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**The Role of Artificial Intelligence in Shaping Business Strategies:
Trends, Challenges and Implications**

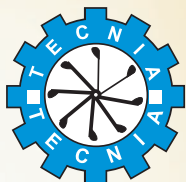
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Artificial Intelligence in HRM: Trends and Prospects

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Determinants of Green Product Purchase Decision: An Empirical Study using Smart PLS-SEM

Preeti Jindal & Nidhi



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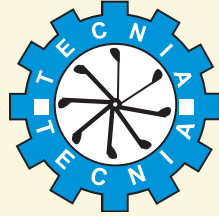


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From The Editor's Desk

I take this opportunity to thank all contributors and readers for making *Tecnia Journal of Management Studies* an astounding success. The interest of authors in sending their research-based articles for publication and overwhelming response received from the readers is duly acknowledged. I owe my heartfelt gratitude to all the management institutes for sending us their journals on mutual exchange basis, and their support to serve you better.

We are happy to launch the Thirty Six issues of our academic journal. The present issue incorporates the following articles:

- ❖ Is Social Media the New Village for New Mothers?
- ❖ The Contribution of the Selected Scheduled Indian Commercial Banks in Economic Development
- ❖ Monetary Approach to Exchange Rate Determination During Managed Float in India: An ARDL Framework
- ❖ Striking A Balance: Gender Equality and The Concerns of Boys in Progressive Societies
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I am sure the issue will generate immense interest among corporate members, policy-makers, academicians and students.

Editor

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IS SOCIAL MEDIA THE NEW VILLAGE FOR NEW MOTHERS?

Ngaimuankim Tonsing*

Kavita Singh**

Soma Dey***

Abstract: It is said that “it takes a village to raise a child,” but in the new millennium with shrinking family sizes and community space, how do mothers access ‘the village’ or the social support that is so important for the wellbeing of both the mother and the child? This paper discusses why, in the absence of a ‘physical village’, some mothers are considering their online social community as their village --- a platform to help and guide each other and to share information, a safe space to share and vent, a social support system. We use exploratory research and conduct individual interviews to understand the nature of information and advice sought in such ‘mommy groups’ and benefits and drawbacks of using the Social Media. We find that mothers use Social Media to gather information, for social and emotional support, and as an outlet to discuss the challenges and the insecurities.

Key Words: Social Media, Mommy group, Social Need, Social Support, Motherhood

1. Introduction

A new mother posted on her Instagram page a picture of her holding her new baby with the caption, “I keep hearing it takes a village to raise a child, do they just show up or is there a number to call?” Despite the humor, one cannot miss the painful truth behind it. In our Indian society, giving birth is considered a duty of a married woman along with the responsibility of taking care of a child. The arrival of a new baby is a time when the mother experiences extreme emotions. However, for a new mother, it is also a time when she is confronted with many issues related to such as adjusting to her new role as a mother, child’s health, well-being and childcare, breastfeeding or the inability to breastfeed, post-childbirth recovery, her own mental health, the big decision whether to go back to work and the transitioning back to work (Archer & Kao, 2018); and most common in India, expectation from in-laws and society. These new experiences can be daunting and overwhelming for a new mother and the Covid-19 pandemic has isolated new mothers

more than ever. In Indian society, women after a certain age are expected to get married and are expected to conceive a child soon. The opinion and wishes of the woman regarding their own fertility decision are rarely taken into account. A term has been coined which defines such expectations called ‘Mommy myth,’ which implies that (a) a woman is considered incomplete without having children; (b) women are the best child caregivers, and (c) a ‘good’ mother should dedicate her entire life - physically, emotionally, and psychologically to their children (Prikkhidko & Swank, 2018, p.2). This creates unrealistic expectations from mothers, resulting in increased stress for a new mother, along with feelings of incompetence, guilt, and shame (Prikkhidko & Swank, 2018). Social Media combined with technology in the form of smartphones, iPad, tablets, etc. is acknowledged as a lifetime that ‘helps moms get through the day’ (Gibson & Hanson, 2013). We plan to study the role social media have played in the life of new mothers in India. It plans to study why new mothers are turning to social media for

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information and advice, a safe space to express themselves. It further analyzes what is the kind of information and support they are seeking and if social media is indeed the support system a new mother desperately seeks, to create her 'own village.'

2. Literature Review:

Social support is the social architecture that provides emotional nutrition, assistance with information and advice, help, support, and encouragement (Archer & Kao, 2018). Social support is very crucial for a new mother's mental health, which plays a major role in the child's well-being (Gibson & Hanson, 2013).

Some mothers gain this social support from family and friends. However, not all new mothers may have access to such social support. These can be due to various reasons – family and friends staying far away or being unsupportive, not able to afford childcare or find trustworthy childcare, fear of judgment, pride, etc. (Archer & Kao, 2018). New mothers feel guilt and shame due to the fear of being judged and negative evaluations. This is one of the main reasons why most mothers withdraw themselves from asking for help because then they feel that they would not fit into Indian society's perception of a good mother (Prikhidko & Swank, 2018). These mothers need a safe space to voice their needs and insecurities without the fear of being judged. In some cases, some mothers also prefer opening up to the perception of anonymity (even though that is not always the case) as they feel more comfortable discussing certain issues with people online (Buultjens et al., 2012); bounded by similar experiences, it gives them comfort that they are not alone in this journey. This shared experience in a non-judgmental environment is just what a new mother needs as an 'esteem support' and a healthy supplement of information from medical professionals (Madge & O'Connor, 2006). The interaction, feedback, and responses from parents on mommy blogs and other social networking sites increase the perception of social support, reducing the mother's stress and enhancing her overall well-being (McDaniel et al., 2012).

Recent studies have found that Social Media satisfies three basic needs (Ali-Hassan et al., 2015):

1. Social need – the need to belong, to build social relations with other people. Social Media is being used to make new friends, be part of a community of individuals with a shared interest, and be in constant touch with family and friends (Ali-Hassan et al., 2015)
2. Hedonic need – the need for pleasure and

emotional experience (Ali-Hassan et al., 2015) measured by the experience-based effects in the form of how satisfying and pleasing those feelings are (Batra & Ahtola, 1991). Social media is being used for fun experiences, entertainment, relaxation, escaping from current scenarios as well as passing time (Ali-Hassan et al., 2015).

3. Cognitive need – the need to seek information, knowledge, and understanding. Social media is being used to share opinions; swap stories, personal photos, and videos create and share content, and access others as well (Ali-Hassan et al., 2015).

Social Media is used to maintain social ties and collaboration. These ties and benefits which are referred to as Social Capital (Ali-Hassan et al., 2015) are a part of Social Need. Social Capital has two ties – Expressive network ties and Instrumental network ties (Ali-Hassan et al., 2015). With social media offering a large pool of mothers from different worlds, different states, and different religions but all of them in a similar position, facing new challenges, feeling overwhelmed and isolated; new mothers have greatly benefitted from both these ties - expressive network ties provide social and emotional support along with friends or in this case 'electronic' friendship while instrumental network ties are better suited for information and advice (Ali-Hassan et al., 2015).

There are also groups such as 'Intimate mothering publics' a term given by Johnson (2015), that enables mothers to gather practical knowledge or wisdom and offer a safe space for mothers to learn and practice motherhood and its most intimate details and topics without the fear of being judged. It encourages new and first-time mothers to join online communities on social media and play a positive and productive role in each other's journey through motivation, social and emotional support, practical and experiential advice (Johnson, 2015), providing each other a sense of empowerment (Gibson & Hanson, 2013).

While many mothers give positive feedback about their social media use, some mothers do discuss the negative effect such as it being addictive and superficial (Archer & Kao, 2018), some mothers chose to post or reflect on their perfect life and perfect child, which can be at odds with the reality. The ideal image of motherhood displayed on Social Media can become trigger for low self-esteem as it gives the wrong idea of what ideal motherhood looks like (Prikhidko & Swank, 2018). There are also privacy concerns and children imitating the mother's behaviour.

In this paper, we wish to understand the reasons why tech-savvy, middle-class new mothers are choosing social media as a source of support for raising their children and what information they are seeking. We also wish to understand the supporting mechanism or the lack thereof of the most commonly used social media Mommy groups.

3. Methods

3.1 Participants

The target population of the study is mothers of young children between the ages of 0-4 years, preferably new mothers. All the participants are married and are distributed all over India.

A questionnaire was made using Google form and the participants were contacted using Social Media in the form of Whatsapp, Facebook, and Instagram. At the beginning of the interview, the participants completed a demographic questionnaire. Participants were asked to provide information about their age, gender, marital status, and the age of the child. A questionnaire was sent to more than 150 mothers from all over the country (India), out of which 30 useable responses were received.

4. Results and Discussions

4.1 Quantitative research results

The highest mean age of new mothers was found between 31-40 years (70%), followed by 20-30 years (20%) and 41 and above (10%). 70% of these new mothers are working, 24% are stay-at-home moms and the rest 6% are entrepreneurs/who have their own businesses. 67% of these new mothers are post-graduates and above. For 60% of the participants, it is their first child and the average age of the child is equally distributed between 0-4 years. 73.3% have help in taking care of the baby, out of whom 52.4% have help in the form of a nanny, 33.3% have help in the form of parents/in-laws, and 14.3% have help in the form of both (Table 1). The remaining 26.7% have no help.

Table 1. Data on help available to new mothers

	Frequency	Percent (%)
Nanny	11	52.4
Parents/in-laws	7	33.3
both	3	14.3

64% of new mothers use Social Media to discuss motherhood and some of the reasons are shown in Table 2. In Table 3, we have the most common topics that are discussed on Social Media.

Table 2. Why mothers use Social Media

	(%)	Mean	SD
To gather general information	70	.70	.466
Advice from other mothers	66.7	.67	.479
Social support from other mothers	40	.40	.498
I consider it a safe space to express myself	30	.30	.466
Non-judgmental environment	3.3	.33	.479
I feel lost and lonely	20	.20	.407
Knowing that other mothers have gone through the same journey	66.7	.67	.479
I love my child but motherhood is overwhelming	36.7	.37	.490

Table 3. Statistics on topics discussed on Social Media

	(%)	Mean	SD
Breastfeeding	36.7	.37	.490
Child's sleep-related issue	46.7	.47	.507
Lack of support from spouse/partner	23.3	.23	.430
Medical-related issue/query	63.3	.63	.490
Looking for tried and tested home remedies for common illnesses	46.7	.47	.507
Feeding related issue/query	40	.40	.498
Different food ideas/recipe for child	56.7	.57	.504
Change in behavior of child	56.7	.57	.504
Issue with in-laws	23.3	.23	.430
Just needed and Outlet	26.7	.27	.450
General information	80	.80	.407
Need a non-judgmental support	30	.30	.466
Motherhood is hard	40	.40	.498

Table 4. Social Media usage pattern

Social Media	Less than 2 hrs		2-4 hrs		4-6 hrs		6-8 hrs	
	No. of participants	Percentage (%)	No. of participants	Percentage (%)	No. of participants	Percentage (%)	No. of participants	Percentage (%)
Whatsapp	18	60%	7	23.3%	3	10%	2	6.7%
Facebook	26	86.7%	3	10%	1	33.3%	-	-
Instagram	23	76.7%	6	20%	1	33.3%	-	-
Blogs	29	96.7%	1	33.3%	-	-	-	-
YouTube	27	90%	2	6.7%	1	3.3%	-	-

Whatsapp has emerged as the preferred Social media platform for new Indian mothers with the maximum time spend on it (Table 4). Although they read and gained information from mommy blogs etc. on Facebook and Instagram, Whatsapp has been chosen for sharing and seeking personal information, advice, and support (Prabhakar et al., 2021). Our research has proved this theory, as well as most new mothers especially in their 30s and 40s; prefer to be a part of the Whatsapp moms group while new mothers in their 20s prefer Instagram. Middle-class Indian mothers trust Whatsapp groups more than any other social media platform as they feel more comfortable and it provides better privacy than other platforms as the participants can control who has access to the information they share (Prabhakar et al., 2021).

90% of the participants feel that Mommy groups on Social Media have been a source of social support while 10% do not think so. However, one thing they do have in common is that all the participants of this study are a part of one or the other Mommy group on Social media. From this study, we can see that it is used mostly to gather general information, to get advice from other mothers; social support from other mothers and knowing that other mothers have gone through the same journey lessens the stress and form an unspoken bond. The most common advice and discussion in these mommy’s groups such as home remedies for common illnesses, different food items/recipes for the child, change in behavior of the child, children sleep-related issues or lack of it, and medical-related issues have been tried and tested by one or the other mothers.

4.2. Exploratory research results

This is a small study with participants who have specific characteristics which cannot be generalized. However, it gives us a preliminary idea that although a lot of women still have kids in their 20s, our sample consists of mothers who are mostly between the ages of 31-40 years. There is a demographic change; this change can be due to women in their 30s’ preference to have an established career before giving birth.

Our sample size consists of middle-class tech-savvy mothers. These mothers feel that social media has been a support system, easy access to information, and a validation that they are not bad mothers but doing their best. Knowing that they are not alone in this journey has been a huge moral support for most mothers. These 30 participants were personally interviewed to get a better understanding of their responses. One of the questions asked was to describe how being a part of Mommy WhatsApp/Facebook/Instagram groups helped in dealing better with motherhood, the responses were:

Mother	Response
M1**	It helps and gives relief that you are not the only one going through this phase
M3	They made me realize that I’m not the only mommies struggling and this too shall pass quotes made me feel better
M4	Even though motherhood is hard, even though as a mother we struggle, we will overcome these overwhelming situations together because we love our children
M5	Knowing that other mommies have gone through the same struggle as mine
M6	Having a resource group of mothers from this generation and similar aspirations, product recommendations, and hearing their stories, makes me feel all right about my own experience
M7	It has been amazing to know that you are not alone and you have support
M9	Now I know what other mothers do to deal with the same situation like breastfeeding, feeding, sleeping issues, stomach issues, or any medical issue
M11	Helped immensely in breastfeeding and weaning. Helped me to prepare for the next phases by looking at other moms’ experience

M12	It has helped me value my time, process my guilt, appreciate my support system, work on issues with my family, and provide me with a non-judgmental space. I learn every day from other new moms
M14	Keeps me prepared for most things and if not, then it is the quickest way to get answers to any baby-related query
M18	Knowing that other mothers have gone through/ are going through the same challenges or feelings as I make me feel that I am not alone in this journey and that I am not a bad mom. It's ok to not be the perfect mom or a super mom
M20	Have more knowledge about child milestone-related development mentally and physically
M21	It's good to know that you are not alone through this motherhood journey
M22	Being a first-time mum, I freak out about almost everything. Once when my baby was 6 months old he fell from the bed, I panicked and asked the mummies, once he had a severe allergy I didn't know what it was, my Mom group has been my lifeline through all these
M25	Just being able to relate with one another without hassle
M26	I get information quickly
M29	Being a first-time mom was overwhelming. During the first 3 months, my child cried the whole night, lack of sleep, not knowing what to do combined with love for your newborn makes you feel like a failure. I stumbled upon a blog on Facebook by another new mom, she penned down every emotion I was feeling at that very moment so accurately. I cried knowing I am not alone, I message her and we are both parts of a mommy group where we met other mothers who were in the same boat. The kind of love and support one received from this group is empowering.
M30	It provides me with an outlet, a safe space to speak whatever is in my mind without being judged
** To protect the identity of the mothers, they have been mentioned as M1- Mother 1 etc.	

Although all the mothers interviewed were a part of some or the other mommy groups, not all mothers were in favor of Social Media, as they do feel it is time-consuming and can even distract them from their own child. Some mothers feel that too much of smartphones use in front of their children can have a negative impact. Another question discussed was if there are any drawbacks to these mommy groups, 70% of participants responded NO, and the remaining 30% responses were:

Mother	Response
M6	It does sometimes create a sense of not doing enough (especially Instagram influencers who do a lot of activities with their kids)
M7	Time consuming
M9	Distraction from the normal work, more time being spent on social media but it is a necessary evil
M11	Sometimes other moms (being human) get judge mental and everyone tries to be the expert, especially on the FB group. It becomes confusing as we get contradictory advice from the same platform.
M12	Possible tendency to compare bubs and their milestones etc.
M14	Sometimes people become judgmental and that demoralizes
M26	Too much information which is not required can be overwhelming
M27	Yes sometimes I feel I am doing less for my child, I mean being competitive
M29	Every child is unique but sometimes we tend to compare our child with someone else's child

5. Conclusion

This research shows that these new mothers, whether working or homemaker, highly educated or lesser, use Social Media as a lifeline – to gather information, for social and emotional support, a non-judgmental support system, and an outlet to discuss the challenges and insecurities. By drawing on the experience of new mothers across the country from various backgrounds, this study shows how online support has given birth to new mothers' confidence by providing them with a sense of control, the more information they received, the more informed choices and decisions they can make. It also provides

them with a safe space to discuss their insecurities and fears. From concerns such as breastfeeding, child's sleep-related issue, home remedy for common illnesses, feeding-related issues, different food ideas/recipes for children or to gather general information; this study demonstrates the number of ways in which physical and online support co-exists, along with the knowledge gained from it. However, like everything else on Social Media, the image portrayed by a mother on Social Media can be superficial, and it can lead to a mother thinking she is not doing enough or even comparison among children. This is probably the first such study in India and it has its positive and negative impacts. Further research can be done on mommy's guilt and how Social Media plays a part in it.

With the advancement in technology, motherhood today is vastly different than what it was centuries ago, and we are lucky to live in the century where Social Media combined with technology, such as smartphones, iPad, tablets, etc. has made online social support even more easily accessible. With its low entry barrier, new mothers can join any Whatsapp and Facebook group or follow any mom blog on Facebook and Instagram, where one can seek advice without any appointment necessary, and support is available all the time for every member even if they are geographically or personally isolated. Although sometimes Social Media can be overwhelming, from this research we understand that the groups and the discussions on Social Media have helped immensely in topics such as breastfeeding, weaning, post-partum, etc. which is otherwise not discussed publicly; and has prepared a new mother for the next phase of motherhood. From this research, we can conclude that for a new mother, being alone and isolated, Social Media can be an ally and can act as a savior in times of need, and can substitute for the village or social support that she badly needs and craves; and knowing that other mothers have gone through the same struggle, it gives them a new sense of confidence and empowers them to face the new challenges. Motherhood is not one size fits all, and it's not about losing one's identity, it's about adding to everything she already is.

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THE CONTRIBUTION OF THE SELECTED SCHEDULED INDIAN COMMERCIAL BANKS IN ECONOMIC DEVELOPMENT

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Abstract: Various parameters are analyzed to assess the role of banks in economic development. The banks selected for the research are SBI, PNB, Axis Bank and HDFC. Randomly selected two of each public sector and private sector scheduled commercial banks. Evaluation of trends in the deposits, loan portfolio and non-performing assets (NPA) of the four banks. An increment in gross deposits is by Rs. 54,70,142 crores (43.5%) and loan portfolio are by Rs. 39,03,513 crores (39.94%). SBI is the highest contributor in deposits, loans and NPA. The decline in NPA also shows a high recovery rate of credit. customers can repay their loans which emphasizes that the customers are efficient in making money. Surge in deposits further verifies that more people are saving. If people can save that means they have enough to spend and save for the future and generate wealth. The employment level of all the banks have shoot up by 3,10,062 employees. SBI percent of employee have drowned by 20% and it is still a leading bank in employment as its contribution is higher than HDFC, PNB and Axis, but scenario might suffer if there is further decline in number of employees.

Key Words: Banking Sector, Economic Development, Loan Portfolio, Employment, Non-Performing Assets, Aggregate Deposits

1. Introduction

For any economy to prosper the most essential system support required is banking. Banking provides facilities and acts as an intermediary in mobilizing the savings of the people and injecting the investment while managing the risks. The research on the banking network is never-ending to explore how it furnishes to the economic development. This research paper explores how banks contribute to economic development through deposits, loan portfolios and non-performing assets. Deposits are money collected from the customer. The most preliminary functions of banks are deposits. Deposit is the first step to amalgamate the money in the economy, the bank collects deposits from various

entities such as individuals and businesses, mobilises these savings and offers them for investment. In a situation where there are no deposits with the bank, the banks would not be able to further inject investments in the economy, which would fabricate stagnation in the economy. It is also beneficial for the customers as they receive a percent of interest on their deposit and the money is safe without any burden of theft. Loan portfolio refers to the total loans disbursed to different sectors such as agriculture, industry, service sector and personal loan. Providing loans is a mechanism to accelerate the economy. Credits are not confined to some types of loans, there are various types of loans such as education loans, home loans, auto loans, business loans, mortgages,

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gold loans, transport loans, export and import loans etc. Loans are beneficial for entrepreneurs, under various schemes of Government and Banks loans are disbursed to the MSME sector which helps to overcome the financial crisis of entrepreneurs and creates employment opportunities, such a situation is very beneficial for running the economy.

