how, supply chain inefficiencies, and difficulties in accessing funds, indicate a potential deterioration in conditions for these enterprises. To counter these challenges, MSMEs need to proactively enhance their business prospects, and one effective measure is the adoption of digital technology-enabled platforms. Recognizing the pivotal role of digital transformation, the government has initiated the "Digital MSME" scheme, signalling a commitment to supporting the sector's integration of digital technologies. Simultaneously, various stakeholders, including banking institutions, have responded to the need for digital upskilling by providing training programs aimed at equipping MSMEs with the necessary tools to navigate the hurdles associated with digital transformation.

Keywords--- Micro, Small, Medium Enterprises, Digital MSME, Digital Transformation.

A Study on Assessing the Impact of Store Environment on Hedonic Value and Customer Retention – Empirical Evidence from Food and Grocery Retailing Sector

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Abstract--- The majority of research on how appealing and pleasant retail spaces are has concentrated on the vital role those ambient qualities, or store atmosphere, play in influencing consumer happiness and store preference. The environmental cues that affect consumers' enjoyment in various purchasing situations, however, are not well understood. Accordingly, the current study seeks to address the following queries: "Are the store atmospheric variables equally relevant in hedonic shopping?"; Moreover, "Does the type of shopping affect the influence of store environment on customer satisfaction?" In order to test the concerned research problem, the researcher collected 575 samples from the different food and grocery retailing stores. The findings show that shoppers' perceptions of store environments vary. More specifically, research indicates that in hedonistic retail contexts, interior ambient and merchandise layout are the primary atmospheric cues that influence customer pleasure. It's interesting to note that consumer pleasure is unaffected by store crowding. Retailers could use this study's improved understanding of the particular shop factors that affect consumer satisfaction to set themselves apart from rivals. However, it is believed that this research paper can address the impact of store environment over the customer retention through the hedonic value of their shopping in food and grocery retailing

Keywords--- Food and Grocery Retailing, Store Environment, Hedonic Value, Customer Retention.

Fintech's Impact on Future Banking

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Abstract--- This study aims to investigate the effects of FinTech businesses in relation to the conventional banking sector. FinTech is a digital financial solution that helps people and small businesses meet their banking demands. FinTech companies are forecast to grow at a quicker rate in nations where digital technology is available, but they should be able to offer the same banking products as current banks. Fintech has established itself in the innovation economy, and its rapid growth has made it harder and harder to distinguish fact from fiction. The trade media has made a lot of buzzwords out of chatbots and artificial intelligence, blockchain and cryptocurrency assets and a host of other symptoms of digitization over the past few years. The findings of the statistical research demonstrate that there is no statistically significant relationship between financial technology and the profitability of the banking industry. Consumers will typically benefit greatly from the FinTech industry's ongoing transformation of the financial services delivery model, not just in terms of ease and user experience but also in terms of cost savings and accessibility. However, banks are understanding that they must adapt to survive in the changing environment.

Keywords--- Banks, Banking, Fintech, Finance, Digital Technology, Block Chain, Cryptocurrency, Economy.

A Study on the Problems Faced by Women Entrepreneurs in Mizoram

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Abstract--- In this modern world, every government face economic problem leading to shortage in the creation of job opportunities for younger generation. In this situation, every eye focus and depends on business activities to create and improve the economic condition of the country. This is the reason why entrepreneurs are so important in the development of the economy although they face many problems and challenges. They are an important source and means for the development of the country especially the rural areas. They also balance the rate of people shifting from rural areas to urban areas, thereby decreasing one of the major problems called over-population in metropolitan areas. However, it is necessary to keep in mind that entrepreneurship is not only carried out by men. There are large number of female entrepreneurs worldwide and this number is likely to increase steeply. From the various studies done on women entrepreneurs, it is found that the situation of women entrepreneurs is not comparable with that of men entrepreneurs. This is the reason why this study is conducted to find out the actual difficulties faced by these entrepreneurs in the state of Mizoram.

The primary data were collected through structured questionnaire and interview of the entrepreneurs. In case of secondary method, data were collected from journals, books, government publications and government records. For analysing the collected data, Statistical tools like Correlation, Reliability Test, Cronbach's alpha, KMO and Barlett's test of Sphericity as well as Factor Analysis were used.