However, the process of lending involves risks, one of which is (NPAs) Non-Performing Assets. NPAs refer to loans that have stopped generating income for banks because borrowers have failed to make repayments for a specified period. NPAs can arise due to various reasons, such as economic downturns, mismanagement, or external shocks. While a certain level of NPAs is inevitable in any banking system, high levels of NPAs can impair a bank's financial health and disrupt its propensity to lend, thereby impacting economic development negatively.

To mitigate the adverse effects of NPAs, banks employ several strategies, including prudent lending practices, rigorous credit assessments, loan recovery mechanisms, and asset reconstruction. Regulatory authorities also of paramount importance in managing NPAs by implementing guidelines and frameworks to monitor and address asset quality issues in banks.

Despite the challenges posed by NPAs, the banking sector's overall benefaction to economic development remains substantial. Banks not only bring forth financial services, on top of accord to the efficient allocation of resources in the economy. By mobilizing deposits and allocating credit efficiently, banks enhance productivity, encourage entrepreneurship, and foster innovation.

Literature Review

- 1 **Balaji, C., & Kumar, G. P. (2016)**, The paper points to the contrast between public units in private units of the banks. Five public units and six private units of banks were identified and examined on the grounds of income generated, NII, profit net along with operational, and ROA. ROA of private units was on top of public units of banks. Net profits of public banks were in (w)Trend, that is public banks spotted ups and downs in net profit. Net profits of private units were escalating upwards. Public units are better at managing operations. The trend line of net interest income of public units was way above the private unit line. The trend lines of public units and private units were parallel. From the data gathered from the years 2011-12 to 2015-16, it can be remarked that private units need
- 2 **Banu, M. (2019)**, The objective of the author was to analyse the operational efficiency of the Indian Bank. 10 years of data was collected from the financial year 2007-8 to 2016-17. Various ratios analysed were ROE, ROA, ROI, and liquidity. The research techniques used are descriptive analysis and t-test. The author stated that there is a strong connection between the loans given and deposits with the liquidity of the banks. Public sector banks maintain a high credit deposit ratio. In contrast to public banks, banks' credit deposit ratio is lower of private and foreign banks.
- 3 **Chaudhary, K., & Sharma, M. (2011)**, the study was steered to find the trends in the NPA of public units and private units of banks. The author compared 27 public units and 22 private units of banks. The analysis period was for 1 year from 2009 to 2010. The research paper stated that the public units of banks did not use marketing tools of personal selling, gifts, pamphlets and mail, additionally there were very few advertisements in newspapers of public units of banks. While private units of banks score upfront in their marketing strategy. The author suggested improving the speech of staff, making it friendly to retain customers and internet banking facility.
- 4 **Kumar, A., Joshi, J., & Saxena, J. (2018)**, The author analysed the services omnipresent by the banks in the public and private sectors. The author used the BCG (Boston Consulting Group) matrix to analyse the SBI, ICICI and Central Urban Cooperative Bank. Nature of data gathered was mixed of primary and secondary. The after found that SBI and ICICI offer international services while cooperative Banks did not offer international services. The third-party product was offered by ICICI and remaining two banks did not bring forth this service. As shown in the BCG matrix, there was no service under cash cows and two services, that are letters of guarantee and international banking were under question marks.
- 5 **Malyadri, P., & Sirisha, S. (2011)**, The study was conducted to analyse the NPA of private units and public units of banks from the year 2004 to 2010. The study was analytical and the research methodology used was percentage. In the case of nationalized banks, CAGR of advances of seven years was 26.19%. Supplementary there

was a huge decline in NPA in the year 2009. In 2004 NPA percent was 17.29% and in 2010 it reduced and came to 2.8%. In the case of state banks CAGR advances of 7 years was 21.16% there was a huge decline in NPA in the year 2009. In 2004, NPA percent was 22.8% and in 2010 it reduced and came to 3.7%. The NPA of new private units of banks was below 1%. The authors concluded that the public sector is working efficiently therefore there exists a decline in NPA.

Objectives

1. Evaluation and comparison of the deposits with the selected commercial banks.
2. Evaluation and comparison of the loan Portfolios of the commercial banks.
3. Assessing non-performing assets of the commercial banks.
4. Evaluation and comparison of the number of employees of the commercial banks.
5. Percentage of contribution of the banks in the economic development.

Research Methodology

Analysed the various parameters to assess the involvement of banks in economic development. The banks handpicked for the research are State Bank of India (SBI), Punjab National Bank (PNB), Axis Bank and Housing Development and Finance Corporation (HDFC). Randomly selected two of each public and private scheduled commercial banks. Evaluation of trends in the deposits, loans portfolio, employees and NPA of the four banks. Data was collected and organised from the annual reports of the banks and the database of the Reserve Bank of India (RBI). To examine the percentage of contribution of the parameters in economic development the gross value of the parameters from the RBI database was taken and compared. For trend analysis, the data of five years was gathered from the financial year 2018-19 to 2022-23. For macro understanding purposes, advances of priority and non-priority sectors were merged. The loans are classified into agriculture, industrial, service and personal loans.

Findings

As per Table 1, in the annexure, it is assessed that all the banks analysed have a trend of increment in deposits. There has been an increment of 43.5% in the total deposit aggregate of banks. There has been an increment of 51.9% in deposits in SBI Bank, 89.5%

of deposits in PNB, 104% in HDFC and 75.59% in Axis Bank in the last 5 years. HDFC Bank deposits have risen by more than 100% in the last 5 years. Among the banks, SBI has the lowest increment in its deposits. Although the increment in deposits in the last 5 years is less in comparison to other banks the contribution in the aggregate deposit was highest of SBI Bank in all the previous five years. The lowest contributor in aggregate deposits is Axis Bank among the analysed banks. The approximate increase in the contribution of PNB is 2% and HDFC is 3% in the five years.

As per Table 2, the credit disbursed into agriculture and aligned activity shows an up-and-down trend, in gross advances in the year 2023 agriculture advances dropped by 15.61% from the year 2022. Agriculture advanced as similar for all the banks the all show increment in the last 5 years. The highest contributor was SBI in the last 5 years. Axis Bank is the one that shows a rise in its contribution by approximately more than 200% in 2023 in comparison to 2019. Agriculture advances of PNB and HDFC have risen by 41% and 76% respectively.

As per Table 3, credit flow into the industry sector is positive and upward trending. Observations point out that SBI credit loans in the industry sector have declined by 19.84%. SBI is the leading one in contributing to overall gross industry advances. HDFC Bank shows an increment in providing loans to the industries sector by 96.84% in the last 5 years. As the overall advance of all the banks in industry sectors increased by 30%, credit to the industries sector by PNB and Axis also rose by 22% and 40% respectively.

As per Table 4, gross credit flow in the service sector has also increased by 54%. The contribution of SBI, PNB and Axis Bank shows ups and downs. Only HDFC Bank has been fortunate in maintaining the pace of increment in contributing to the service sector. In the last 5 years SBI's advance to the service sector has risen by 179%, PNB has risen by 47%, HDFC by 101% and Axis by 44.5%.

As per Table 5, credit flow into the personal sector is positive and upward trending. Overall, there was a rise of 7.64% in personal loans. SBI has been the highest contributor among banks in advancing personal customers. There was a rise of 80% in personal loan disbursement in five years. The highest increment was observed in PNB personal loans by 276%. Personal loans from HDFC and Axis Bank have also risen by 92% and 85% respectively.

As per Table 6, non-performing assets have been

in decline in the last 5 years. This is a very good indicator as it depicts that the banks can recover the loans. In non-performing assets SBI has been the highest contribution in comparison to other banks. The NPA of PNB has been on the rise in the last 5 years, and it has an increment of 60% while to contribution in gross NPA has also upgraded. The NPA of HDFC has also increased by 61.8%. The NPA of Axis Bank declined by 37.30% in five years.

As per Table 7, 21.3% of employees in all the scheduled commercial banks have increased. HDFC Bank has the highest percentage of increment in the employees (76%). At the glance of five years, the number of employees at SBI has been decreasing and declined by 8%. The number of employees at PNB and Axis Bank has increased by 47% and 63.10% respectively. The highest percent of employee's contribution in overall employment is of SBI in past 5 years. Spotted the lowest percent of employee's contribution in overall employment is of Axis Bank in past 5 years.

Conclusion

It is conclusive that banks have contemplate progress in the deposits and credit flow over the last five years. There has been a huge increment in the flow of personal loans. Credit flow to agriculture have declined. Increment in industrial loans was Less than 50% and the service sector was more than 50%. As the overall loan portfolio has increased it can be perceived that banks have contributed to economic development. An increment in gross deposits is by Rs. 54,70,142 crores (43.5%) and loan portfolio are by 39.94%, that is by Rs. 39,03,513 crores. SBI is the highest contributor in deposits, loans, employment and NPAs. The decline in NPA also shows a high recovery rate of credit. Customers can repay their loans which emphasizes that the customers are efficient in making money. Surge in deposits further

verifies that more people are saving. If people can save that means they have enough to spend and save for the future and generate wealth. The employment level of all the banks have shoot up by 3,10,062 employees. Leaving beside SBI all the other three bank analysed, spot increase in employment. SBI is still a leading bank in employment as its contribution is higher than HDFC, PNB and Axis, but scenario might suffer if there is further decline in number of employees. There is a huge scope of research in role of banks in economic growth, parameters analysed could be social responsibility, employment generation and diversification, financial ratios, lending and giving interest rates and financial inclusion.

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Annexures

Table 1: Aggregate Deposits and Deposits of Selected Banks (In Rs. Crores)

Items	2019	2020	2021	2022	2023
Aggregate	1,25,73,772	1,35,67,492	1,51,13,512	1,64,65,313	1,80,43,914
SBI	29,11,386	32,41,621	36,81,277	40,51,534	44,23,778
%Contribution	23.15	23.8	24.3	24.6	24.5
PNB	6,76,030	7,03,846	11,06,332	11,46,219	12,81,163
%Contribution	5.37	5.1	7.32	6.9	7.1
HDFC	9,23,141	11,47,502	13,35,060	15,59,217	18,83,395
%Contribution	7.3	8.4	8.8	9.4	10.4
AXIS	5,39,287	6,25,930	6,97,985	8,21,721	9,46,945
%Contribution	4.2	4.6	4.6	4.9	5.2

Source: From Annual Reports and RBI Database

Table 2: Gross Agriculture Advances and Agriculture Advances of Selected Banks (In Rs. Crores)

Items	2019	2020	2021	2022	2023
Banks Gross	22,25,211	23,86,325	26,69,082	29,46,642	18,77,670
SBI	2,19,193.53	2,06,421	2,14,380.85	2,28,674.43	2,58,938.17
%Contribution	9.9	8.7	8.0	7.8	13.8
PNB	1,00,308	86,129	1,12,823	1,24,808	1,42,125
%Contribution	4.5	3.6	4.2	4.2	7.6
HDFC	82,904.48	1,05,439.03	1,13,375.93	1,05,618.45	1,45,932.56
%Contribution	3.7	4.4	4.2	3.6	7.8
AXIS	27,829.60	32,620.63	45,307.03	58,043.69	86,834.11
%Contribution	1.3	1.4	1.7	2.0	4.6

Source: From Annual Reports and RBI Database

Table 3: Gross Industry Advances and Industry Advances of Selected Banks (In Rs. Crores)

Items	2019	2020	2021	2022	2023
Banks Gross	40,69,598	43,24,483	43,99,154	48,81,560	53,06,213
SBI	10,73,013	11,55,365.	7,71,083.	8,21,326	8,60,072.49
% Contribution	26.37	26.72	17.53	16.83	16.21
PNB	1,41,689.17	1,46,474.02	1,93,852.30	1,81,326.26	1,73,795.79
% Contribution	3.48	3.39	4.41	3.71	3.28
HDFC	2,35,035.16	3,17,891.93	3,67,969.68	4,25,602.89	4,62,655.42
% Contribution	5.78	7.35	8.36	8.72	8.72
AXIS	1,71,998.82	1,91,753.95	1,93,179.91	2,18,500.06	2,41,200.88
% Contribution	4.23	4.43	4.39	4.48	4.55

Source: From Annual Reports and RBI Database

Table 4: Gross Service Advances and Service Advances of Selected Banks (In Rs. Crores)

Items	2019	2020	2021	2022	2023
Banks Gross	23,40,659	26,72,047	27,70,713	30,11,975	36,08,574
SBI	3,46,774	3,05,513	6,82,274	7,64,031	9,69,542
% Contribution	15	11	25	25	27
PNB	1,85,635	1,67,039	2,20,230	2,21,818	2,73,319
% Contribution	8	6	8	7	8
HDFC	2,66,664	2,90,601	3,38,230	4,54,306	5,38,532
% Contribution	11	11	12	15	15
AXIS	1,12,282	1,17,145	1,33,192	1,36,566	1,62,335
% Contribution	5	4	5	5	4

Source: From Annual Reports and RBI Database

Table 5: Gross Personal Advances and Personal Advances of Selected Banks (In Rs. Crores)

Items	2019	2020	2021	2022	2023
Banks Gross	28,42,963	33,47,212	36,46,683	40,61,914	47,66,051
SBI	6,54,473.40	7,55,544.99	8,71,654.39	10,04,639	11,80,689
% Contribution	23.02	22.57	23.90	24.73	24.77
PNB	78,561	2,23,776	2,12,502	2,57,151	2,95,440
%Contribution	2.76	6.69	5.83	6.33	6.20
HDFC	2,42,731	2,88,794	3,23,733	3,94,986	4,67,109
%Contribution	8.54	8.63	8.88	9.72	9.80
AXIS	1,98,985	2,47,278	2,68,146	3,08,660	3,68,516
%Contribution	7.00	7.39	7.35	7.60	7.73

Source: From Annual Reports and RBI Data Base

Table 6: Gross NPA and Gross NPA of Selected Banks (In Rs. Crores)

Items	2019	2020	2021	2022	2023
Banks Gross	9,36,474	8,99,803	8,35,138	7,43,653	NA
SBI	1,72,750	1,49,092	1,26,389	1,12,023	90,928
%Contribution	18.45	16.57	15.13	15.06	-
PNB	48,233	73,478.7	1,04,423	92,448	77,327
%Contribution	5.15	8.17	12.50	12.43	-
HDFC	11,135	12,559	14,999	16,140	18,019
%Contribution	1.19	1.40	1.80	2.17	-
AXIS	27,146	26,604	22,681	18,565.63	17,019.09
% Contribution	2.90	2.96	2.72	2.50	-

Source: From Annual Reports and RBI Database

Table 7: Gross Employees and Employees of Selected Banks

Items	2019	2020	2021	2022	2023
Banks Gross	14,54,955	15,35,197	15,66,913	16,42,804	17,65,017
SBI	2,57,252	2,49,448	2,45,652	2,44,250	2,35,858
% Contribution	18	16	16	15	13
PNB	70,810	68,781	1,01,802	1,03,144	1,04,120
% Contribution	5	4	6	6	5.89
HDFC	98,061	1,16,971	1,20,093	1,41,579	1,73,222
% Contribution	7	8	8	9	10
AXIS	61,940	74,140	78,000	85,500	1,01,030
% Contribution	4	5	5	5	6

Source: From Annual Reports and RBI Database

MONETARY APPROACH TO EXCHANGE RATE DETERMINATION DURING MANAGED FLOAT IN INDIA: AN ARDL FRAMEWORK

Shalini Devi*

Abstract: This study is an attempt to refresh the evidence on the application of monetary model of exchange rate (ExR) determination for explaining the quarterly movements of Indian Rupee/US dollar (INR/USD) rate during the flexible ExR regime in India (2004 Q1 to 2023 Q2). The econometric methodology of autoregressive distributed lag (ARDL) model is used to explain the INR/USD ExR behaviour in short run and long run. The stationarity property of the variables considered in this study is checked using Augmented Dickey Fuller (ADF) test. The empirical observations validate a long run relationship between ExR and other important monetary variables particularly during the controlled float period. In short-term analysis, all variables are observed to be significant at the 1% level with expected signs except the relative money stock variable. Moreover, one period lagged value of money stock differential is also observed to be significant during short run. While analyzing the error correction model (ECM) framework, it is observed that 38% deviations of the ExR from its equilibrium point get covered in one quarter. Relative interest rate is noticed to have larger impact in short run than in long run, suggesting that interest rates should always be closely and regularly monitored by the regulatory authorities to maintain a stable ExR. The research concludes that relative money stock and interest rate variables are useful for ExR forecasting because they are significant macro-economic factors that impact ExR fluctuations.

Keywords: exchange rate, relative money stock, real income differential, monetary model

1. Introduction

Exchange rate (ExR) is a significant macroeconomic variable that connects a country to the remaining world. The price of a foreign currency converted in terms of the domestic currency is known as ExR. It tells about the well-being of an economy. A steady ExR denotes that the economy is stable whereas a comparatively weak ExR indicates a poor economy. ExR is very crucial in making economic policies in both emerging and established countries. Policy decisions about the currency ExR are made with the goal of maintaining a rate that is both stable and useful in everyday transactions. Understanding the dynamics of ExR movements has always been

a challenging issue for empirical research since the global economy adopted a market determined ExR system. In an economy having flexible ExR mechanism, the ExR is determined with the help of demand and supply of a currency. When there are variations in the dynamics that drive a currency's demand and supply, the value of that currency in relation to others might change. Under monetary approach, the forex market is considered as any other asset market and the price i.e. the ExR is decided by the demand and supply of the currency.

As ExR is the relative cost of the two currencies under consideration, any change in the money stock could be a valid reason for changes in agents' expectations

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about the ExR. The backbone of the monetary approach to ExR determination is the inter-relationship among the ExR and monetary policy variables. In the past few decades, considerable volatility in exchange rate movements under the flexible ExR regime has been matter of great concern for most of the rising nations, including India. The process of establishing a stable ExR over the long term is intricate. ExR is a key concept in maintaining competitiveness in the international market and thus expansion of economies. ExR policies affect economic activities and decide variations in the other macroeconomic variables. In 1990s, the Indian economy adopted major economic reforms, including introduction of new ExR regime i.e. move from pegged or fixed exchange rate system towards flexible exchange rate mechanism. This shift in the exchange rate system was becoming essential to achieve current account convertibility and for having a market-determined ExR. Another important change in the Indian forex market was the establishment of an expert group on forex markets in India, which delivered its report in June 1995 under the able leadership of Shri O.P. Sodhani. The report gave various suggestions for improving the depth and breadth of the Indian forex market. The considerable increase in trade volume and foreign exchange reserves indicate noticeable expansion and development of the Indian forex market over the last several years. Today India's forex market has grown substantially. India was able to ease the effects of the Asian financial crisis of 2008 because the government was continuously monitoring the situation and acted swiftly and promptly by taking strong monetary measures, wherever required. ExR determinants are the bedrock of international competitiveness, and these are very crucial to the development of developing countries. Therefore, it becomes essential to identify the factors that play crucial role in determining the ExR. The monetary approach focuses on monetary variables as determinants of ExR. In this study, these monetary factors are analysed by empirically testing of the monetary approach to ExR.

2. Objectives of the Study

This research paper aims:

- i) to empirically examine the flexible price reduced form monetary approach to ExR determination for the INR/USD rate during the flexible ExR era. For this purpose, the ARDL methodology is used to explore the short-run and long-run fluctuations in the INR/USD rate.
- ii) To discuss the inferences drawn from the

empirical findings including the validity of theoretical assumptions and the explanatory power of the model.

- iii) To compare and contrast the results with existing literature and empirical studies, highlighting any inconsistencies, convergence, or divergences in findings.
- iv) To give policy implications for central bank policies, monetary interventions, and ExR management strategies.
- v) To give insights into how policymakers can use the findings to formulate effective monetary policies and manage ExR fluctuations.

3. Theoretical Framework

The monetary approach to ExR determination is a theoretical framework used by economists and researchers to explain the relationship between money stock, interest rates, and ExRs. It is grounded on the concept of Quantity Theory of Money (QTM) and the assumption that ExRs are primarily influenced by monetary factors rather than trade or other economic variables. The monetary approach to ExR determination is established on QTM. The QTM states that the price level of an economy is directly proportionate to the money stock and the velocity of money (the rate at which money circulates in the economy).

The equation of exchange, based on QTM, is expressed as: $M \times V = P \times Q$, where M denotes money stock, V is the velocity of money, P is the price level, and Q is the quantity of goods and services produced.

Monetary Approach to Exchange Rate

The monetary approach highlights the impact of variations in the money stock and interest rates, on ExR. The key assumption is that changes in the money stock affect domestic prices, which further influence ExRs. The key variables of the monetary approach and how these variables impact the ExR are:

Money stock: An upward shift in the money stock results in higher prices (inflation) as per the principle of QTM. In order to compensate for this inflation, the foreign investors demand higher returns causing decline in the value of the domestic currency known as depreciation.

Interest Rates: Higher interest rates invite foreign capital inflows, increasing demand for the domestic currency and thus appreciating its value. Whereas low interest rates may result in depreciation as the

foreign capital flows out chasing higher returns elsewhere.

Expectations: Expectations regarding future changes in money stock, inflation rates, and interest rates have a crucial role in ExR determination. If investors anticipate an upward shift in money stock leading to inflation, they may sell the domestic currency, resulting in its depreciation.

Purchasing Power Parity (PPP):

The monetary approach is related to the concept of PPP, which states that ExR should adjust itself to equalize the purchasing power of different currencies. According to PPP, if inflation is higher in one economy than another, its currency tend to depreciate in order to maintain parity in purchasing power.

Overall, the monetary approach gives a theoretical framework that emphasizes on the functions of monetary policy and its influence on domestic prices, interest rates, and finally the ExRs. The currency market mechanism is very complex and it can be understood only with the help of this monetary approach even if its predictive accuracy varies depending upon economic conditions and various other external factors.

As any other asset price, ExR is the selling price of foreign currency converted into local currency. Just like any other asset market, the demand and supply factors of the two currencies should be considered for determining the ExR between the two corresponding currencies. If the stability of the local money market is to be maintained, the current money stock must be freely kept (demanded). For the home economy, the neoclassical logarithmic demand function for money is as follows:

$$\begin{aligned} m &= p + a + \alpha y - \beta r \\ m &= p + \alpha y - \beta r \end{aligned} \quad (1)$$

where each of the small alphabets indicate the natural logarithm of the respective values of money demand, price levels, and real national income (except for 'r,' which represents the interest rate variable).

Similarly, the condition of equilibrium on the international money market is given as:

$$m^* = p^* + \alpha y^* - \beta r^* \quad (2)$$

wherein * denotes the foreign variables.

For simplicity, the elasticity with respect to income that is, α and semi-elasticity with respect to interest rate that is, β are assumed to be equal across the two economies.

Using absolute PPP

$$s = p - p^* = m - m^* + \alpha y + \beta r - m^* + \alpha y^* + \beta r^*$$

$$s = (m - m^*) - \alpha (y - y^*) + \beta (r - r^*) \quad (3)$$

The above equation is referred to as the 'reduced version' of the flexi-price model of ExR analysis. As per this model, ExR is said to be based on the interest rate difference, money stock difference and real income difference of the two nations.

The above model as specified by equation (3) for empirical estimation purposes can be specified as:

$$s = \alpha_0 + (m - m^*) - \alpha_1 (y - y^*) + \alpha_2 (r - r^*) + \epsilon_t$$

4. Review of Literature

During the years 1919–1930, Gustav Cassel offered the monetary strategy for establishing the value of a currency's ExR. A resurgence of the monetary method, advocated for by Robert Mundell (1968) and recorded in the compilation by Frenkel and Johnson, may be traced to the early to mid-1970s (1978). Their works show that reasonable expectations are thoroughly included into the theory. The stock-based monetary strategy of the early to mid-1970s is considered as a forerunner to the more comprehensive portfolio strategy of today. If we assume perfect mobility of capital and a completely exogenous money stock, we have this specific scenario.

Frenkel's (1976) is the detailed explanation of monetary approach with respect to both; theory as well as empirical evidences. It examines 11 monetary factors affecting the ExR.

Bilson (1978) tested the empirical soundness of this asset market model for the period 1970-1977 using deutsche mark/pound rate. He concluded with strong evidence that the forecasts generated by the monetary model were well in line with actual behaviour of the deutsche mark/pound rate. He also suggested that monetary model may be used to analyse short-term behaviour as well as to guide the monetary authorities of an economy for currency market intervention. Woo (1985) observed by empirical testing of the monetary model that the money demand function assuming gradual stock changes had comparatively low empirical support as compared to the model assuming instantaneous stock changes. Miyakoshi (2000) found long run inter-linkage amongst ExR and other monetary factors by empirical testing of the model for Korea. Groen (2002) used the panel vector error correction (VEC) approach to validate the monetary model for Canada, Japan, and the United States for quarterly data from 1975-2000. He asserted that predicting ability of the monetary model is far better than that of the random walk (RW) model. With the help of

cointegration methodology, Zhang and Lowinger (2005) empirically examined the model for developed nations like Japan, Germany, UK, and the US. concluded that the monetary model was better than the RW model in terms of predicting ability. Again by applying cointegration approach, Dutt and Ghosh (2009) examined the yen/dollar ExR from 1959 to 1973 and discovered a single cointegrating vector. Dua and Ranjan (2011) observed that the predictions generated by various forms of the monetary model outperform the predictions of the RW model for India. Bruyn, Gupta, and Stander (2013) explored the long-term interaction amongst ExR and other monetary fundamentals, and they found good empirical evidence for the same. Sharma and Setia (2015) documented empirical support for the monetary model and a correlation between fundamental macroeconomic variables and the INR/USD rate in the long run. Using yearly data from 1993 to 2015, Misra and Gupta (2017) asserted that the macroeconomic variables namely interest rate difference, inflation rate differential, and GDP differential influence the INR/USD rate in the long run. Padake, Karamcheti, and Geeta (2018) after empirical testing of the monetary approach, rejected the validity of the model for the INR/USD rate over the short period. Ojo and Temitayo (2018) did empirical research for this model to identify the factors influencing the Nigerian naira ExR from 1986 to 2016 using an ARDL framework. They discovered that GDP, inflation and interest rate are statistically the most significant variables in this respect. For the period after the Asian financial crisis in 2008, Huy and Hoang Ba (2020) examined the efficacy of monetary model for five nations in the Pacific Basin. They recorded that for Thailand and Indonesia, the monetary model did not fit the data, but for Korea and Malaysia, the model had long-term validity in terms of coefficients and the presumed signs of the variables.

Empirical research by Brown et al. (2020) provides strong support for the monetary approach, showing that variations in money stock and interest rates significantly affect ExR over the short and long period. Contrasting findings are presented by Garcia and Nguyen (2021), who argue that while monetary variables play a role, other factors such as trade balances and economic growth also contribute to ExR movements. Research by Wang and Li (2022) explores the function of expectations and forward markets in the monetary approach. They demonstrate that forward ExRs can be used as guides for future monetary policy actions and ExR movements. Studies by Chen and Wang (2021) and

Li et al. (2024) integrate the monetary approach with other theories such as interest rate parity and PPP. They highlight the complementary nature of these theories in explaining ExR dynamics under different economic conditions. Recent studies by Kim and Lee (2023) and Chen et al. (2024) examined the impact of central bank interventions on ExRs within the perspective of the monetary approach. They find that coordinated monetary policy actions can influence currency valuations, especially in the times of currency crises.

Overall, it is observed that the empirical studies have shown mixed results regarding the effectiveness of the monetary approach in predicting ExR movements. Critics argue that the model may oversimplify ExR determination by focusing solely on monetary factors and neglecting other important variables such as trade balances, capital flows, and government policies. In conclusion, the empirical soundness of monetary model is inconsistent depending on various techniques like the use of panel data or time series data, an increase in the time span, and the use of non-linear models etc.

5. Research Methods and Data Sources

Before starting with the empirical estimation of the models, the status of stationarity property of the variables used, is checked applying the Augmented Dickey Fuller (ADF) test (Dickey & Fuller 1979). The ARDL Bounds test given by Pesaran (2001) et al. is used for estimation of the short-term and long-term association amongst the ExR and its determining factors, as indicated by the flexi price reduced form monetary model. Following is the estimable form of the monetary model tested in this study.

$$s^t = \alpha + \beta (m - m^*) - \gamma (y - y^*) + \eta (r - r^*) + \epsilon_t$$

where s^t is the equilibrium value of ExR, $(m - m^*)$ represents the relative money stock, $(y - y^*)$ represents the relative real income, $(r - r^*)$ represents the interest rate difference and ϵ_t is the error term. All other variables except interest rates, are expressed as a logarithm, with the constraints and anticipated signs given by:

$$\beta = 1, \gamma < 0, \text{ and } \eta > 0.$$

The data used in this study is the quarterly observations spanning over the time period 2004 Q1 to 2023 Q2. M1 definition of money (narrow money) is used as money stock. The Consumer Price Index (CPI) is considered for converting the nominal GDP into real GDP. Discount rate is used as interest rates for both the economies. ExR is the quarterly average ExR.

The data is obtained from secondary sources including International Financial Statistics – publication of IMF, Handbook of Statistics on Indian Economy, and Statistical release of Federal Reserve Bank. All empirical analysis is done with the help of E-Views software.

6. Empirical Analysis and Findings

6.1 Unit Root Testing

The unit root test is a statistical tool for evaluating the property of stationarity of the time series data and to determine the order of integration for the variables. The ADF is used for this purpose. Table 6.1 displays the outcomes of the ADF evaluation.

Table 6.1: Unit Root Test

Variables	ADF Values for Levels	ADF Values for First Difference	Critical Values	Order of Integration
st	-2.9258 (with constant & trend)	-6.5028	-3.4773 (5% level) -4.0987 (1% level)	I(1)
(m – m*)	-1.7019 (with constant)	-6.5422	-2.9055 (5% level) -3.5316 (1% level)	I(1)
(y – y*)	-3.412 (with constant & trend)	-10.7058	-2.9055 (5% level) -3.5316 (1% level)	I(0)
(r – r*)	-1.0214 (with constant & trend)	-7.6275	-3.4794 (5% level) -4.1032 (1% level)	I(1)

Source: Author’s Computation

After initial differencing, the variables namely ExR, money stock difference, and interest rate difference, become stable at levels, whereas the real income differential is stable at levels only. What this means is that any shock or disruption in these variables won’t last forever and will eventually fade off. The ARDL model is used, and a bound test is utilised to capture the cointegration if any, among the variables, as the variables are a mix of I(0) and I(1). The optimal number of lags in the estimation is decided with the help of Akaike Information Criterion (AIC).

6.2 Test for Cointegration

Null Hypothesis (H0): No long run relationship exists.

The Bounds test is performed to check for cointegration between the variables since the model includes both I(0) and I(1) variables. In this test, the null hypothesis assumes no cointegration. Table 6.2 displays the outcomes of an ARDL bounds test.

Table 6.2: ARDL Bound Test Results

Null Hypothesis	F-Statistic	Critical Values Bounds		
		Significance Level	Lower Bound	Upper Bound
No long run relationship exists	5.3217	10%	3.47	4.45
		5%	4.01	5.07
		2.5%	4.52	5.62
		1%	5.17	6.36

Source: Author’s Computation

Across all reported significance levels, the calculated value of F-stat is 5.3217, which is larger than the upper limit value. Therefore, the assumption that there is no such thing as a long-term correlation fails. This shows that in the long run, all the variables move together, and confirms long-term linkage between them.

Estimation of Short Run and Long Run Coefficients
Assuming a long-term relationship between the variables, we computed their coefficients in both the short and long terms using the ARDL method’s standard, general-to-specific technique.

6.2.1 The Short Run Behaviour and the ECM

Table 6.3 displays the outcomes of both the ECM and the ARDL for short run.

Table 6.3: ARDL Short Run Dynamics and the ECM

Variable	Coefficient	Std. Error	-Statistic	Prob.
C	1.6762	0.3538	4.7373	0.0000
@ TREND	0.0049	0.0009	4.8757	0.0000
D(st(-1))	0.3178	0.1048	3.0337	0.0038
D(st(-2))	0.3268	0.1099	2.9732	0.0045
D(m-m*)	0.0222	0.0424	0.5234	0.6029
D(m-m*(-1))	0.1449	0.0503	2.8831	0.0057
D(m-m*(-2))	0.1647	0.0397	4.1489	0.0001
D(y-y*)	-0.3729	0.1834	-2.0333	0.0471
D(i-i*)	0.0143	0.0047	2.9959	0.0042
ECM (-1)	-0.3823	0.0806	-4.7450	0.0000

Source: Author’s Computation

The error correction term’s coefficient, represented by ECM(-1), is considerably negative and significant at the 1% level, as observed in Table 6.3. After being knocked off by a shock or disturbance in the preceding quarter, the ExR returns to its long run equilibrium point by 38.23 percent (the coefficient value being -0.3823). The data demonstrate a long-term equilibrium ExR convergence of 38.23% each cycle. Based on the monetary theory’s explanation, the given findings confirm the predicted signs for the monetary variables namely, relative money

stock, relative real income, and the interest rates difference variables. While positive effects may be seen from monetary policy differences and interest rates difference, real relative income has a negative influence on the value of the currency. All the variables are observed to be significant at the 1% level except the relative money stock. Although the coefficient's values reveal that the responsiveness of relative money stock and interest rate difference is minimal, the impact of real income differential on the ExR is roughly 37% lower.

6.2.2 The Long Run Cointegration Coefficients

Table 6.4 given below summarizes the long run estimation of the monetary model.

$$s^e_t = \alpha + \beta (m - m^*) - \gamma (y - y^*) + \eta (r - r^*) + \epsilon_t$$

Variables	Coefficient	Std. Error	t-Statistic	Prob.
(m - m*)	-0.4023	0.1597	-2.5192	0.0149
(y - y*)	-0.2574	0.4757	-0.5410	0.5908
(i - i*)	0.0063	0.0085	0.7381	0.4638

Source: Author's Computation

Long-term results show that the projected sign of the difference between real income and interest rates is borne out, but that the difference is statistically insignificant. As the relative money stock increases by 1%, the ExR drops by 0.42% in the long run (the coefficient of money stock difference is -0.4023, and it is significant at the 1% level). The value of the coefficients for real income difference and interest rates difference suggests that a 1 percent variation in real income difference and interest rate difference would create 25.74 percent lowering impact and 0.63 percent raising impact on the ExR, respectively. A high correlation is observed between the money stock difference, the real income difference and the interest rate difference, although the money stock difference is the most sensitive.

6.3 The Diagnostic Test

The diagnostic test values of the residuals are computed to further check the fitness of the ARDL model for testing the flexi price monetary model for India.

**Table 6.5: Autocorrelation Test Result
(Breusch Godfrey Serial Correlation LM Test)**

H₀: No autocorrelation exists in the error term.

F-Statistic	0.1798	Prob. (2,50)	0.8435
Obs R-squared	0.4411	Prob. Chi-square (2)	0.8021

Source: Author's Computation

According to Table 6.5, the likelihood of the chi-square statistic for the autocorrelation test is 0.8021 (80.21 percent), which is more than the 5% level of significance, hence the null hypothesis is accepted. As informed in table 6.5, the LM Test results show that the residuals do not suffer from the aforementioned serial correlation issue.

Table 6.6: Heteroscedasticity Test (ARCH)

H₀: Homoscedasticity exists in the error term.

F-Statistic	0.0504	Prob. (1,62)	0.8231
Obs R-squared	0.0520	Prob. Chi-square (1)	0.8196

Source: Author's Computation

Table 6.6 displays findings of a test for heteroscedasticity, which indicate that the null hypothesis confirming homoscedasticity in the the residuals, is accepted since the likelihood of the chi-square statistic is 0.8196 (81.96 percent), which is larger than the 5 percent threshold of significance. This methodology produces a trustworthy conclusion since the residuals are of constant variance.

6.4 Stability Test

Table 6.7: Stability Test- Ramsey RESET Test

H₀: Estimated parameters are stable over time implying that the model is fir.

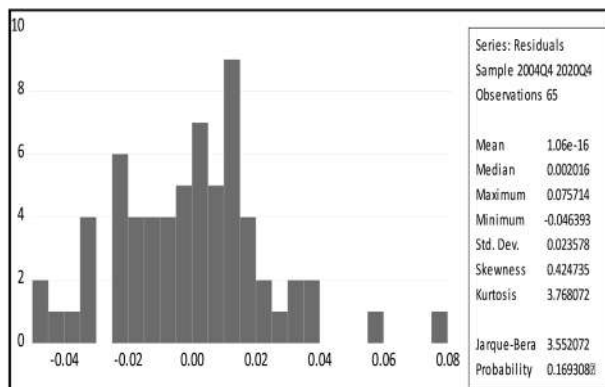
F-Statistic	0.4794	Prob. (1,51)	0.4918
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Source: Author's Computation

Table 6.7 outlines the outcome of the stability tests. The F-statistic value of 0.4918 (49.18 percent) confirms that the null hypothesis stating that the regression model fits the data well, is accepted, which in turn signifies that the parameter estimate of the model is constant across time.

6.5 Test for Normality

The assumption of normality in the residuals underpins the whole analysis and the statistical conclusions of the ARDL model used and estimated in this research. The authenticity of the regression analysis is jeopardised if the normalcy assumption is broken. Figure 6.1 conveys the outcome of the normality test. The probability value of the Jarque-Bera statistic is 0.169308 (16.93 percent), which is higher than the 5 percent level of significance, and therefore the null hypothesis of normality is well accepted. Thus, it is confirmed that the residuals follow a normal distribution.

H0: Residuals are normally distributed.**Figure 6.1 Normality Test of Flexi Price Monetary Model**

Source: Author's Regression Residual

7. Discussion of Results and Relevant Policy Recommendations

The empirical observations made in this study confirm the long-term relationship amongst the ExR and other monetary variables, as asserted by the monetary model of ExR determination. The relative interest rate variable is showing limited degree of responsiveness over the long period. All the variables except relative money stock have presumed signs and are significant at 1% level. The results support the view that India's managed float ExR regime is in line with the monetary model of ExR determination. The ECM estimates highlight that the speed of adjustment is 0.38 implying that 38% of the deviations of actual value of ExR from its equilibrium value converge towards its equilibrium level in one quarter. It is the relative interest rate that has a more immediate impact on the ExR. Therefore, the government should constantly monitor interest rates to limit the scope of currency ExR fluctuations. The monetary model suggests that changes in domestic interest rates can influence ExRs. Policymakers can use this insight to adjust interest rates strategically to achieve desired ExR levels.

The relative money stock variable is very influential on the ExR over the long run, but only the one period lagged value of this variable has an impact in the short run. This stresses the need of considering its effect on the ExR and to have a regular check on the level of money stock in the economy. The relative money stock and the interest rate differences are declared to be the most significant variables that need utmost regular attention and must be cautiously and continuously planned and controlled. The empirical outcomes of the study can help policymakers to see how changes in the money

stock affect ExRs. This will guide decisions related to money stock management and its effect on currency values. Empirical testing of the monetary model highlights the interconnectedness of domestic monetary policies with global economic conditions and ExR movements. Therefore, the policymakers may collaborate with international counterparts to coordinate monetary policies and address cross-border spillovers affecting ExRs.

By looking at the significance of the interest rate, it is suggested that policymakers should use interest rate adjustments as an instrument to regulate ExR movements. For example, increasing interest rates will bring in foreign investment, causing appreciation of the INR whereas decline in the interest rates can assist in domestic investment but it may also result in depreciation of the rupee.

The empirical findings also highlight the relevance of coordination between monetary policy and exchange rate policy. Close coordination between the central bank's monetary policy actions and the government's exchange rate policies is very essential to achieve stability in the international market and to foster economic progress of the nation. An empirically sound model that can accurately explain ExR movements can enhance investors' confidence in the Indian economy. Such confidence will in turn FDI and portfolio investment, facilitating economic development and growth.

In summary, the empirical analysis the monetary model of ExR determination provides policymakers with valuable insights into the factors driving ExR movements. These insights can inform a range of policy decisions related to monetary policy management, ExR targeting, inflation control, trade competitiveness, financial stability, policy coordination, and risk management.

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STRIKING A BALANCE: GENDER EQUALITY AND THE CONCERNS OF BOYS IN PROGRESSIVE SOCIETIES

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Abstract: *The research paper explores the global call for empowering girls, recognizing historical disparities faced by females across cultures. It delves into challenges such as limited access to education, restrictions on employment, unequal legal rights, child marriage, and violence. Affirming girls' rights is seen as a moral imperative, aiming to rectify historical imbalances and create a just society. The paper advocates for equal opportunities and proactive measures, emphasizing the importance of recognizing girls' inherent rights. However, it raises a crucial question about whether the emphasis on girls' rights may inadvertently neglect challenges faced by boys in developed cities. The research objectives aim to analyze gender issues in developed cities, assessing the need for a balanced approach for true equality. The analysis explores challenges faced by boys in education, workforce disparities, and mental health, emphasizing the importance of a nuanced understanding. The paper calls for a balanced educational landscape, recognizing gender-specific disparities. It emphasizes the evolving workforce landscape and encourages support for girls while addressing emerging disparities for boys. The discussion extends to mental health, advocating for spaces allowing boys to navigate emotional well-being without societal expectations. The conclusion underscores the importance of balance, inclusivity, and a society free from gender stereotypes, envisioning equal opportunities for both girls and boys. Overall, the research paper provides a comprehensive exploration of gender issues, aiming for a society that transcends traditional norms and fosters equality for all.*

Key words: *Empowering Girls, Gender Disparities, Affirmation of Rights, Balanced Approach, Educational Landscape*

Introduction

The global call for empowering girls signifies a concerted effort to uplift and provide opportunities for females worldwide. This movement is rooted in the recognition of historical disparities and systemic discrimination faced by girls in various parts of the world.