The analysis of data indicates that there are ten (10) different problems faced by women entrepreneurs in the state of Mizoram. These different problems are then classified into three components or factors such as Financial Problem, Production and Marketing Problem and General Problem. It is surprising to know that the major problems faced by women entrepreneurs is the Production and Marketing Problem followed by General Problem and finally the Financial Problem.

Keywords--- Problem, Women, Entrepreneurship, Women Entrepreneurs, Mizoram.

A Study of Role and Strategies of Talent Management in HRM Process

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Abstract--- The main aim of the paper is to establish the relationship between talent management and organizational performance as well as to determine the talent assessment system in organizations. Talent Management focuses on certain specific, critical day-to-day activities overseen by the HR team. It means planning, creating planned development opportunities, performance management, development and evaluation, succession planning, recruitment, and so on, talent, as a resource, is rare. Thus, hunting requires the best people and internal resources need development for the better future. The objectives of this study are to learn about talents and organizational concepts, to rely on organizational policy as well as to create a talent-based organizational culture, ensuring that talent persists in the organization. Talent management is done as an essential strategy and method for an organization to identify, develop, attract and retain valuable skilled workers.

Keywords--- Talent Management, Human Resource, Recruitment.

HR Analytics and Data Driven Decision Making

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Abstract--- Analytics for human resources (HR) have become a vital tool for businesses to use while managing their employees and making decisions. The goal of this research paper is to present a thorough analysis of HR analytics, emphasizing its significance, approaches, advantages, and drawbacks relating to IT sector. The study looks at how HR analytics are used in a variety of contexts, including talent development, retention, performance management, employee engagement, and recruiting and selection in IT sector. It also looks at the important metrics, data sources, and analytical methods that are employed in HR analytics, such as prescriptive, predictive, and descriptive analytics. The study also addresses the possible effects of HR analytics on overall company outcomes, employee happiness, and organizational performance. Finally, it discusses privacy issues and ethical issues related to the use of HR analytics in IT sector.

The study's conclusions highlight the value of HR analytics in supporting data-driven HR functions within businesses and enabling evidence-based decision making.

Keywords--- Performance, Retention, Hiring and Selection of Employees, and HR Analytics.

Mergers and Acquisition of Indian Banking

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Abstract--- This research paper explores the intricacies of mergers and acquisitions (M&A) within the Indian banking sector, shedding light on the pre-merger, acquisition, and post-merger phases. It delves into the emerging issues that shape the landscape of M&A transactions in this sector, examining the structural aspects of bank mergers and acquisitions. The study investigates the diverse impacts of such transactions on stakeholders and the financial ecosystem, considering both positive and negative outcomes. Additionally, it categorizes and analyses various types of mergers and acquisitions, identifying their distinctive characteristics and implications. The challenges inherent in executing successful M&A deals in the Indian banking context are scrutinized, providing insights into the complexities faced by involved entities. Furthermore, the research discusses the advantages and disadvantages associated with mergers and acquisitions, offering a comprehensive understanding of their implications on the Indian banking sector's dynamics and stability.

Keywords--- Mergers and Acquisitions, Banking System, Phases, Structural Aspects, Banking Dynamics.

India's Digital Currency Prospects: A Path Forward

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Abstract--- The advent of information and communication technologies has opened up a world of possibilities. The area of business and finance that has profited the most from these recent developments. The breadth and velocity of technological advancement, consumer attitudes, and widespread adoption suggest that these innovations and disruptions will completely change the banking and finance industries as we know it, presenting financial institutions with both opportunities and challenges. Given the scale and agility needed for the digital age, systems that have historically been used for savings and investments are not well suited. Financial institutions are adapting to these changes by launching new digitalization and innovation projects and utilizing cloud computing, analytics, and other cutting-edge solutions to meet the needs of their clients. India is a nation with a sizable economy, a despotic government, and respectable economic growth despite a convoluted legal framework full of arbitrary rules and regulations. With the aid of technologies that are becoming more efficient and focused on the needs of the customer, there is a great deal of potential to change the lending and investment patterns amidst all the growth. Thus, blockchain-based technologies aim to stimulate innovation in India's diverse industries. Cryptocurrencies are the main component of the blockchain era. In this field, they are considered to be the most disruptive technologies. This essay tries to extrapolate from the global experience India's digital currency future.