Historical disparities faced by girls worldwide have been diverse and have varied across cultures and regions. Some common historical disparities that girls have faced are:

Limited Access to Education:

- Girls often had restricted or no access to formal education in many societies.
- Cultural norms and societal expectations sometimes prioritized boys' education over girls.

Restrictions on Employment:

- Girls were historically confined to specific roles and occupations, limiting their employment opportunities.

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- Cultural norms often dictated that girls' primary responsibilities were within the household.

Unequal Legal Rights:

- Legal systems in many societies historically granted fewer rights to girls than boys. Examples include limitations on property ownership, inheritance rights, and legal decision-making.

Child Marriage and Early Motherhood:

- Many cultures allowed or even encouraged child marriages, depriving girls of their childhood.
- Early motherhood had health implications and limited girls' opportunities for personal development.

Lack of Political Participation:

- Girls were excluded from political processes and decision-making in many historical contexts.
- Societal norms often confined them to private, domestic roles rather than public participation.

Violence and Exploitation:

- Girls have been subjected to various forms of violence and exploitation, including child labor and human trafficking.
- Lack of legal protection often left girls vulnerable to abuse.

Healthcare Disparities:

- Limited access to healthcare and information about reproductive health negatively impacted girls.
- Cultural taboos sometimes prevented girls from seeking necessary medical care.

Gender-Based Discrimination in Religious and Cultural Practices:

- Some religious and cultural practices perpetuated gender-based discrimination against girls. Examples include certain rituals, traditions, or customs that disadvantaged girls.

Social Stigma:

- Girls faced social stigma and prejudice based on gender, affecting their self-esteem and societal standing.
- Traditional beliefs about gender roles contributed to the perpetuation of stereotypes.

Invisibility in Historical Records:

- Girls' contributions to society were often overlooked or undocumented in historical records.
- The historical narrative tended to focus more on the achievements and contributions of men.

Affirmation of Girls' Rights:

Empowering girls goes beyond mere acknowledgment; it involves the affirmative recognition and guaranteeing of their fundamental rights which are as under:

Recognizing Fundamental Rights:

Empowering girls starts with acknowledging and upholding their inherent and inalienable rights. This includes rights such as the right to education, healthcare, freedom from discrimination, and the right to participate in social, economic, and political spheres.

Equal Opportunities and Access:

Affirming girls' rights means ensuring they have equal opportunities in various aspects of life, including education and employment. It involves dismantling barriers that have historically restricted their access to resources and opportunities solely based on gender.

Moral Imperative:

There is a moral imperative associated with affirming girls' rights, recognizing the historical injustices and imbalances they have endured. This moral obligation stems from the belief that every individual, regardless of gender, deserves the same respect, dignity, and opportunities to fulfill their potential.

Rectifying Historical Imbalances:

Historically, girls have been subjected to discrimination and limitations in various societal domains. Affirming girls' rights involves a conscious effort to rectify these historical imbalances by actively working towards creating an environment where girls have the same rights and opportunities as boys.

Proactive Measures:

Affirmation requires taking proactive measures to ensure that girls are not only recognized as equal members of society but are actively supported in their pursuit of personal and professional goals. These measures may include policy changes, educational reforms, and societal shifts in attitudes towards gender roles.

Creating a Level Playing Field:

Affirming girls' rights contributes to the creation of a level playing field, where gender does not determine access to opportunities. It involves challenging ingrained gender stereotypes and prejudices that may hinder girls from realizing their full potential.

Building a Just and Equitable Society:

By affirming girls' rights, societies strive to build a just and equitable community where every individual, irrespective of gender, can thrive. This affirmation is a commitment to creating a future where historical injustices are rectified, and girls are empowered to contribute to all aspects of society.

Empowering girls involves fostering an environment where they are afforded equal access to education, employment, and various societal resources. It seeks to challenge and overcome gender-based stereotypes and prejudices that have limited the aspirations and achievements of girls for generations. This empowerment movement underscores the belief that the full realization of girls' rights is not only a moral imperative but also a catalyst for positive societal transformation.

However, as this movement gains momentum, it raises a pertinent question: In developed cities where strides have been made towards gender equality, it is crucial to assess whether an overemphasis on girls' rights may inadvertently neglect the challenges faced by boys. In the pursuit of equality, it is essential to recognize that gender issues are multifaceted and impact both girls and boys in different ways. Does the emphasis on girls' rights inadvertently lead to an injustice against the rights of boys?

RESEARCH OBJECTIVES

The research objectives are designed to delve into the multifaceted nature of gender issues, particularly in developed cities. It seeks to assess the need for a balanced approach to achieve true equality, recognizing that gender-related challenges are complex and have various dimensions. This nuanced understanding is essential to comprehensively address gender issues.

ANALYSIS

The analysis explores challenges faced by boys in education, emphasizing gender-specific disparities and the need for a balanced educational landscape. Studies consistently demonstrate that boys may lag behind in certain subjects or exhibit different learning styles compared to their female counterparts.

The educational landscape, while emphasizing inclusivity, must strike a delicate balance to meet the unique needs of both genders.

In parallel, the analysis scrutinizes the evolving workforce landscape, emphasizing the importance of encouraging and supporting girls in diverse career paths. However, it also highlights the need to address any emerging disparities that boys may face in specific professions or academic pursuits. Dismantling stereotypes and biases affecting individuals of all genders is imperative for achieving true equality in the professional realm.

The discussion extends to mental health, where boys often grapple with challenges due to societal norms around masculinity. Traditional expectations may hinder boys from expressing vulnerability or seeking help. The call to create spaces allowing boys to navigate their emotional well-being without societal expectations reflects a commitment to fostering an inclusive approach to gender equality.

Challenges faced by Boys in Education

The identification of education as an area where boys frequently encounter challenges is based on empirical studies that consistently demonstrate boys may lag behind in specific subjects or manifest distinct learning styles compared to their female counterparts. This recognition of gender-specific disparities in educational outcomes underscores the importance of addressing the unique needs of boys within the contemporary educational landscape.

The mention of boys lagging behind in certain subjects or exhibiting different learning styles suggests that a one-size-fits-all approach may not be suitable for addressing the diverse educational requirements of both genders. These challenges could stem from various factors, such as teaching methods, curriculum design, or societal expectations regarding gender roles in education.

The acknowledgment that the current educational landscape places emphasis on inclusivity highlights the positive strides made in recognizing and addressing gender-based disparities. However, the statement also emphasizes the need to strike a delicate balance. While progress has been made in empowering girls, it underscores the importance of ensuring that efforts to meet the unique needs of boys do not compromise the advancements achieved for girls.

The call to foster an environment that accommodates diverse learning styles underscores the necessity of creating educational settings that are responsive

to the individual strengths and challenges of all students, regardless of gender. This involves a departure from traditional approaches that might not cater to the specific learning preferences of boys. Simultaneously, the statement urges a cautious approach to avoid swinging the pendulum too far in either direction, emphasizing the importance of maintaining a fair and equitable educational system.

In essence, the passage advocates for an educational landscape that is not only inclusive but also attuned to the nuanced needs of both boys and girls. It encourages a holistic approach that challenges traditional gender norms, promotes diversity in learning styles, and ensures that the progress towards empowering both genders is sustained without inadvertently perpetuating new forms of inequality.

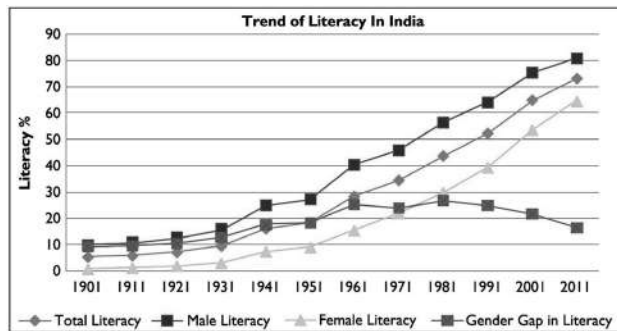


Figure 1: Literacy Rates and Gender Disparity in India
Source: Based on data from Census in India 1901-2011.

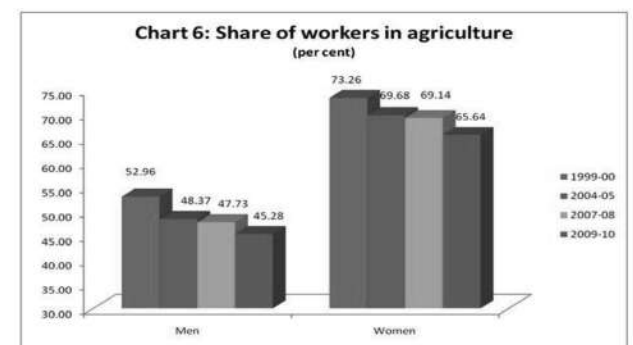
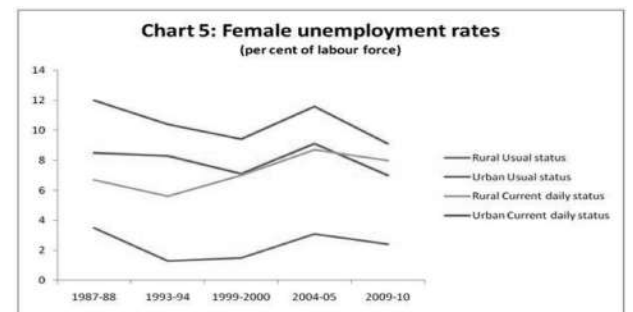
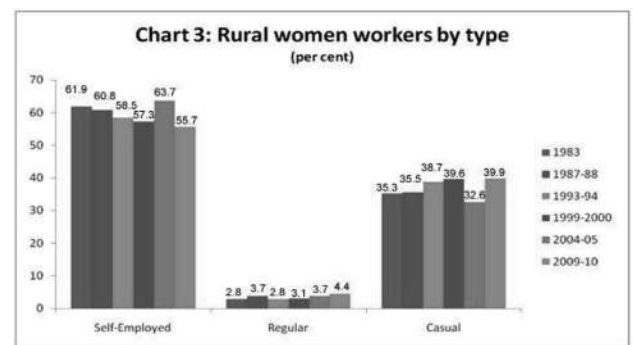
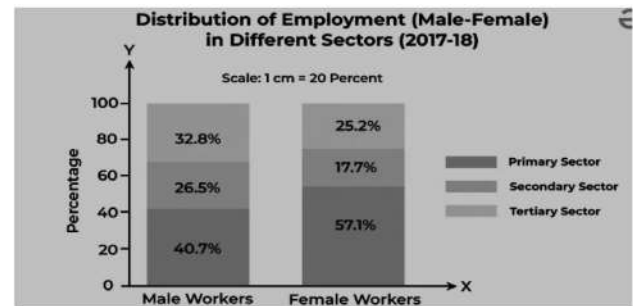
Evolving Workforce Landscape Challenges

The emphasis on the evolving workforce landscape sets the stage for the subsequent discussion on the importance of gender equality in career opportunities.

The call to continue encouraging and supporting girls in pursuing diverse career paths emphasizes the ongoing commitment to breaking traditional gender norms that may have restricted women's access to certain professions in the past. This encouragement aligns with the broader societal goal of empowering girls to explore and excel in fields that were historically dominated by men. It reflects the recognition that fostering diversity in career choices is integral to achieving gender equality.

However, the statement also highlights the need to address any emerging disparities that boys may face in specific professions or academic pursuits. This recognition underscores the complexity of gender issues and emphasizes that achieving true equality involves a comprehensive approach that considers

challenges faced by both genders. It rejects a one-sided focus and advocates for a balanced approach that promotes equal opportunities for everyone.



The mention of dismantling stereotypes and biases signifies a deeper commitment to eradicating ingrained societal prejudices that can hinder the career aspirations of individuals of all genders.

This involves challenging preconceived notions about traditional gender roles and expectations that may persist in certain professions. By dismantling these stereotypes and biases, the statement suggests a transformative approach towards creating a workplace and educational environment where individuals are judged based on their skills, abilities, and qualifications rather than their gender.

Mental Health Issues among Boys

Mental health issues among boys can be exacerbated by societal norms surrounding masculinity, creating a complex dynamic that influences their emotional well-being. The acknowledgment of these challenges signifies an understanding that issues related to mental health are not solely biological but are intricately linked to societal expectations and gender norms.

The mention of societal norms around masculinity highlights the prevailing expectations that often discourage boys from expressing vulnerability or seeking help. Traditional notions of masculinity may reinforce the idea that boys should be stoic, resilient, and self-reliant, which can create barriers to open communication about emotional struggles. This recognition emphasizes the societal role in shaping attitudes and behaviors related to mental health, illustrating the broader impact of cultural expectations on individual well-being.

The statement then advocates for the imperative need to create spaces that allow boys to navigate their emotional well-being free from the weight of societal expectations. This call reflects a commitment to fostering environments where boys feel safe, supported, and encouraged to express their emotions and seek help when needed. It aligns with the broader goal of promoting mental health as an essential aspect of overall well-being and recognizes that achieving gender equality extends beyond addressing physical and economic disparities.

CONCLUSION

The call to strike a balance signifies a commitment to avoiding an overly skewed focus on one gender over

the other. By maintaining equilibrium, the pursuit of equality becomes truly inclusive, fostering an environment where both girls and boys can thrive. The concept of balance implies that societal efforts should aim for fairness and equity, ensuring that neither gender is disadvantaged or overshadowed in the quest for equality.

Finally, the statement envisions a society free from the constraints of gender stereotypes. This aspiration aligns with the broader goal of creating a more equitable and inclusive world where individuals are not confined by traditional expectations associated with their gender. It advocates for a society that allows both girls and boys the freedom to pursue their aspirations and potentials without being limited or defined by rigid gender norms.

In summary, the research paper emphasizes the necessity of a balanced and inclusive approach in the journey toward gender equality. It highlights the importance of recognizing and addressing the unique challenges faced by both girls and boys, ultimately striving for a society that transcends gender stereotypes and fosters equal opportunities for all.

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GST (GOODS AND SERVICES TAX) AND ITS IMPACT ON TEXTILE INDUSTRY IN INDIA

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Abstract: GST or Goods and Services Tax is considered to be a game changer in Indian Economy. India has posed a beacon of hope with ambitious growth targets, supported by a bunch of strategic undertakings such as the Make in India and Digital India campaigns. The Goods and Services Tax (GST) is another such undertaking that is expected to provide the much needed stimulant for economic growth in India by transforming the existing base of indirect taxation towards the free flow of goods and services. This research paper uses primary sources of data such as survey and analysis of the data collected. The secondary sources such as books, journals and articles have also been referred for this research. A total of 510 responses were collected and analysed. An attempt has been made to analyse the impact of GST on the Textile Industry of India. GST especially in Textile industry has proven to be very profitable to both consumers and the profitability of companies.

KEY WORDS: GST, Taxation, Textile Industry

INTRODUCTION

GST also known as Goods and Services Tax. More than 150 nations have implemented GST so far. Goods and Service Tax or GST as it is known is a game changer in Indian Economy. (Narayanan G. and Vashisht) Amidst economic crisis across the globe, India has posed a beacon of hope with ambitious growth targets, supported by a bunch of strategic undertakings such as the Make in India and Digital India campaigns(Raj). The Goods and Services Tax (GST) is another such undertaking that is expected to provide the much needed stimulant for economic growth in India by transforming the existing base of indirect taxation towards the free flow of goods and services. GST is also expected to eliminate the cascading effect of taxes. India is projected to play an important role in the world economy in the years to come. The expectation of GST being introduced is high not only within the country, but also within neighboring countries and developed economies of the world. Despite these and other implementation challenges, the GST is expected by

many to deliver substantial benefits over time. Most notably, Finance Minister Jaitley has estimated that GST will increase the country's economic growth by two percent; external economists and investment professionals place the growth impact in a wider range of .5 percent to more than two percent. Additionally, the GST should increase the ease of conducting business within India (especially across state borders) and between India-based companies and companies based in other countries. From a government perspective, "the GST is expected to improve tax compliance and draw more people into the tax net in a country where tax evasion is common. It will also make India more attractive for foreign investors by simplifying rules for a huge and increasingly attractive market."(Pasricha)

The introduction of the Goods and Services Tax will be a very noteworthy step in the field of indirect tax reforms in India. By merging a large number of Central and State taxes into a single tax, GST is expected to significantly ease double taxation and make taxation overall easy for the industries. For the

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end customer, the most beneficial will be in terms of reduction in the overall tax burden on (Dr.Lakshmi T and Rajeshkumar S) goods and services. Introduction of GST will also make Indian products competitive in the domestic and international markets. Last but not least, the GST, because of its transparent character, will be easier to administer. (Trishala A, Lakshmi T and Rajeshkumar S) Once implemented, the proposed taxation system holds great promise in terms of sustaining growth for the Indian economy. (Ajay Kumar and Kumar). The main aim of this paper is to critically analyse the GST reforms. The specific aims are to compare the past and present tax systems especially the profitability of Indian automobile industry and to analyse GST in consumer perspective.

HYPOTHESIS

- **NULL HYPOTHESIS**

GST had not made a considerable impact on the profitability of the Indian Textile industry.

- **ALTERNATE HYPOTHESIS**

GST had made a considerable impact on the profitability of the Indian Textile industry.

METHODOLOGY

This research paper uses primary sources of data such as survey and analysis of the data collected. The secondary sources such as books, journals and articles have been referred for this research.

RESULTS & DISCUSSION

A total of 510 responses were collected in the survey. Among those respondents 72.8% are male whereas rests (27.2%) are female. The age of the respondents are 30.5% below the age of 18, 38.7% between 18- 25, 17.4% between 26- 30, 9.2% between 31- 40 and the rest are aged above 40 years. Most of the respondents (67.9%) reside in Ahmadabad. 43.3% of the respondents aren't employed but are students, 25.6% are working in private sector, 18.7% are employees of public sector, 7.5% are self-employed and 4.9% are in business. Among 305 respondents only 56.1% only know about the past and present tax systems followed in India. 66.6% respondents had only heard about GST or Goods and Services Tax. Among them 78.2% heard before implementation of GST and the rest (21.8%) heard after implementation of GST. Among the respondents 44.2% think it's a positive change to the consumers whereas 42.2% otherwise and 13.5% are not sure. Similarly 43.4%

think GST is profitable to the industry whereas 40.8% think otherwise and 15.8% aren't sure. Respondents 54.6% think prices of raw material, petrol and diesel prices would impact the Textile industry.

The survey indicates that the people's opinion on the current GST model is on both extremes. The difference between the numbers of people who think GST is profitable to consumers and the Textile industry. However the prices of the raw materials have reduced which indicates the reduced tax burden to the companies which have decided to pass on the benefit of lower taxes to the consumers. The main issue raised by general public, several politicians and scholars is the petroleum and diesel prices which are not brought under GST. The survey results say that the people are hoping to add petrol and diesel within the proposed GST model. But several newspapers and articles have stated the reason why they may not have possibly been brought under GST. An important reason is the revenue collected by both central and state governments. The international prices of crude oil had been reduced over the past several years but the government had constantly raised the taxes in reason that people would over consume it. The revenue to the government due to petroleum sector alone almost reached Rs.3,40,000 crores. Due to raising petroleum prices central government may likely provide relief by cutting taxes but only to some extent.

CONCLUSION

Since the implementation of GST, people, Economists and politicians had shown different criticisms to the proposed model. But however GST has without doubt had raised the economic development of the country. It will eliminate cascading effects and generate revenue for both central and state government. Composition of GST as central goods and services tax (CGST), state goods and services tax (SGST), and integrated goods and services tax (IGST) projects scientific and transparent indirect tax system in India. GST is going to reduce tax leakage and prevent corruption in pricing of products. World Bank had stated that India's GST model is one of the most complex GST model in the world. (Mathew).

Lessons learned in India's transition to the common GST will be important to both the United States and the European Union," writes Gavin Ekins, a research economist with the Tax Foundation. "If India's gamble turns out to be a boom to the Indian economy, the West may have to consider similar changes." ("India Pushes for July 1 Rollout of Common GST - Tax Foundation") Many changes

have been constantly made ensuring simplicity in the GST tax system. Textile industry had benefited from the GST tax system and the prices of textiles products have also reduced. But the survey had found that raising petroleum prices is a barrier to middle class people, government could likely provide relief considering the raising prices. This would ultimately result in the development of textile industries in India.

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CHANGING FACE OF AUTHORITY FIGURES AND INFLUENCERS IN THE NEW AGE: A STUDY OF NEW EMERGING PRACTICES IN THE INDIAN ADVERTISING INDUSTRY

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Abstract: Advertising is the key focus because it plays a pivotal role at the junction where the economy and culture interact. Advertising trends have evolved from the quintessentially traditional print ads and TV spots to new marketing strategies that include QR codes, co-branding, content marketing and online advertising. While print and TV are steadfast in the ad industry, new technology is opening new avenues to reach consumers. India's ad revenue is expected to grow by a subdued 12% to \$17.3 billion in 2023, according to a report by advertising agency GroupM. In marketing, authority figures can have a significant influence on customer decisions. Endorsements from celebrities, experts, or even satisfied customers can add credibility to a product or service. This can lead to increased sales and brand loyalty. Moreover, Influencer collaboration has moved beyond the status of merely being an improvement in the dynamic world of modern marketing, and has instead established itself as a crucial component of a well-planned marketing strategy. Leading organizations now assign particular budgets designed for influencer marketing campaigns in an effort to stay at the very forefront of industry trends. Every firm appears to be eager to utilize influencer marketing to its fullest potential as the market matures and changes. The research aims to propose an in-depth review on the strategic change happening in the Indian advertising industry in relation to the use of authority figures and influencers for promotional activities.

Keywords: Indian advertising, Television commercial, Indian Authority figures, Influencer advertising.

1. Introduction

Influencer marketing has seen an exponential rise in the digital age, becoming an integral part of brand growth strategies. With the increasing dominance of social media platforms, influencers have emerged as key players in shaping consumer behaviour and driving brand awareness. A lot of research has been done to determine exactly what influencer marketing is, why companies are using it more and more and what it brings them (Backaler and Shankman, 2018; Coll, 2019; Genú, 2019; Levin, 2019). Influencer marketing is described as a new effective and cost-efficient marketing tool as it is not perceived by customers as advertising (Ye,

Hudders, De Jans and De Veirman, 2021). It is today a key component of the firm's digital marketing strategies (Abidin, 2015) used to promote brands and reach very engaged audiences. This strategy could be compared as an evolved word-of-mouth marketing as it works thanks to experience sharing, user-generated content and spreading via blogs and social media (Ye et al., 2021). Authenticity is one of the driving forces behind the success of influencer marketing. Unlike traditional advertising methods, where brand messages are often perceived as forced or insincere, influencers have the ability to connect with their audiences on a personal level. They build a loyal following by sharing genuine experiences, opinions, and recommendations. For instance, travel

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influencers who share their adventures and provide honest reviews of products or destinations can create a significant impact on their followers' travel choices. Influencer marketing allows brands and companies to promote their product through tools such as influencers and social networks. Many industries are using this growing marketing strategy such as sports, technology, food and travel (Ingrassia, Bellia, Giurdanella, Columba and Chironi, 2022; Ye et al., 2021). Influencer marketing presents new opportunities to the beauty and fashion industry (Paço and Oliveira, 2017). Consumers are particularly bound to follow influencers in product categories that deal with fashion and beauty (Nafees, Stoddard, Cook and Nikolov, 2021). Indeed, beauty and fashion influencers are very numerous and arouse great interest in followers. Another reason for the rise of influencer marketing is the increasing scepticism towards traditional advertising. Consumers are becoming more adept at filtering out advertisements, skipping commercials, or using ad-blockers. However, they are more likely to trust recommendations from people they perceive as relatable and trustworthy. By collaborating with influencers who align with their brand values, companies can tap into the influencer's credibility and authenticity to reach their target audience effectively. Social media platforms have played a pivotal role in fostering the growth of influencer marketing. Instagram, YouTube, TikTok, and other platforms have provided influencers with a global stage to showcase their talents, expertise, and lifestyles. Social media influencers are users of social media who are being followed by a significant number of other users (De Veirman, Cauberghe and Hudders, 2017; Harrigan, Daly, Coussement, Lee, Soutar and Evers, 2021). As they share a part of their lives with relevant content, they provide the impression that the followers know them. Users develop admiration, para-social interaction; which refers to the relations people have with media figures (Horton and Wohl, 1956); perceived similarity, sense of belonging, intimacy and psychological closeness which play an important role here (Ye et al., 2021) This makes the influencers more trustworthy by users. As they reach large audiences, and thanks to their popularity companies and brands use them to promote products or services. Brands have recognized the power of these platforms in reaching a vast audience and have tapped into influencers' social media presence to promote their products or services. For example, fashion brands often collaborate with Instagram fashion influencers to showcase their latest collections, resulting in

increased brand visibility and sales. By definition advertising is designed to persuade consumers. Persuasion occurs when exposure to information results in an attitude change (Olson & Zanna, 1993). When applied to advertising, successful persuasion occurs when advertising changes consumers' attitudes, beliefs and behavior toward the product, brand or service (Wells, Moriarty & Burnett, 2006). According to Jung and Kellaris (2006), the authority principle refers to "the tendency of individuals to comply with the recommendations or directives of authority figures." The use of an authority figure technique with consumers can be successful in specific situations (Berry, 1988). When a consumer is feeling inadequate or incompetent in some way, they are willing to abdicate responsibility to an authority figure who offers reassurance, protectiveness and security. However, when used incorrectly, authority figures can perpetuate a sense of superiority, leaving consumers feeling inadequate, foolish and angry at the advertiser (Berry, 1988). The lack of research on the authority principle in advertising stands in sharp contrast to frequent use of authority appeals in advertising practice. For example, General Mills uses mothers as spokespersons for "Kix" cereal. McNeil Consumer and Specialty Pharmaceuticals features moms for their "Motrin," children's fever reducer. In France, work place superiors and teachers are often used as spokespersons (Li, Zhenyi , 2001)). In all of these cases, spokespersons are featured as authorities upon whom consumers can rely. Despite the widespread use of non-celebrity authority figures in global advertising, little is known about their effectiveness and their applicability across different segments and cultures. The research aims to propose an in-depth review on the strategic change happening in the Indian advertising industry in relation to the use of authority figures and influencers for promotional activities.

1. Role of Authority figures in advertising in India

Consumer behavior involves making a purchase decision based on available resources, i.e., effort, money, and time (Chiang et al., 2016). Furthermore, Tsao et al. (2019) proposed a holistic view of consumer buying behavior. Consumer behaviors are those activities and processes in which individuals choose and utilize ideas, products, services, and experiences. Li et al. (2021) stated that consumer behavior analysis is another tool to examine the complexity of marketing operations. Meanwhile, Sumi and Kabir (2018) demonstrated that today's consumers are kept in the dark about when and what they desire, all of which results in

interactive advertising. Consumer behavior is a mixture of consuming and purchasing products and services (Sundararaj and Rejeesh, 2021). Therefore, Anetoh et al. (2020) explored seven steps of consumer buying decision which needs recognition: search for information, pre-purchase, evaluation, purchase, consumption, post-consumption evaluation, and divestment. Advertisement is a source that convinces people to purchase the product at least once in their lives. Celebrities or personas used in ads may positively influence peoples' buying intention (Shanahan et al., 2019). Consumer buying behavior should be referred to as the choice to buy a product (Sundararaj and Rejeesh, 2021). Advertisers are adapting different techniques to create purchase decisions through effective commercial messages. Additionally, market advertisers use celebrities in commercials to sponsor their product image (Alalwan, 2018). The involvement of celebrities affects the buying intention of the consumer. This study shows that advertisements have a positive effect on consumer buying intention. Consequently, Vargas-Bianchi and Mensa (2020) remarked that advertisement has a crucial role in the current age as it is an instrument to build society's behavior regarding products. Ads help people to get information and make a purchasing decision. People's psychological, emotional, and behavioral aspects are important while making a purchasing decision (Wirtz et al., 2017). Consumer buying behavior can be predicted by relevant brand awareness in the market (Alalwan, 2018). In conclusion, advertisement has a direct relation with consumer buying behavior. If advertisement increases, it will eventually lead toward an increase in buying intention of the consumer. Advertisers use celebrity endorsements in their advertisements to sway customer attitudes (Gilal et al., 2020). Celebrities are people who are well-known among the general public for reasons other than their support of certain brands or goods (Schimmelpfennig and Hunt, 2020). Advertisers' employment of celebrity has a great impact on consumers' attitudes about advertising (Osei Frimpong et al., 2019). Only when a well-known celebrity is supporting an advertisement will people buy the goods, regardless of whether or not they know anything about them. Popular celebrity endorsement affects buying intention more than unknown celebrity endorsement (Yang, 2018). According to the experts who conducted the experiments cited above, celebrity endorsements have a favourable effect on customers' purchasing intentions (Zhang X. et al., 2020). According to

McCracken (1989, p.310) a celebrity endorser is "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement." Researchers have identified many factors which are favourably influenced by celebrity endorsers. Some of the major factors include awareness of the brand and company, company image, believability, attitude towards the advertisement, attitude towards the brand and purchase intentions (Atkin and Block, 1983; Erdogan, 1999; Friedman and Friedman, 1979; Friedman et al., 1976; Kamen et al., 1975; Ohanian, 1990). There are four main models that explain the effectiveness of celebrity endorsers. Source credibility model states that the credibility of the source/endorser from which the message originates will determine the effectiveness of the advertisement and because celebrities are generally considered credible by the audience, the message originating from them is evaluated positively. According to Hovland et al. (1953) perceived expertise and trustworthiness of the source are two main factors from which credibility of the source originates. The source attractiveness model postulates that the attractiveness of the source induces positive attitude and behavioural intentions towards the advertisement and the brand (Friedman and Friedman, 1979; McGuire, 1985). Celebrities, especially from the field of entertainment are considered attractive than typical endorsers, therefore using them as endorsers have been supported by various studies. The match-up hypothesis states that a celebrity endorsement will be effective only if there is a similarity/congruence between the celebrity and the product (Forkan, 1980; Kamins, 1989, 1990). The match-up between the celebrity and the product can be attractiveness based, expertise-based or image-based. Using attractive celebrity for attractiveness related product is attractiveness-based match-up, for example, Aishwarya Rai for Nakshatra diamonds. Expertise match-up involves using a celebrity endorser, who is perceived as an expert of the product or belongs to same field for example, Virat Kohli for ADIDAS. Image-based match-up is matching the associations of the celebrity with that of the brand, for example Shahrukh Khan for Hyundai Santro. Lastly, meaning transfer model (McCracken, 1989) states that because consumers not only consume the product but also the meanings associated with it, the effectiveness of a celebrity

endorsement depend upon the cultural meanings which the celebrity transfers to the product. According to the model, the celebrity first earns cultural meanings through his/her respective career, for example movie performances, sports achievements, etc. These meanings then get transferred to the product through the endorsement process. Finally, the consumers consume the product in order to take on the cultural meanings which the product holds. Considering the popularity of celebrity endorsers in India, some studies have also tried to analyze their use. Khan and Khan (2002) conducted a content analysis of 250 TV advertisements and reported that 50% of the advertisements featured celebrities. Celebrity endorsers were mostly used for personal appearance products followed by medicine and toiletries and home products, appliances and furnishing. However, they did not report a significant association between various product categories and celebrity use. Prakash et al. (2012) in their study reported 59% use of celebrity endorsers in a sample of 300 TV commercials. The study by AdEx India (India, 2011) reported that celebrity use was highest for shampoos, toilet soaps, aerated soft drinks and cellular phone service in 2010. There are other important aspects like celebrity type and celebrity role that have been studied by the researchers. For example, Khan and Khan (2002) found that film stars (43%) were the most featured celebrity type followed by TV (34%) and sports celebrities (7%). Statistically significant association between celebrity type and various product categories was also reported by them. Film celebrities were used more than TV and sports celebrities for medicine and toiletries, drinks and confectioneries and personal appearance while TV celebrities were used more in case of home products, appliances and furnishing. Sports celebrities were used mostly for drinks and confectionary items. AdEx India (India, 2011) also reported that the film celebrities accounted for 85% of total celebrity endorsements on TV during December–January 2010 followed by sports and TV celebrities. Prakash et al. (2012) found that film celebrities accounted for approximately 52% share of celebrity commercials, TV and sports celebrities accounted for 23% and 16% share respectively. They also reported statistically significant relation between celebrity type and product category. Another important aspect regarding the use of celebrity endorsers is celebrity role, i.e., way of portraying/depicting the celebrity in an advertisement. Celebrities can give a

testimonial or endorsement, can be an actor in the ad or can be a company spokesperson (Schiffman and Kanuk, 1995). If the celebrity endorser states the benefits of the product on the basis of his knowledge or experience of using the product it is called as testimonial. Endorsement is when the celebrity just lends his/her name to a product and actor means celebrity playing a character in the commercial. If a celebrity keeps on representing a company or a brand for a longer period of time and he becomes closely associated with the brand or the company then he is called as company spokesperson (Schiffman and Kanuk, 1995). Khan and Khan (2002) reported that celebrities were mostly used as actors (54%) followed by testimonial/endorser (42%) and company spokesperson (4%) in TV commercials. However, they did not find statistically significant relation between the celebrity role and various product categories. Celebrity role can also be classified as explicit, imperative, implicit and co-present mode (McCracken, 1989). In explicit mode the celebrity overtly declares that he or she is endorsing the product ('I endorse this product'). When a celebrity suggests the consumers to use the product it is imperative mode ('You should use this product'). In implicit mode the celebrity uses physical or verbal communication ('I use this product') and co-present mode is when the celebrity only appears with the product (McCracken, 1989). Jain et al. (2010) in their analysis of celebrity advertisements which were aired on television during 1995 to 2007 in India found that in 64% of celebrity commercials implicit mode of portraying the celebrity was used followed by imperative (20%) and co-present mode (14.5%). Explicit mode was used only in 1% celebrity commercials. In India the practise is quite popular. Federation of Indian Chambers of Commerce and Industry (FICCI) reported that 60% of Indian brands used celebrity endorsers in 2008, in 2001 it was only 25% (Shashidhar, 2008). According to AdEx India, TV commercials featuring celebrities witnessed a six times increase from 2003 to 2007 and 49% from 2006 to 2007 (India, 2008). More recently, The Financial Express (2013) reported that more than 50% of commercial advertisements feature celebrity endorsers.

2. CHANGING ROLE OF AUTHORITY FIGURES IN INDIAN ADVERTISING

2.1 More realistic and balanced picture of Indian women:

Its quite evident when taking look at some of the advertisements being shown on Indian Television;

- A. *HERO HONDA PLEASURE (Why should boys have all the fun)*- This advertisement advocates women empowerment. Here a flock of girls is shown which epitomizes group will and freedom of movement. Today women have stepped out; realizing their potential in fulfilling their dreams and for them, driving a vehicle is one of the symbols of liberty and fun. This ad completely breaks the notion that outdoor fun is only a domain of men.
- B. *ICICI PRUDENTIAL LIFE INSURANCE (Jeetey Raho)*- In this advertisement, a young couple is seen where a wife asks husband to sign the life insurance papers. In the next frame, she cleverly and logically explains the benefits of taking insurance. This advertisement projects a progressive change in our society where the woman is accepted as the chief catalyst in taking financial decisions.
- C. *ARIEL DETERGENT (Ariel ki safai do khusboo mein aaye)*- This ad uses the slice of life concept where has returned home from work and comes across a message from his wife that she would be late from work. He then prepares dinner and drops some curry on his shirt and washes it himself. This advertisement has broken the myth that only women are supposed to do household work.
- D. *ASMI DIAMOND JEWELLERY (I believe in me)* - Kajol is viewed as a woman who is traditional yet fully capable of participating in the modern world. Her modernity does not necessarily mean divorce from traditional ethos. She is the brand ambassador of Asmi and provides assurance to the target audience that wants to do things differently without breaking from the past. Here she says she does not believe in stars, talking parrots and crystal balls but believes in herself.
- E. *FEMINA (Believe)*- "I am dark, fair, 14, fat, 40, I love..." If we go through this advertisement, an emphatic "I is revealed. Today's woman is confident and comfortable with what she is and is unapologetic about carrying the weight of her "self". This ad makes minimum use of visual imagery-just the face of protagonist infusing confidence and warmth.

These are some advertisements, which depict the changing face of women in Indian advertising. There are many more ads and everyday one new

ad is surfacing which clearly depict the increasing influence of women in Indian Television and society.

2.2 Ordinary looking models now crowd ad agencies

Airtel's 4G can be included in one of the most successful ad campaigns by brands at one point. It was only a few years back when Airtel introduced its 4G network in the country. After a few years of the network's launch, came a face that got associated with the brand so well that people saw her as the brand herself. Every household and people of all ages knew her face even if they didn't know her name. Sasha Chettri became a name known to all. Having featured in nearly 50 ad campaigns, including Maruti, NIIT, Pantaloon and Indiatimes.com, Chetan Sethi, 32, is a busy model. And an even busier tax lawyer with a flourishing practice in the capital. Rajni Nijhawan, 34, is vice-president, business development, with an immigration consultancy firm in Delhi. But most people recognize her as the house wife with the "glowing" face in the commercial for Hindustan Lever's Dove soap. Presenting the deglamourised face of Indian advertising. These are not regular Milind Soman, Madhu Sapre or Rahul Dev. The model is not someone off the catwalk. She could be your grandmother. Advertisers and advertisement agencies are increasingly using ordinary people as models in advertisements to infuse a sense of realism in their campaigns.

Greying grandparents, bored officegoers, housewives with time on their hand and pesky brats are peddling wares more than ever before, cutting across socioeconomic and psychographic demographics. In the process they have shattered stereotypes like the brawny, 6-ft-tall dude or the sculpted, glamorous girl. Much of this shift could be due to the growing need to bring consumers closer to the product being advertised. Using deglamourised models to endorse a product is to make the consumer associate himself (okay,her-self) with the person in the ad.

3. Transformation to the Digital Age

Fast forward to the digital age, where social media rules the roost. Suddenly, everyone has a voice, and the line between celebrity and influencer is blurred. We don't just admire our Bollywood stars; we also follow Instagram influencers who share every facet of their lives, from fashion choices to diet plans. According to a Statista report, the country's social network users are expected to reach roughly 1.5 billion by 2040 due to the accessibility of the internet. According to the report, the federal

government's Digital India effort has improved the availability and accessibility of the internet, which has resulted in a direct correlation between the growth of social media users and the tremendous growth of the digital marketing sector. Simply put, digital marketing is promoting a product through the internet or other forms of electronic media. The global digital marketing industry has a significant impact on the country's digital marketing market, as per the Expert Market Research analysis. According to this analysis, the sector is growing at a CAGR of 17.6% and is expected to be more than \$930 billion by 2026. The key driver of the sector is the growing global population's preference for digital social media platforms. Consumers have never had more opportunities thanks to social networking, which has upended many industries. Influencer marketing is a good illustration of this, as it allows previously unidentified consumers to enhance and, in some instances, outperform traditional marketing initiatives.

3.1 The Rise of Micro-Influencers

In this new era, brands are no longer relying solely on A-list celebrities. They're turning to micro-influencers – individuals with a smaller but highly engaged following. These micro-influencers feel like friends, and their endorsement of a product doesn't feel forced. It's more like a recommendation from someone you trust. For instance, a fashion brand might collaborate with a niche fashion blogger who has a dedicated following interested in sustainable fashion. Their endorsement feels more relatable and authentic compared to a traditional celebrity.

3.2 Authenticity Is Key

Today's consumers are savvy. They can spot a forced celebrity endorsement from a mile away. What they crave is authenticity. They want to see their favorite stars and influencers genuinely using and loving a product. This shift has led to brands collaborating with celebrities and influencers who align with their values. For example, when Virat Kohli promotes a fitness brand, it aligns perfectly with his image as a fitness-conscious athlete. It feels authentic because consumers know he's genuinely passionate about fitness.

3.3 Commercials talk about ideas and brand values with the pinch of Social Awareness

Celebrity endorsements in India have also evolved to embrace social issues. From endorsing girl child education to promoting eco-friendly products, celebrities are using their influence to create positive

change. This shift towards socially responsible endorsements is a reflection of the changing values of Indian consumers. For instance, when Deepika Padukone speaks about mental health awareness, it resonates with the audience, and it's more than just a product endorsement – it's a message of social significance. One of the first and most-fashionable trends or practices that are followed by advertisers. They are coming with commercials on various social issues, political, environmental, health and other issues, getting people to think about social concerns, which are important for rising public supporting and affecting meaningful changes. For instance, in Tata tea ads instead of talking directly about tea product, it creates awareness about the value of one vote, which is completely different from traditional ads. Not for a single moment, Tata tea discusses the product's quality and the question raised here that why should buyers buy only Tata tea since potential buyers don't get the details about the quality of this product. There are several brands of tea. It's interesting to observe the shifting patterns of ads filmmaking. Now ads don't talk directly about the product's features. In Tata tea case, Tata Company is promoting the 'brands large value' while creating awareness about the civil rights and values of election voting. Indirectly, these brands are creating good values for their products. Buyers buy a certain product because of the particular brand values.