Keywords--- Blockchain, Cryptography, India, RBI, Digital Currency.

The Impact of Recessions on IT Employment: A Longitudinal Analysis

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Abstract--- The Indian IT industry generates billions of dollars a year, making it a major contributor to the world economy. Nonetheless, it is impacted by worldwide economic downturns much like any other industry. The majority of the global IT market is made up of Indian IT companies, and the state of the global economy has a direct impact on the expansion of the Indian IT sector. The US and European markets provide for the lion's share of income for Indian IT companies, and the health of the consumer and banking sectors has a huge impact on the growth of the IT sector.

Recessions in the context of economics are defined as long-term, broad slowdowns in economic activity, also known as business cycle contractions. The expected expenses for the business's future growth include the IT projects. Several US- and UK-based businesses had reduced their IT spending at this time. The Indian IT industry was significantly impacted by this. IT firms have implemented a number of measures to manage their outflow. The objective of this research paper is to analyse the impact of a recession on the Information Technology (IT) sector. This will involve examining various aspects of the sector including Economic Performance, Market Trends, Technological Innovation, Organizational Strategies, Policy Implications.

Keywords--- Financial Environment, Gross Domestic Product (GDP), IT Sector, Recession.

Customer Perceptions Towards Usage of Netflix

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Abstract--- Netflix is very popular these days all over the world. Therefore, this in-depth research report aims to identify the determinants of Netflix usage intention based on technology implementation patterns and customer perceptions of Netflix usage. As the number of internet users in India, especially mobile internet users, is increasing, consumption habits and entertainment consumption behaviour are changing. The popularity of the Internet has increased the use and popularity of video-on-demand (SVOD) streaming services worldwide. Netflix is one of the world's largest SVOD service providers with a customer subscription system. Due to stiff competition in the SVOD industry, Netflix has experienced a significant drop in subscribers globally. Therefore, the goal of the researcher was to determine the consumer decision-making process for continuing to use Netflix in terms of consumer attitude patterns towards technology adoption and customer benefits compared to with other SVOD service providers. predict influencing factors.

Keywords--- Technology Acceptance Model (TAM), Brand Loyalty, Confidence in Willingness to Pay, Netflix.

Training and Selection in HRM

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Abstract--- The collective body of research summaries provided delves deeply into the realm of Human Resource Management (HRM), specifically exploring how recruitment, selection, training, and related HR practices impact employee performance across diverse industries and geographical locations. The first cluster of studies concentrates on the broader impact of HRM practices on organizational performance. Notably, research examines government institutions amid changing economic landscapes. It explores how these entities strive to enhance performance by minimizing costs, innovating products and processes, and improving quality to stay competitive in a globalized market. Geographical context becomes crucial in other studies, like the examination of Japanese-owned multinational companies in Malaysia. This research explores perceptions of key HRM functions and their contributions to organizational effectiveness, emphasizing a mixed-method approach involving case studies and surveys. Several studies focus on recruitment practices within specific industries, such as construction. Research conducted in Rwanda identifies a lack of empirical evidence supporting recruitment and selection practices in the construction sector, highlighting the need for more research in this area. Studies also tackle challenges faced in recruitment practices, particularly in developing countries like Tanzania. They identify constraints affecting recruitment in building contractors and propose solutions through mixed-method approaches utilizing questionnaires and interviews. The summaries collectively underline the multifaceted nature of HRM and its pivotal role in organizational success. They highlight the significance of aligning HR practices with organizational goals, emphasizing the need for tailored approaches in different industries and regions. Moreover, the studies underscore the importance of continuous improvement in HR practices, ensuring they effectively support employee performance and organizational objectives.

Keywords--- Human Resource Management (HRM), Recruitment, Organizational Performance, Geographical Context, Employee Performance.

Impact of Learning and Development among Employees in A Hospital: A Review

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Abstract--- This paper provides a review on impact of learning and development on employees in hospitals. We review the literature focusing on the benefits of training and development. Employee training is often overlooked in healthcare, but it can improve worker performance and organizational commitment. Despite occasional training, only a small percentage of employees believe it has had a significant impact on their personal lives and the company's success. A well-planned and well-designed training program results in a content and motivated workforce. To create a successful L&D program, identify needs, establish objectives, select efficient approaches, make it interactive, measure success, and constantly improve. Learning and development is essential for maintaining competent, knowledgeable, and adaptable staff in the healthcare sector. It includes study hall preparing, web-based preparing, hands-on preparing, gatherings, training, re-enactment, and pretend.