4. CONCLUSION

India, a land of diverse cultures and traditions, has always had a soft spot for celebrities. Be it our favorite Bollywood actors or cricket stars, we've admired them, emulated their style, and followed their choices. And somewhere along the way, clever marketers realized that attaching a celebrity's name to a product can work wonders. Back in the day, celebrity endorsements in India primarily meant Bollywood stars gracing our television screens, endorsing everything from toothpaste to tea. Remember the iconic "Lalitaji" from Surf washing powder ads? That was the era when the power of a celebrity's endorsement could make or break a brand. The underlying principle was trust. When Amitabh Bachchan told us to use a certain brand of cement, we trusted that it was the best. Celebrities were seen as experts in everything, and their word was gold. But times were simpler then, and the advertising world was a different ball game. So, what does the future hold for celebrity endorsements in India? Well, it's safe to say that while the landscape has changed, the influence of celebrities and influencers remains strong. However, authenticity, alignment

with values, and a genuine connection with the audience will be the keys to success. In this ever-evolving world of advertising, one thing remains constant – the love and admiration Indians have for their stars. Whether it's a Bollywood legend like Shah Rukh Khan endorsing a luxury brand or a social media sensation like Bhuvan Bam promoting a new-age tech gadget, celebrity endorsements will continue to shape our buying decisions, but in a more authentic and relatable way. After all, in a country where cinema is a religion, celebrities will always be more than just faces on a billboard; they'll be our guides, our inspirations, and sometimes, even our friends.

5. Future Implications & Limitations

The major challenge of the future is likely to be the ability to meet competitive threats from a variety of competitors; from small scale to multinationals. The need to offer the consumer a better choice than the competition and yet make a profit will be the basis of all marketing challenges. Market conditions will continue to be more competitive and manufacturers will have to place greater emphasis on quality. Clients are going to demand effectiveness of advertising and most cost effective advertising.

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CATALYSTS OF CHANGE- WOMEN ENTREPRENEURS AND PATH TO INCLUSIVE GROWTH IN INDIA

Rajeev Kaur*
Nitu Rana**

Abstract: When women or group of women initiate, manage and run the business enterprise, then they are termed as women entrepreneurs. India saw a shift on the economic front when women realized their potential and started becoming entrepreneurs and entering the job markets. When decided to make a mark as job making entrepreneurs a revolution started. MSMEs played a crucial role in inclusive industrial and entrepreneurial growth. Government is offering many incentives to women entrepreneurs but society should also support them for their endeavors. Swarnlatha K. and Anuradha R.K. listed the barriers as poor risk undertaking capacity and lack of effective leadership which prevented women entrepreneurs to reach pinnacle of success. Dey and Biswas were of the opinion that females are taking up challenging work, are ready to bear risk and have trust on their goals. The present study tries to provide a comprehensive overview of the percentage of women-owned MSMEs, examine the sectors where women entrepreneurs are engaged in and their geographical distribution across India. Through this study researchers also tried to evaluate the effectiveness of government policies and initiatives aimed at promoting women's entrepreneurship in MSMEs. Secondary data is used for analysis. The data collected were analyzed using appropriate statistical tools such as simple mean, simple percentages, charts and graphs.

Keywords: Entrepreneurs, Growth, Financial Inclusion, Policies.

1. Introduction:

Women entrepreneurs can be defined as the women or group of women initiating, managing and controlling the operation of a business firm. India saw a shift on the economic front when women realized their potential and started becoming entrepreneurs and entering the job markets. When women decided to make a mark as job making entrepreneurs, a revolution was set in. Globalization and industrialization encouraged women to acquire skills and education to take up those professional activities which, till then, were assumed to be the domain of male in MSME's. Today, in most developed countries women are at par with men

as entrepreneurs when it comes to success and development. MSME's are crucial for inclusive industrial and entrepreneurial growth because they cater to domestic and international markets through provision of a variety of goods and services. It lends support to existing enterprises and encourages the creation of new enterprises. Women constitute a catalyst for the development of our economy and micro, small and medium enterprises help to cultivate entrepreneurial skills and also facilitate distribution of income and wealth at the grassroot level. The potential and strength of women was unrecognized till recent years. But now empowering women is a buzzword. In this diverse economy, one

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sector that has contributed towards empowering women and economic development – the Micro, Small, and Medium Enterprises (MSMEs). As per UNIDO women entrepreneurial activities not only help them in contributing towards economic growth but it also brings positive change in them and their social environment.

The women entrepreneurs are those women who have the capacity to take risks and generate employment when their financial holding is at least fifty-one per cent. Powell & Johnson (1994) were of the view that women entrepreneurs are more cautious, less confident, less aggressive, easier to persuade and have inferior leadership and problem-solving ability. J.S. Schumpeter defines women entrepreneur as “Women who innovates, imitates or adopts a business activity. Pareek (1992) is of the opinion that women entrepreneur plays an important role by repeatedly interacting and adjusting herself with financial and socio-economic support spheres in society.

Review of Literature

The literature review with regards to women entrepreneurs in MSME's shows that gender discrimination and feminist perspectives, financial challenges and types of businesses are the major causes of concern. Greene, et al, Tambunan made an elaborate study of women entrepreneurs in MSME sector and highlighted the facts that representation of women entrepreneurs is relatively low in the economy because in most cases women joined as forced entrepreneurs for seeking better family incomes (Greene, et al, Tambunan). In the research conducted by Senthilkumar, Vasantha and Varadharajan it was found that in spite of all the assistance to the MSMEs by government agencies to women entrepreneurs, the entire sector is still plagued with male domination. Low literacy rates, low work participation and lack of sufficient developmental programs in the field also added to the woes of this ailing sector (Senthilkumar, Vasantha and Varadharajan). Swarnlatha K and Anuradha R.K. listed the barriers as poor risk undertaking capacity and lack of effective leadership which prevented women entrepreneurs to reach pinnacle of success (Swarnlatha K and Anuradha R.K.). Shaik and Kalvakolanu also highlighted that independence and authority required for an entrepreneur is inadequate in Indian women due to low literacy rate. Emphasis is given on vocational training with no or little focus on development of their managerial skills (Shaik and Kalvakolanu). Trivedi and Gaur concluded that although there is an increase in the number of

women entrepreneurs but still there are many who want to become entrepreneur but they lack access to information, motivation and training programs run by government (Trivedi and Gaur). Dey and Biswas have opined that women are taking up challenging work, are ready to bear risk and have trust on their goals (Dey and Biswas). Government is also offering many incentives to them but society should also support them for their endeavors. Lall M. and Yadav S. examined various opportunities and challenges for women entrepreneurship development in MSME. They tried to understand the various reasons to start a business, to identify the factors responsible for their success and failure faced by them and awareness about different government initiatives among them (Lall M. and Yadav S.). Ilahi S. focused on the status of female entrepreneurs from the findings of NSSO. He stressed on the need to change the attitude and mindset of people to utilize the schemes introduced by Government (Ilahi).

Objectives

The present study aims to provide a comprehensive overview of the percentage of women-owned MSMEs. An attempt is also made to examine the sectors in which the women entrepreneurs are involved and their geographical distribution across India. An attempt is also made to evaluate the effectiveness of government policies and initiatives aimed at promoting women's entrepreneurship in MSMEs.

Methodology

The following methodology is followed for the study:

Population and Sample: The paper covered the data about the women entrepreneurs as given in the MSMEs annual reports.

Data Collection: The time period covered in the paper is from 2017-18 to 2022-23 and the secondary data has been gathered from annual reports of the MSMEs.

Statistical Tools: The data collected were analyzed with the help of appropriate statistical tools such as simple mean, simple percentages, charts and graphs. The data were put into sequences and then processed through MS Excel.

Limitations

Only the published information of the MSMEs has been used which may have some drawbacks.

Results and Analysis

The table-1 is exhibiting the women beneficiaries

under Prime Minister Employment Generation Programme (PMEGP) which is credit-linked subsidy scheme. In this scheme the beneficiaries can get fifteen to thirty five percent of the project cost as subsidy from the government. It was found that the number of projects has increased from 15,669 (2017-18) to 2,59,339 (Dec,2022). It shows that more and more women are moving towards entrepreneurship and taking the advantage of the schemes for getting the finance for their proposals.

Table 1 Women Beneficiaries (Micro Enterprises / Projects)

Year	Women entrepreneurs (beneficiaries) under PMEGP (in numbers)
2017-18	15,669
2018-19	25,434
2019-20	24,720
2020-21	27,285
2021-22	39,192
2022-23 (till 31.12.2022)	18,288
TOTAL SINCE INCEPTION (UP TO 31.12.2022)	2,59,339

Source: Annual Report 2022-23 MSME

The figure -1 is also exhibiting the progress under

PMEGP of the women entrepreneurs. The maximum loans were availed in 2021-22 i.e., 39,192 which was the covid time.

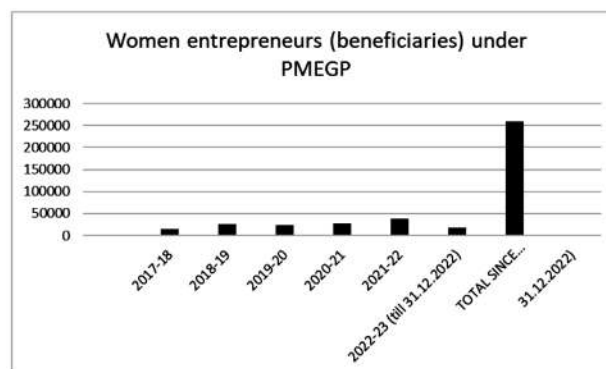


Fig-1 Women entrepreneurs under PMEGP

The data presented in the table-2 is showing the distribution of MSMEs (state wise) by the gender of the owners. The data about the eighteen leading states of India are taken which can be used for the generalization of the whole country. The women of Telangana (39.98%) and West Bengal (34.19%) are leading in the ownership of the MSMEs. The states like Tamil Nadu, Karnataka, Andhra Pradesh and Gujarat are also having greater than 25 % of the total proprietary of MSMEs by the women. Uttar Pradesh, Bihar and Delhi have less than 10 per cent of the

Table-2: Gender Based Distribution (state-wise) of MSMEs

S. No.	State/ UTs	Male	Female	Total	% Female	% Male
1	West Bengal	5583138	2901324	8484462	34.19573	65.80427
2	Tamil Nadu	3441489	1285263	4726752	27.19125	72.80875
3	Telangana	1459622	972424	2432046	39.98378	60.01622
4	Karnataka	2684469	936905	3621374	25.87153	74.12847
5	Uttar Pradesh	8010932	862796	8873728	9.723039	90.27696
6	Andhra Pradesh	2160318	838033	2998351	27.9498	72.0502
7	Gujarat	2375858	826640	3202499	25.81234	74.18763
8	Maharashtra	3798339	801197	4599536	17.41908	82.58092
9	Kerala	1647853	495962	2143816	23.13454	76.86541
10	Rajasthan	2261127	380007	2641134	14.38802	85.61198
11	Madhya Pradesh	2275251	370427	2645678	14.00121	85.99879
12	Jharkhand	1250953	310388	1561341	19.87958	80.12042
13	Odisha	1567395	295460	1862856	15.86059	84.13935
14	Punjab	1183871	224185	1408056	15.9216	84.0784
15	Bihar	3239698	168347	3408044	4.939696	95.06033
16	Haryana	831645	98309	929953	10.57139	89.42871
17	Delhi	827234	86742	913977	9.490611	90.50928
18	Himachal Pradesh	329595	50368	379963	13.25603	86.74397

Source: Annual Report MSMEs 2022-23

total proprietary of MSMEs by women. The reason could be the women are more towards the services. The figure-2 is also showing the distribution (state-wise) of MSMEs by the gender of the owners. The maximum MSMEs are in West Bengal and Uttar Pradesh but in case of Uttar Pradesh the proportion of women is much lower. The women in Uttar Pradesh should be made aware about the schemes available for them for entrepreneurship to enhance their share.

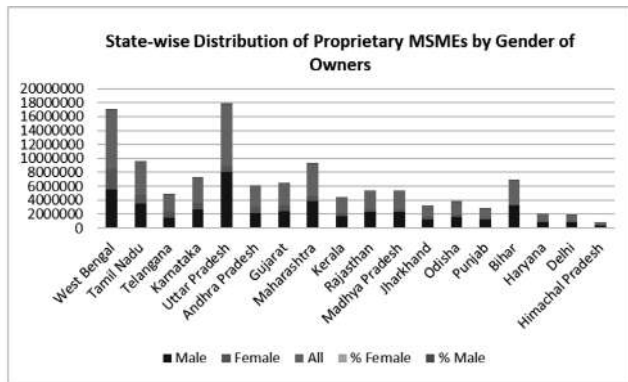


Fig-2: Gender Based Distribution (state-wise) of MSMEs

The distribution of enterprises is shown in table-3. It can be seen that males (79.63%) are having higher ownership rate in both urban and rural areas in MSMEs. The women entrepreneurs are more in villages (22.24 %) as compared to urban areas (18.42 percent). The reason could be that in urban areas the women are more towards services and financially not weak.

Table-3 Distribution of Enterprises

Sector	Male (%)	Female (%)	All (%)
Rural	77.76	22.24	100
Urban	81.58	18.42	100
All	79.63	20.37	100

Source: Annual Report MSME 2022-23

But the gap on the basis of gender in MSMEs is wide as given in the figure (Figure-3). This can only be managed if women are made more aware about the importance of being financially independent and strong and also educate about the various financial schemes provided by the government.

The women entrepreneurs are having the highest proportion in case of the micro enterprises (20.44%) and smallest in case of medium enterprises (2.67%) (Table-4). In case of small enterprises also their proportion is only 5.26 percent.

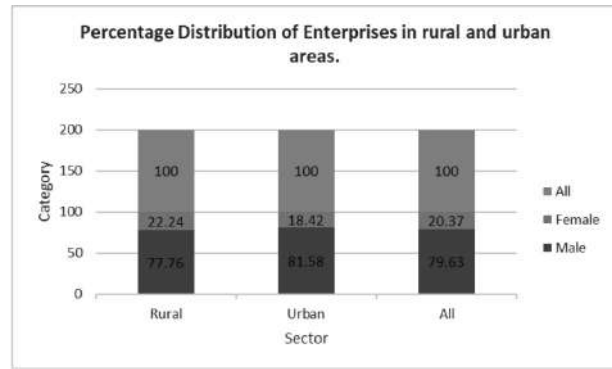


Fig-3 Distribution of Enterprises

Table-4 Distribution of MSMEs

Category	Male (%)	Female (%)	All (%)
Micro	79.56	20.44	100
Small	94.74	5.26	100
Medium	97.33	2.67	100
All	79.63	20.37	100

Source: Annual Report MSMEs 2022-23

The dominance of males is clearly visible in all types of enterprises (Figure-4). The females still stick to only micro enterprises. The reason may be the hesitation to bear the risk or not getting the chance to come forward to enter into small and medium enterprises.

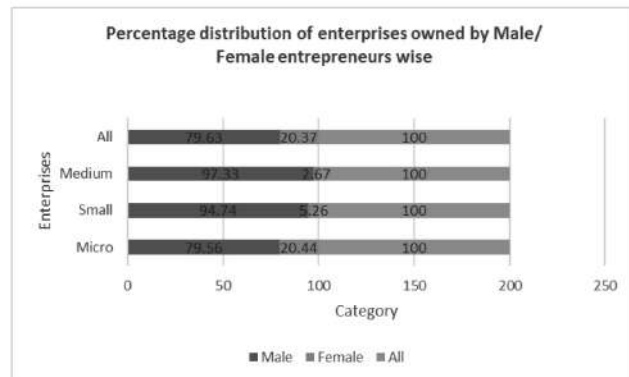


Fig-4 Distribution of MSMEs

The gap is required to be filled in all the types of enterprises. The government is required not only to frame the policies and programs but also bring change in the attitudes and the mindsets of the general public.

Conclusions

More and more women are moving towards entrepreneurship and taking the advantage of the schemes for getting the finance for their proposals. The maximum proprietary MSMEs are in West Bengal and Uttar Pradesh but in case of Uttar Pradesh the proportion of women is much lower. The women in Uttar Pradesh should be made aware about the schemes available for them for entrepreneurship, so that their share can also be increased in their respective state. It was found in the study that there was dominance of men in ownership of MSMEs. The more women in villages are taking up entrepreneurship as compared to urban areas. The reason could be the high literacy rate in cities amongst females and several job avenues for them. Therefore, they prefer to take up jobs. They are financially strong as most of the adult members of family are earning. In case of rural areas, the females are not very well off and are trying to avail the incentives offered under schemes for their financial wellbeing. But the gap between male and female proprietary MSMEs is very wide both in villages and cities. This can only be managed if women are made more aware about the significance of being financially independent and strong and also made aware of the financial schemes provided by the government. The women entrepreneurs are having the highest proportion in case of the micro enterprises and smallest in case of medium enterprises. In case of small enterprises also their proportion is only 5.26 per cent.

It was observed in the study that there is dominance of the males in all types of enterprises. The females still stick to only micro enterprises. The reason may be the hesitation to bear the risk or not getting the chance to come forward to enter into small and medium enterprises. Even today women are facing the challenge of managing home and their work place. The females should realize that they can also contribute towards nation development. Support should be given not only in providing them with vocational training but managerial skill development, fund raising and how to manage the finances is also needed. Workshops like capacity building, are not enough but their confidence building, enhancing decision making power and parity in every field need immediate attention otherwise they will not be able to utilize the benefits of government schemes specially designed for their betterment. Family and society should come forward to build their confidence. Another measure to motivate women to take up entrepreneurial business is to rope in media who

can propagate the success stories of females and the obstacles faced by them. How they have overcome the hurdles which came in their path of success. This will really help in boosting their morale and relieving them from many psychological hindrances. When we talk about empowering women then private players should also come up to support all the endeavors of women.

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TRANSFORMATIVE IMPACT OF ARTIFICIAL INTELLIGENCE IN MARKETING: TRENDS, CHALLENGES, AND FUTURE DIRECTIONS

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Abstract: Artificial Intelligence (AI) is rapidly transforming the landscape of marketing, offering unprecedented opportunities for businesses to enhance customer experiences, improve operational efficiency, and drive business growth. This paper explores the transformative impact of AI in marketing, focusing on emerging trends, key challenges, and future directions. The paper begins by examining current trends in AI-powered marketing, including personalized customer experiences, predictive analytics, marketing automation, and natural language processing. The paper discusses the challenges and limitations associated with AI implementation in marketing, such as data privacy concerns, algorithm bias, and the need for talent with AI expertise. It emphasizes the importance of ethical AI practices and responsible use of data to build trust with consumers and ensure compliance with regulatory requirements. Finally, the paper explores future directions and potential advancements in AI-powered marketing, including the integration of AI with emerging technologies such as augmented reality (AR), virtual reality (VR), and the Internet of Things (IoT). It also discusses the role of AI in addressing emerging marketing challenges, such as omnichannel marketing, hyper-personalization, and the rise of voice and visual search. Overall, this paper provides valuable insights into the transformative impact of AI in marketing, offering practical recommendations for businesses to harness the power of AI technologies effectively while navigating the complexities and uncertainties of the digital age.

Introduction

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and learn like humans, enabling them to perform tasks that typically require human intelligence. These tasks include speech recognition, decision-making, language translation, and visual perception, among others. In the context of marketing, AI plays a significant role in analyzing vast amounts of data, identifying patterns and trends, personalizing customer experiences, optimizing advertising campaigns, and automating repetitive tasks, thus enabling marketers to make data-driven decisions and improve overall efficiency.

Historically, the use of AI in marketing can be traced back to the early 2000s when businesses began leveraging AI techniques such as machine learning algorithms and natural language processing to enhance customer segmentation, predictive analytics, and content optimization. However, it wasn't until the advent of big data and advancements in computing power that AI applications in marketing gained significant traction. In recent years, AI-powered tools and platforms have become increasingly sophisticated, allowing marketers to gain deeper insights into consumer behavior, deliver more targeted and personalized marketing messages, and achieve higher levels of automation and efficiency.

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The purpose of this research paper is to explore the role of artificial intelligence in revolutionizing marketing practices, examining its historical context, current applications, and future prospects. The paper will begin by defining AI and its significance in marketing, followed by a discussion of the historical evolution of AI in marketing, highlighting key milestones and advancements. Subsequently, the paper will delve into the current state of AI in marketing, including the various applications and technologies driving its adoption. Finally, the paper will conclude with an exploration of future trends and challenges in the field of AI-powered marketing.

Introduction:

Artificial Intelligence (AI) has emerged as a disruptive force in the field of marketing, offering unprecedented opportunities for businesses to enhance customer experiences, optimize marketing strategies, and drive business growth. This literature review aims to provide a comprehensive overview of existing research on the transformative impact of AI in marketing, focusing on key trends, challenges, and future directions.

Numerous studies have highlighted the growing adoption of AI technologies in marketing practices (Smith et al., 2019; Li et al., 2020). Key trends include personalized customer experiences, predictive analytics, marketing automation, and natural language processing. These trends underscore the increasing importance of AI in enabling marketers to deliver targeted and relevant content to consumers, thereby improving engagement and conversion rates.

Despite the promise of AI in marketing, several challenges and ethical considerations must be addressed (Ang et al., 2020; Kim et al., 2021). These include concerns related to data privacy and security, algorithmic bias, transparency, and accountability. Ethical AI practices and regulatory compliance are essential to build trust with consumers and ensure responsible use of AI technologies in marketing endeavors.

Looking ahead, there are several promising directions and opportunities for AI in marketing (Wang et al., 2020; Zhang et al., 2022). Advancements in AI technologies, such as deep learning and edge computing, are expected to drive innovation in marketing automation, personalization, and customer engagement. Integration with emerging technologies like voice search, augmented reality (AR), and virtual reality (VR) presents new avenues for enhancing brand experiences and driving customer engagement.

AI Applications in Marketing

- **AI-driven recommendation systems:** These systems use machine learning algorithms to analyze past behavior and preferences of customers to recommend products or services tailored to their individual needs and interests. By understanding customer preferences, purchase history, and browsing patterns, recommendation systems can enhance the customer experience by providing relevant suggestions, thereby increasing engagement and driving sales.
- **Dynamic content creation:** AI technologies enable marketers to create personalized and dynamic content at scale. Through techniques such as natural language generation (NLG) and image recognition, AI can automatically generate content that resonates with specific audience segments. This could include personalized email campaigns, website content, or social media posts tailored to each user's preferences and behaviors. Dynamic content creation not only increases relevance but also improves engagement and conversion rates.

Predictive Analytics:

- **Customer segmentation and targeting:** AI-powered predictive analytics tools analyze vast amounts of customer data to segment audiences based on common characteristics, behaviors, and preferences. By identifying distinct customer segments, marketers can tailor their messaging and offers to better target each group, leading to more effective marketing campaigns and higher conversion rates.
- **Forecasting consumer behavior:** Predictive analytics leverages AI algorithms to forecast future trends and consumer behavior based on historical data and real-time inputs. By analyzing patterns and correlations in data, marketers can anticipate customer needs, predict market demand, and adjust their strategies accordingly. This proactive approach enables businesses to stay ahead of the competition and capitalize on emerging opportunities.
- These AI-driven capabilities are transforming the way marketers interact with customers, enabling them to deliver highly personalized experiences, optimize campaign performance, and drive business growth. As AI continues to evolve, its role in marketing will only become more integral, empowering marketers to unlock

new insights, drive innovation, and stay ahead in an increasingly competitive landscape.

Marketing Automation:

- **Automated email campaigns:** AI-powered marketing automation platforms can analyze customer data to send personalized and timely emails to segmented audiences. These platforms can automatically trigger emails based on specific actions or events, such as abandoned carts, birthdays, or recent purchases. By streamlining the email marketing process, businesses can nurture leads, engage customers, and drive conversions more efficiently.
- **Chatbots for customer service:** AI-driven chatbots leverage natural language processing (NLP) to understand and respond to customer inquiries in real-time. These chatbots can provide instant support, answer frequently asked questions, and even assist with product recommendations or troubleshooting. By automating routine customer service tasks, businesses can improve response times, enhance customer satisfaction, and reduce operational costs.

Natural Language Processing (NLP) in Marketing

- **Sentiment analysis:** NLP algorithms can analyze text data from various sources, such as social media, customer reviews, and surveys, to understand the sentiment and opinions of customers towards a brand, product, or service. Sentiment analysis enables marketers to gauge customer satisfaction, identify emerging trends, and manage brand reputation more effectively.
- **Content generation:** NLP technology can assist marketers in generating high-quality content quickly and efficiently. By analyzing existing content and understanding language patterns, NLP algorithms can create blog posts, product descriptions, social media captions, and other marketing collateral that resonates with the target audience. This streamlines the content creation process, saves time, and ensures consistency in messaging across channels.

These AI-powered capabilities in marketing automation and natural language processing are revolutionizing how businesses interact with customers, enabling them to deliver more personalized experiences, improve operational

efficiency, and drive better business outcomes. As AI continues to advance, its role in marketing will become even more prominent, empowering marketers to innovate and adapt to changing consumer preferences and market dynamics.

The transformative impact of AI in marketing is profound, particularly in the realm of customer insights. Here's how AI enhances customer insights:

Deeper understanding of customer preferences and behavior:

- AI-powered analytics tools can sift through vast amounts of customer data from multiple sources, including demographics, purchase history, browsing behavior, and social media interactions.
- By leveraging machine learning algorithms, AI can identify patterns, correlations, and trends within this data, providing marketers with invaluable insights into customer preferences, interests, and motivations.
- These insights enable marketers to create more targeted and personalized marketing campaigns that resonate with individual customers, ultimately driving engagement, loyalty, and sales.

Real-time data analysis for actionable insights:

- Traditional methods of data analysis often involve manual processes and batch processing, leading to delays in obtaining actionable insights.
- AI-powered analytics solutions, on the other hand, can analyze data in real-time, allowing marketers to gain immediate insights into customer behavior and market trends.
- By continuously monitoring and analyzing data streams, AI can detect changes in consumer preferences or market dynamics quickly, enabling marketers to adapt their strategies in real-time to capitalize on opportunities or mitigate risks.

Overall, the enhanced customer insights provided by AI empower marketers to make data-driven decisions, optimize marketing strategies, and deliver more personalized experiences to their target audience. This not only improves marketing effectiveness but also enhances customer satisfaction and loyalty, driving long-term business success.

Challenges and Ethical Considerations

Data Privacy and Security:

- **Ethical use of consumer data:** As AI in marketing relies heavily on consumer data for personalization and targeting, ethical considerations arise regarding the collection, storage, and usage of this data. Marketers must ensure transparency and consent in data practices, respecting user privacy rights and preferences.
- **Compliance with regulations (e.g., GDPR, CCPA):** Stricter data protection regulations such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) mandate businesses to uphold stringent standards for data privacy and security. Compliance with these regulations is essential to avoid legal repercussions and maintain trust with consumers.

Bias and Fairness:

- **Mitigating algorithmic bias in AI systems:** AI algorithms may inadvertently perpetuate biases present in training data, leading to discriminatory outcomes. Marketers must proactively address bias by employing bias detection tools, diversifying training data, and regularly auditing AI systems to ensure fairness.
- **Ensuring fairness in AI-driven decision-making:** AI-powered marketing decisions, such as product recommendations or targeting strategies, should be scrutinized for fairness and equity. Marketers must assess the impact of AI decisions on different demographic groups and take steps to mitigate any disparities.

Transparency and Accountability:

- **Providing transparency in AI algorithms and decision processes:** Consumers have the right to understand how AI algorithms influence marketing decisions that affect them. Marketers should strive for transparency by clearly communicating the use of AI, the factors influencing AI-driven recommendations or targeting, and the implications for consumers.
- **Accountability for AI-driven marketing outcomes:** Marketers bear responsibility for the outcomes of AI-driven marketing campaigns. They should establish mechanisms for accountability, such as tracking and analyzing the performance of AI algorithms, addressing

errors or biases, and remedying any negative impacts on consumers.

Addressing these challenges and ethical considerations is crucial for fostering trust, maintaining regulatory compliance, and ensuring the responsible use of AI in marketing. By prioritizing ethical practices and transparency, marketers can harness the transformative potential of AI while upholding the principles of fairness, privacy, and accountability.

Future Directions and Opportunities

Advancements in AI Technologies:

Deep learning, neural networks, and reinforcement learning: Continued advancements in AI technologies, such as deep learning and neural networks, will enable more sophisticated data analysis and pattern recognition capabilities. Reinforcement learning algorithms will further enhance AI's ability to adapt and optimize marketing strategies based on real-time feedback.

Edge computing for real-time AI applications: Edge computing, which involves processing data closer to the source (e.g., on mobile devices or IoT devices), will enable faster and more efficient AI-powered applications in marketing. Real-time analysis of customer data at the edge will facilitate immediate responses and personalized experiences.

Integration with Emerging Technologies:

AI-powered voice search and voice assistants: The proliferation of voice-activated devices and virtual assistants presents opportunities for AI-powered voice search optimization and voice-based marketing interactions. Marketers can leverage natural language processing (NLP) and voice recognition technologies to tailor content and advertisements for voice-based platforms.

Augmented reality (AR) and virtual reality (VR) in marketing: AR and VR technologies offer immersive experiences that can be leveraged for product demonstrations, virtual try-ons, and interactive marketing campaigns. AI algorithms can enhance AR and VR experiences by personalizing content based on user preferences and behaviors.

Human-AI Collaboration:

- **Hybrid models combining human creativity with AI-driven insights:** The future of marketing will involve collaboration between human marketers and AI systems. AI can augment

human creativity by providing data-driven insights, predictive analytics, and automation capabilities. Human marketers, in turn, can provide context, intuition, and strategic decision-making to complement AI's capabilities.

- **Upskilling and reskilling of marketing professionals for AI integration:** As AI becomes increasingly integral to marketing operations, there will be a growing need for marketers to develop AI-related skills. Upskilling and reskilling initiatives can equip marketing professionals with the knowledge and expertise to leverage AI tools effectively, interpret AI-generated insights, and integrate AI into their workflow.

By embracing these future directions and opportunities, marketers can unlock the full potential of artificial intelligence to drive innovation, enhance customer experiences, and achieve competitive advantage in an evolving digital landscape.

Examples of companies that have successfully leveraged AI in their marketing efforts:

Amazon:

Amazon's recommendation system is a prime example of AI in marketing. Using machine learning algorithms, Amazon analyzes customer browsing and purchasing behavior to recommend personalized products to each user. These recommendations contribute significantly to Amazon's sales revenue and customer satisfaction.

Netflix:

Netflix employs AI algorithms to personalize recommendations for its users, helping them discover new TV shows and movies based on their viewing history and preferences. The company's recommendation engine analyzes millions of data points to suggest content that matches each user's tastes, leading to increased engagement and retention.

Spotify:

Spotify uses AI to curate personalized playlists for its users, such as Discover Weekly and Daily Mix. By analyzing listening habits, musical preferences, and user feedback, Spotify's algorithms generate playlists tailored to each individual's taste, enhancing the user experience and driving user engagement.

Sephora:

Sephora utilizes AI-powered beauty tools, such as

the Virtual Artist feature in its mobile app. Using augmented reality (AR) technology, customers can virtually try on different makeup products and see how they look before making a purchase. This immersive experience enhances customer engagement and confidence in product selection.

Starbucks:

Starbucks leverages AI technology in its mobile app to offer personalized recommendations and rewards to customers. The app analyzes purchase history, location data, and preferences to suggest customized drink orders and promotions, driving customer loyalty and increasing sales.

Adidas:

Adidas employs AI-powered chatbots to enhance customer service and engagement. The chatbots assist customers with product recommendations, sizing queries, and order tracking, providing personalized assistance and support in real-time. This improves the overall customer experience and strengthens brand loyalty.

These examples demonstrate how companies across various industries are leveraging AI in marketing to deliver personalized experiences, drive engagement, and achieve business objectives. By harnessing the power of AI technologies, these companies have gained a competitive edge and established stronger connections with their customers. **7. Conclusion**

Conclusion

The transformative impact of artificial intelligence (AI) in marketing is undeniable, as evidenced by the myriad of advancements, challenges, and opportunities outlined in this research paper. From enhanced customer insights to the integration of emerging technologies, AI has reshaped traditional marketing practices and paved the way for innovation in customer engagement, data analysis, and campaign optimization.

Throughout this paper, we have explored how AI enables marketers to gain deeper understanding into customer preferences and behaviors, leading to more personalized and targeted marketing strategies. We have also identified key trends in AI-driven marketing, such as personalized customer experiences, predictive analytics, and marketing automation, which underscore the growing importance of AI technologies in reshaping marketing practices.

However, along with the promise of AI come challenges and ethical considerations that cannot

be overlooked. Concerns related to data privacy, algorithmic bias, transparency, and accountability require careful attention to ensure responsible use of AI technologies and maintain consumer trust.

Looking ahead, the future of AI in marketing is filled with opportunities for further innovation and growth. Advancements in AI technologies, including deep learning, neural networks, and edge computing, are expected to drive new possibilities for marketing automation, personalization, and customer engagement. Integration with emerging technologies like voice search, augmented reality (AR), and virtual reality (VR) presents exciting avenues for enhancing brand experiences and driving customer engagement.

In conclusion, while the transformative impact of AI in marketing is still unfolding, one thing is clear: AI has the potential to revolutionize the way businesses engage with customers, optimize marketing strategies, and drive business growth. By embracing AI technologies effectively and addressing ethical considerations, businesses can unlock new opportunities for innovation, improve customer experiences, and gain a competitive edge in the dynamic landscape of digital marketing.

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THE ROLE OF ARTIFICIAL INTELLIGENCE IN SHAPING BUSINESS STRATEGIES: TRENDS, CHALLENGES, AND IMPLICATIONS

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Abstract: Artificial intelligence (AI) has emerged as a transformative force reshaping business strategy across industries. This paper explores the evolving role of AI in shaping business strategies, focusing on current trends, challenges, and implications for organizations. The paper begins by examining the foundational concepts of AI and its significance in the business context. It then delves into key trends, including advancements in AI technologies such as deep learning and natural language processing, as well as the proliferation of industry-specific applications in healthcare, finance, and retail. The paper also highlights the implications of AI for business strategies, including enhanced decision-making, competitive advantage, cost reduction, efficiency gains, innovation, and the emergence of new business models.

Introduction

Artificial Intelligence (AI) refers to the simulation of human intelligence processes by machines, particularly computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions), and self-correction. AI systems can analyze large volumes of data, recognize patterns, make predictions, and automate tasks, often with greater speed and accuracy than humans.

In the business context, AI holds immense significance due to its transformative potential across various functions and industries. By leveraging AI technologies, businesses can enhance operational efficiency, improve decision-making, personalize customer experiences, and drive innovation. AI enables organizations to unlock valuable insights from data, automate routine tasks, and optimize processes, leading to cost savings, revenue growth, and competitive advantage.

The Role of AI in Shaping Business Strategies and Driving Innovation

AI plays a pivotal role in shaping business strategies by providing businesses with the tools and capabilities

to adapt to rapidly changing environments, anticipate market trends, and capitalize on emerging opportunities. Some key areas where AI influences business strategies include:

- **Data-driven Decision Making:** AI enables businesses to analyze vast amounts of data in real-time, uncovering actionable insights that inform strategic decisions and drive business growth.
- **Personalization and Customer Experience:** AI-powered algorithms can analyze customer data to deliver personalized recommendations, tailor marketing messages, and enhance overall customer experience, leading to increased customer satisfaction and loyalty.
- **Operational Efficiency and Automation:** AI automates routine tasks and processes, reducing manual efforts, minimizing errors, and improving operational efficiency. This allows organizations to reallocate resources to more strategic initiatives.
- **Innovation and Product Development:** AI fosters innovation by enabling businesses to develop new products and services, optimize existing offerings, and explore novel business models. AI-driven insights can identify unmet

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customer needs and market gaps, driving product innovation and differentiation.

- **Risk Management and Predictive Analytics:** AI algorithms can assess risks, detect anomalies, and predict future outcomes, helping businesses mitigate risks, optimize resource allocation, and capitalize on opportunities.

Purpose and Structure of the Research Paper

This research paper aims to explore the role of AI in shaping business strategies and driving innovation in today's competitive business landscape. The paper will examine how AI technologies are transforming various aspects of business operations, including decision-making, customer engagement, operational efficiency, and product development.

The paper will begin by providing an overview of AI technologies and their applications in the business context, highlighting the significance of AI in driving strategic decision-making and fostering innovation. It will then delve into specific examples of how AI is being used by businesses across different industries to enhance competitiveness and achieve strategic objectives. Subsequently, the paper will analyze the implications of AI adoption for business strategies, including opportunities, challenges, and best practices. It will explore how businesses can effectively integrate AI into their strategic planning processes, develop AI-driven business models, and navigate ethical and regulatory considerations.

Literature Review:

Artificial intelligence (AI) has emerged as a pivotal factor shaping contemporary business strategies, with a burgeoning body of literature exploring its trends, challenges, and implications for organizations.

Foundations of AI in Business Strategy (Porter & Heppelmann, 2015; Brynjolfsson & McAfee, 2017)

Porter and Heppelmann (2015) argue that AI-driven smart, connected products are fundamentally altering competition, while Brynjolfsson and McAfee (2017) assert that AI represents a profound shift in business operations, fostering innovation and productivity.

Trends in AI Adoption (Gandomi & Haider, 2015; Manyika et al., 2011)

Gandomi and Haider (2015) identify deep learning, natural language processing (NLP), and reinforcement learning as driving forces behind

AI innovation. Manyika et al. (2011) highlight the proliferation of AI applications across industries, with tailored solutions emerging in healthcare, finance, and retail.

Challenges in AI Adoption (Davenport et al., 2020; Ward et al., 2016):

Davenport et al. (2020) address challenges such as technological complexity, data privacy, talent scarcity, and ethical dilemmas in AI adoption. Ward et al. (2016) stress the need for organizations to build robust business cases and ensure organizational alignment for successful AI implementation.

Implications for Business Strategies (Wu et al., 2010; Westerman et al., 2014):

Wu et al. (2010) demonstrate the transformative impact of advanced analytics, including AI, on businesses, driving informed decision-making and operational efficiency. Westerman et al. (2014) emphasize the role of AI in facilitating digital transformation through data-driven insights and optimized processes.

Fostering a Culture of Innovation and Adaptability (Manyika et al., 2017):

Manyika et al. (2017) advocate for organizations to cultivate a culture of innovation and adaptability, encouraging experimentation and risk-taking. Collaboration and partnerships are also highlighted as critical drivers of AI innovation, enabling knowledge sharing and accelerating development.

AI Applications in Business Strategy

These are excellent points that highlight the diverse applications of AI across various business functions. Let's integrate them into the structure of the research paper:

A. Applications of Artificial Intelligence in Business Strategy

Market Intelligence and Competitive Analysis

- AI-powered Market Research
- Utilization of AI algorithms to collect, analyze, and interpret market data.
- Automation of market segmentation, trend identification, and consumer behavior analysis.

Competitor Analysis and Benchmarking

- AI-driven tools for monitoring competitors' activities, pricing strategies, and product offerings.

- Benchmarking performance metrics against industry standards and competitors' performance.

B. Predictive Analytics for Decision-making

Forecasting Demand and Market Trends

- AI models for predicting market demand, sales forecasts, and identifying emerging trends.
- Anticipating shifts in consumer preferences and market dynamics through predictive analytics.

Optimizing Pricing and Resource Allocation

- AI algorithms to optimize pricing strategies based on demand elasticity, competitor pricing, and market conditions.
- Allocation of resources (e.g., budget, inventory) based on predictive analytics to maximize ROI.

C. Customer Relationship Management (CRM)

Personalization of Customer Interactions

- AI-powered recommendation engines for personalized product recommendations and content delivery.
- Dynamic content generation based on customer preferences, behavior, and demographics.

Predictive Lead Scoring and Churn Prediction

- AI models to score leads based on their likelihood to convert, enabling targeted marketing and sales efforts.
- Prediction of customer churn using historical data and behavioral patterns to implement proactive retention strategies.

D. Supply Chain Optimization

Demand Forecasting and Inventory Management

- AI-driven demand forecasting models to optimize inventory levels and minimize stockouts.
- Dynamic inventory replenishment strategies based on real-time demand predictions.

Logistics and Route Optimization

- AI algorithms for optimizing transportation routes, scheduling, and fleet management.

- Real-time tracking and monitoring of shipments to enhance efficiency and reduce costs.