Keywords--- Learning, Development, Productivity, Hospitals, On-Job-Training.

An Analysis of Employee Attrition's Causes and Effects

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Abstract--- The most precious resource in an organization is its workforce. They are the ones who give the company value in both quantity and quality. Consequently, it is essential to keep a steady and capable staff, which throughout the years has grown challenging for employers, and as a result higher organizational attrition. The goal of this research study is to investigate attrition from a variety of angles. It investigates how the same may affect both the employer and the employee. In light of this, numerous peculiar causes of attrition have been discussed. There has also been discussion of the benefits of attrition. In the paper, the role of leadership styles in reducing attrition has been examined. Additionally, the corrective actions have been covered in this article.

Keywords--- Productivity, Retention, Leadership, Management, Employee, Employer, and Organization.

Analysing the Impact of Digital Transformation on Business Process: An Empirical Analysis

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Abstract--- This research paper aims to explore and analyse the impact of digital transformation on business process, Business process is a systematic business approach to improve their organisation, Digital transformation on business helps to reach their business goals earlier because it helps to identify the actual work they had in the organisation and complete that work in a better form. The rapid growth of digital technologies helps to improve operational efficiency, customer experiences and also helps to extend the business. Most of the companies are successfully undergo digital transformation in their business processes to compete with competitors and to satisfy customers. COVID 19 also plays a major role transformation of traditional methods to digital method, people are adopted the new technology in that time which make the companies need to change technologies in their business.

Furthermore, this paper argues the benefits of digital transformation in business and how the impact of COVID 19 pandemic in the digital transformation of business process.

Keywords: Systematic Business Approach, Operational Efficiency.

Purchasing Behaviour Influencing Consumer Decision Making

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Abstract--- These abstract focuses on the importance of consumer research and analysing buying behaviours in the business world. The text highlights the various dimensions that influence consumer choices, including financial, psychological, and sociological factors. The research problem addressed is the need to understand consumer motives and behaviours in order to make purchase decisions. The aim of the study is to investigate the impact of factors such as age, pricing, brand image, and online consumer reviews on buying behaviours. The methodology involves a qualitative analysis of consumer behaviour's, with a focus on demographic factors such as age, and their influence on brand image and pricing. The context of the study is the current retail environment, where consumers are overwhelmed with numerous brands and products. The findings suggest that factors such as pricing and brand image significantly impact consumer buying behaviours. The implications of the study highlight the importance for enterprises to manage their brands in order to fulfil the desires and wishes of their customers.

Keywords--- Consumer Behaviour's, Buying Decisions, Brand Image, Pricing, Online Consumer Reviews, Demographic Factors.

Revolution in Photography Industry through Smart Phones

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Abstract--- The paper deals with the revolutionary changes in the photography industry. These smart phones made a significant change as a replacement for the professional cameras. These smart phones have been first started as camera phones which had the camera quality as a pocket camera. But now they have become the perfect replacement for a professional DSLR camera. These smart phones have become more helpful by choosing the types of filters. The main objective this research is to Understand the way photographers are using the smart phones and also the evolution in Photography. The paper deals with the secondary data and the tools are the research papers and the analysis is the percentile method analysis. Today we will see the different platforms and also the Review of literature based on the articles and interviews of famous photographers and also some Research papers. The outcomes will explain the changes in photography industry by mobiles and makes us understand the smart phones as a professional camera.

Keywords--- Effects, Films, Filters, Polaroid Camera, Professional Photographers, Wedding Photographers.

Marketing Strategies of ITC FMCG Products

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Abstract--- This research article delves into the marketing strategies employed by ITC Limited in the fast-moving consumer goods (FMCG). ITC, a diversified conglomerate, has established a significant presence in these markets, showcasing its commitment to innovation, sustainability, and consumer satisfaction. This article explores the key elements of ITC's marketing strategies, including product development, brand positioning, distribution channels, and promotional activities.

Keywords--- FMCG, Marketing Strategies, ITC Limited.