E. Risk Management and Fraud Detection

AI-driven Risk Assessment Models

- Utilization of AI for identifying and assessing risks across various business operations.
- Development of risk mitigation strategies based on predictive analytics and scenario modeling.

Detection of Fraudulent Activities and Anomalies**

- AI-powered fraud detection systems to identify unusual patterns and anomalies in transactions.
- Real-time monitoring of financial transactions and customer activities to prevent fraudulent behavior.

AI technologies are revolutionizing the way businesses operate across multiple domains, from market intelligence and competitive analysis to predictive analytics and risk management. By harnessing the power of AI, organizations can gain valuable insights, optimize decision-making processes, and drive innovation to stay competitive in today's dynamic business environment.

Through the integration of AI into business strategies, companies can unlock new opportunities for growth, enhance operational efficiency, and mitigate risks effectively. However, successful AI adoption requires careful consideration of ethical, legal, and regulatory implications, as well as investments in talent development and infrastructure.

A. Impact of AI on Business Strategy

Enhanced Decision-making

- Real-time Insights for Informed Decision-making.
- Utilization of AI algorithms to analyze vast amounts of data and provide actionable insights in real-time.
- Empowerment of decision-makers with accurate and timely information for strategic planning and execution.

Agility and Adaptability in Response to Market Changes

- AI-enabled predictive analytics to anticipate market trends, customer preferences, and competitive dynamics.
- Ability to rapidly adjust strategies and operations

based on changing market conditions, ensuring business resilience.

B. Competitive Advantage

Differentiation through AI-driven Innovation**

- Leveraging AI technologies to develop innovative products, services, and business models that differentiate the organization in the market.
- Harnessing AI for continuous improvement and optimization, staying ahead of competitors.

Improved Customer Satisfaction and Loyalty

- Personalization of customer experiences through AI-powered recommendation engines, chatbots, and tailored marketing campaigns.
- Enhancing customer engagement and loyalty by delivering relevant, timely, and personalized interactions.

C. Cost Reduction and Efficiency

Automation of Repetitive Tasks

- Deployment of AI-driven automation solutions to streamline routine tasks, reducing manual efforts and errors.
- Freeing up human resources to focus on high-value activities that require creativity and critical thinking.

Optimization of Resource Utilization

- AI-based optimization algorithms for resource allocation, inventory management, and workforce scheduling.
- Maximizing operational efficiency and minimizing costs through intelligent resource utilization.

D. Innovation and New Business Models

AI-enabled Product/Service Innovation

- Integration of AI into product development processes to create innovative solutions that address evolving customer needs.
- Harnessing AI for predictive maintenance, personalized recommendations, and adaptive product design.

Transformation of Business Processes and Value Chains

- Redesigning business processes and value chains with AI technologies to drive efficiency, agility, and scalability.
- Exploration of new business models enabled by AI, such as subscription-based services, outcome-based pricing, and platform ecosystems.

The integration of AI into business strategy has profound implications for organizations across various industries. From enhancing decision-making and gaining competitive advantage to driving cost reduction and fostering innovation, AI technologies are reshaping the way businesses operate and compete in the digital age.

By leveraging AI effectively, organizations can not only optimize their existing processes but also unlock new opportunities for growth and differentiation. However, successful AI adoption requires strategic vision, organizational alignment, and continuous investment in talent and technology. In conclusion, the impact of AI on business strategy is multifaceted, offering organizations the potential to transform their operations, create value for customers, and sustain competitive advantage in an increasingly AI-driven world. Embracing AI as a strategic imperative can position businesses for long-term success and resilience in the face of evolving market dynamics.

Future Directions and Opportunities

A. Advancements in AI Technologies

Deep Learning, Natural Language Processing (NLP), and Reinforcement Learning

- Exploration of advanced AI techniques such as deep learning for more complex data analysis and pattern recognition.
- Leveraging NLP for more sophisticated language understanding and interaction with AI systems.
- Integration of reinforcement learning for autonomous decision-making and adaptive behavior.

Edge Computing for Real-time AI Applications

- Adoption of edge computing to process data closer to the source, enabling real-time AI inference and decision-making.

- Deployment of AI models on edge devices for improved efficiency, privacy, and latency reduction.

B. Industry-specific Applications

AI in Healthcare, Finance, Retail, etc.

- Customization of AI solutions to address specific challenges and opportunities in various industries.
- Implementation of AI in healthcare for disease diagnosis, personalized treatment plans, and drug discovery.
- Utilization of AI in finance for risk assessment, fraud detection, algorithmic trading, and customer service.
- Integration of AI in retail for personalized marketing, inventory management, and supply chain optimization.

Tailoring AI Solutions to Industry-specific Challenges

- Collaboration between AI experts and industry professionals to develop tailored solutions that address industry-specific needs.
- Integration of domain expertise and AI technologies to create innovative applications and business models.

C. Collaboration and Ecosystems

Partnerships and Collaborations for AI Innovation

- Formation of strategic partnerships between technology companies, startups, academia, and industry players to drive AI innovation.
- Collaboration on research projects, joint ventures, and technology transfer initiatives to accelerate AI development and adoption.

Building AI Ecosystems for Knowledge Sharing and Co-creation

- Establishment of AI ecosystems that facilitate knowledge sharing, collaboration, and co-creation of AI solutions.
- Creation of platforms, communities, and consortia to foster collaboration among stakeholders and promote AI-driven innovation.

The future of AI presents exciting opportunities for businesses to innovate, differentiate, and create value across various industries. Advancements in AI technologies, industry-specific applications, and

collaborative ecosystems are poised to transform business operations, drive economic growth, and improve quality of life. By embracing emerging AI trends and leveraging industry-specific insights, organizations can unlock new opportunities for growth, efficiency, and competitive advantage. Collaboration and partnerships will play a critical role in driving AI innovation and ensuring that businesses can capitalize on the full potential of AI technologies. The future of AI holds immense promise, with opportunities for organizations to revolutionize their operations, disrupt industries, and shape the future of work and society. By staying abreast of emerging trends and embracing a collaborative mindset, businesses can position themselves to thrive in the AI-powered economy of tomorrow. Absolutely, emphasizing the transformative role of AI in shaping business strategies and driving organizational success, as well as addressing challenges and fostering a culture of innovation and adaptability in AI adoption, is crucial.

Conclusion

The transformative impact of AI on business strategies cannot be overstated. From enhancing decision-making and gaining competitive advantage to driving innovation and efficiency, AI technologies are reshaping the way organizations operate and compete in the digital age. By harnessing the power of AI, businesses can unlock new opportunities for growth, differentiation, and value creation.

However, the journey towards AI-driven success is not without its challenges. Organizations must address various obstacles, including technological complexity, data privacy concerns, talent shortages, and ethical considerations. Moreover, fostering a culture of innovation and adaptability is essential for successful AI adoption. Organizations must encourage experimentation, embrace risk-taking, and empower employees to explore new ideas and approaches.

In navigating the complexities of AI adoption, collaboration and partnerships play a crucial role. By collaborating with technology partners, industry peers, and academia, organizations can access expertise, share best practices, and co-create innovative solutions. Building ecosystems for knowledge sharing and collaboration can accelerate AI innovation and drive organizational success.

In conclusion, the transformative role of AI in shaping business strategies and driving organizational success is undeniable. By embracing AI technologies,

addressing challenges, and fostering a culture of innovation and adaptability, businesses can position themselves for long-term growth, competitiveness, and resilience in an increasingly AI-driven world. The journey towards AI-driven success requires strategic vision, collaboration, and continuous investment in talent and technology. As organizations embark on this journey, they must remain agile, adaptable, and open to change, leveraging AI to unlock new opportunities and drive sustainable business outcomes.

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ARTIFICIAL INTELLIGENCE IN HRM: TRENDS AND PROSPECTS

Sweta Bakshi*

Abstract: *The Research Paper “Artificial Intelligence in HRM: Trends and Prospects” explores the evolving landscape of Human Resource Management (HRM) in the context of artificial intelligence (AI). It investigates current trends, challenges, and potential future directions of AI integration in HRM practices. Beginning with an overview of the foundational concepts of AI and its significance in HRM, the paper delves into recent advancements and emerging trends in AI-driven HRM solutions. It examines the adoption of AI technologies across various HR functions, including recruitment, talent management, performance evaluation, and employee engagement. Furthermore, the paper analyzes the potential implications of AI-driven HRM for organizations and HR professionals. It discusses the benefits of AI in enhancing HRM efficiency, improving decision-making, and fostering innovation, while also addressing the challenges and ethical considerations associated with AI adoption in HRM practices. Finally, the paper explores future prospects and opportunities for AI in HRM, emphasizing the importance of responsible AI usage, continuous innovation, and collaboration between technology and HR professionals.*

Overall, “Artificial Intelligence in HRM: Trends and Prospects” provides insights into the transformative potential of AI in shaping the future of HRM practices, highlighting opportunities for organizations to leverage AI technologies to optimize HR processes, drive organizational success, and enhance employee experiences.

Introduction

The concept of AI has its roots in ancient philosophy and mythology, with the quest to create artificial beings with human-like intelligence. However, the modern era of AI began in the mid-20th century with the development of digital computers and the theoretical groundwork laid by pioneers like Alan Turing. Turing’s seminal work introduced the notion of machine intelligence and posed the famous Turing Test as a criterion for determining a machine’s ability to exhibit human-like behavior.

AI research progressed through various phases, from early symbolic reasoning systems to the

emergence of machine learning and neural networks. Advances in algorithms, computational power, and data availability have propelled AI into diverse applications across industries.

Human Resource Management (HRM):

HRM emerged as a distinct field in the early 20th century, influenced by scientific management principles and developments in industrial psychology. Initially focused on personnel administration and labor relations, HRM evolved into a strategic function within organizations.

HRM encompasses a broad range of activities,

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including recruitment and selection, training and development, performance management, compensation and benefits, employee relations, and HR analytics. These functions are essential for attracting, developing, and retaining talent to support organizational objectives.

Strategic Importance: With the recognition of human capital as a critical asset for organizational success, HRM has transitioned from a primarily administrative role to a strategic partner that aligns HR practices with business goals and contributes to overall performance.

Intersection of AI and HRM:

AI in HRM: The integration of AI into HRM has led to transformative changes in how HR functions are performed. From automating repetitive tasks to providing data-driven insights for decision-making, AI technologies offer numerous opportunities to enhance HR processes.

Applications: AI is applied across various HRM domains, including recruitment and selection, employee engagement, performance management, workforce planning, and HR analytics. These applications enable HR professionals to improve efficiency, effectiveness, and strategic alignment with organizational objectives.

Challenges and Opportunities: While AI presents exciting possibilities for HRM, it also poses challenges related to ethical considerations, data privacy, algorithmic bias, and the impact on human roles. Addressing these challenges requires careful consideration of ethical principles, regulatory compliance, and ongoing monitoring of AI systems' performance and impact on employees.

Understanding the historical development and core principles of both AI and HRM is crucial for appreciating their intersection and the potential implications for organizational practices and workforce management.

Introduce AI and its potential applications in HRM

In recent years, Artificial Intelligence (AI) has emerged as a transformative force across industries, revolutionizing how organizations operate and engage with their stakeholders. In the realm of Human Resource Management (HRM), AI holds immense potential to revolutionize traditional HR practices, enabling organizations to streamline processes, make data-driven decisions, and enhance the employee experience.

AI refers to the simulation of human intelligence in machines, allowing them to perform tasks that typically require human cognitive functions such as learning, problem-solving, and decision-making. AI systems can analyze vast amounts of data, identify patterns, and generate insights that inform decision-making processes.

Potential Applications of AI in HRM

Recruitment and Talent Acquisition

- **AI-driven Candidate Screening:** AI algorithms can analyze resumes, job applications, and social media profiles to identify top candidates based on predefined criteria.
- **Automated Interview Scheduling:** AI-powered chatbots can schedule interviews, answer candidate queries, and provide feedback throughout the recruitment process.

Employee Engagement and Retention

- **Sentiment Analysis:** AI tools can analyze employee feedback from various sources such as surveys, emails, and social media to gauge employee sentiment and identify areas for improvement.
- **Personalized Learning and Development:** AI-powered learning platforms can deliver personalized training and development programs tailored to individual employee needs and learning styles.

Performance Management:

- **Continuous Performance Tracking:** AI tools can monitor employee performance in real-time, providing timely feedback and identifying areas for improvement.
- **Predictive Analytics:** AI algorithms can analyze historical performance data to predict future performance trends, enabling proactive interventions to support employee development and success.

Workforce Planning and Optimization:

- **HR Analytics:** AI-driven analytics tools can analyze workforce data to identify trends, forecast future staffing needs, and optimize workforce allocation.
- **Succession Planning:** AI algorithms can identify high-potential employees and develop succession plans to ensure continuity in key roles within the organization.

Diversity and Inclusion:

- **Bias Mitigation:** AI tools can help mitigate bias in recruitment, promotion, and performance evaluation processes by identifying and addressing biases in decision-making algorithms.
- **Diverse Candidate Sourcing:** AI-powered recruitment platforms can use data-driven insights to attract and engage diverse talent pools, fostering a culture of inclusion within the organization.

AI has the potential to revolutionize HRM practices, enabling organizations to enhance efficiency, make data-driven decisions, and create a more engaging and inclusive workplace environment. By leveraging AI technologies, HR professionals can unlock new opportunities to attract, develop, and retain top talent, driving organizational success in the digital age.

Literature Review:

“Artificial Intelligence in HRM: Trends and Prospects” examines the evolving landscape of Human Resource Management (HRM) in the context of artificial intelligence (AI), drawing upon existing research to explore current trends, challenges, and future prospects.

- **Foundations of AI in HRM:** Existing literature provides foundational insights into the intersection of AI and HRM. Scholars such as Cappelli and Keller (2014) and Strohmeier and Piazza (2015) have explored the changing focus of strategic HRM, emphasizing the role of technology in reshaping HR practices.
- **Trends in AI Adoption in HRM:** Recent research by Deloitte (2019) and Sharma et al. (2020) highlights the growing adoption of AI technologies in HRM. These studies identify key trends such as AI-driven recruitment, talent management, and employee engagement, underscoring the transformative potential of AI in optimizing HR processes.
- **Challenges and Implications of AI in HRM:** Dery et al. (2019) and Kudyba and Diwan (2016) explore the challenges and implications of AI adoption in HRM. These studies discuss issues related to data privacy, bias, skill gaps, and ethical considerations, underscoring the importance of addressing these challenges to ensure responsible AI usage in HRM practices.
- **Real-world Examples and Case Studies:** Marr (2018) provides real-world examples of

organizations leveraging AI in HRM, offering insights into successful AI implementation strategies and the potential benefits for organizations and HR professionals.

- **Future Directions and Opportunities:** Lastly, the literature offers insights into future prospects and opportunities for AI in HRM. Scholars such as Hargittai and Litt (2011) explore emerging trends in AI adoption and their implications for HRM practices, highlighting the importance of continuous innovation and collaboration between technology and HR professionals.

In summary, the literature review synthesizes existing research to provide a comprehensive understanding of the trends, challenges, and prospects of AI in HRM. By drawing upon insights from diverse sources, the paper offers valuable insights into the transformative potential of AI in reshaping HRM practices and driving organizational success in the digital age.

Current Trends in AI-driven HRM

- **AI-driven HRM (Human Resource Management)** continues to evolve rapidly, with several trends shaping its development:
- **Predictive Analytics:** AI algorithms are increasingly being used to predict employee behavior, performance, and retention. By analyzing large datasets, AI can forecast patterns such as turnover rates, identify flight risks, and suggest strategies to improve employee engagement and satisfaction.
- **Recruitment Automation:** AI-powered tools streamline the recruitment process by automating tasks such as resume screening, candidate sourcing, and scheduling interviews. These tools help HR professionals save time, reduce bias, and identify top talent more efficiently.
- **Personalized Learning and Development:** AI algorithms personalize learning and development programs based on individual employee needs, preferences, and learning styles. By analyzing employee data and feedback, AI recommends relevant training modules, courses, and resources to enhance skills and knowledge.
- **Employee Experience Enhancement:** AI-driven chatbots and virtual assistants provide employees with instant support and assistance for HR-related queries, such as benefits information, policy clarification, and leave requests. These tools improve the overall

employee experience by offering timely and personalized support.

- **Performance Management Reinvention:** AI facilitates continuous performance management by providing real-time feedback, performance metrics, and goal tracking. AI-powered systems help managers and employees track progress, identify areas for improvement, and align individual goals with organizational objectives.
- **Diversity, Equity, and Inclusion (DEI) Integration:** AI tools are being developed to mitigate bias in HR processes and promote diversity, equity, and inclusion within the workforce. These tools help identify and address bias in recruitment, performance evaluations, and talent management decisions.
- **Workforce Planning and Optimization:** AI algorithms analyze workforce data to forecast future talent needs, skill gaps, and workforce trends. HR professionals can use these insights to make informed decisions about recruitment, training, succession planning, and organizational restructuring.
- **Remote Work Support:** With the rise of remote work, AI technologies support virtual collaboration, communication, and productivity. AI-driven tools facilitate remote onboarding, team building, and performance monitoring, ensuring that remote employees feel connected and engaged.
- **Ethical AI and Data Privacy:** As AI becomes more prevalent in HRM, organizations are increasingly focusing on ethical considerations and data privacy concerns. HR professionals are implementing guidelines and policies to ensure fair and transparent use of AI, protect employee privacy, and mitigate potential biases.
- **Continuous Innovation and Adaptation:** The field of AI-driven HRM is continuously evolving, with new technologies and approaches emerging rapidly. HR professionals need to stay updated with the latest trends, experiment with new tools, and adapt their strategies to meet the evolving needs of the workforce and the organization.

Recruitment and Selection:

- AI-powered resume screening
- Automated candidate sourcing
- Virtual interviews

Talent Management:

- Predictive analytics for workforce planning
- Personalized learning and development

Performance Management:

- Real-time performance monitoring
- Continuous feedback mechanisms

Employee Engagement and Well-being:

- Sentiment analysis
- Well-being assessments

Diversity, Equity, and Inclusion (DEI) initiatives:

- Bias mitigation in hiring
- Inclusive language recommendations

Prospects and Future Directions of Emerging AI technologies in HRM:

Emerging AI technologies hold immense potential to revolutionize HRM practices in the future. Here are some prospects and future directions:

Natural Language Processing (NLP) for Employee Feedback Analysis: NLP algorithms can analyze large volumes of employee feedback from various sources, such as surveys, reviews, and social media, to extract insights regarding employee sentiment, engagement levels, and areas for improvement. This can help HR professionals gain deeper insights into employee experiences and sentiments, enabling them to take proactive measures to enhance employee satisfaction and retention.

Emotion Recognition and Sentiment Analysis: AI-powered tools that can recognize emotions from facial expressions, voice tone, and text can provide valuable insights into employee well-being, morale, and engagement levels. By analyzing non-verbal cues and sentiment in communication channels, HR departments can identify signs of stress, burnout, or dissatisfaction among employees and intervene appropriately to address these issues.

Augmented Reality (AR) and Virtual Reality (VR) for Training and Development: AR and VR technologies offer immersive and interactive training experiences, allowing employees to practice skills, simulate work scenarios, and undergo virtual coaching sessions. AI algorithms can enhance these experiences by personalizing training content based on individual learning styles and performance feedback, thereby maximizing learning outcomes and skill development.

Generative Adversarial Networks (GANs) for Synthetic Data Generation: GANs can generate synthetic data that closely resembles real-world HR data while preserving privacy and confidentiality. This technology can address the challenge of data scarcity and privacy concerns in HR analytics by creating synthetic datasets for training AI models without exposing sensitive employee information. Synthetic data generation can facilitate the development of more accurate and robust AI models for various HRM applications, such as predictive analytics and talent management.

Explainable AI (XAI) for Transparency and Accountability: XAI techniques aim to make AI models more transparent and interpretable by providing explanations for their decisions and predictions. In HRM, XAI can help mitigate concerns about bias, discrimination, and unfairness by enabling HR professionals to understand how AI algorithms make decisions regarding recruitment, performance evaluation, and talent management. By enhancing transparency and accountability, XAI can build trust among employees and stakeholders in AI-driven HRM systems.

Blockchain for Decentralized HRM and Credential Verification:

Blockchain technology can revolutionize HRM by enabling decentralized and tamper-proof systems for managing employee records, credentials, and contracts. Blockchain-based HRM platforms can streamline processes such as background checks, credential verification, and payroll management while ensuring data security, integrity, and transparency. Moreover, blockchain-based digital credentials can enhance trust and interoperability in the labor market by allowing employees to securely share and verify their qualifications and achievements across organizations and industries.

AI-driven Performance Enhancement:

Future AI technologies may focus on enhancing employee performance through personalized coaching, feedback, and skill development interventions. AI-powered virtual coaches and mentors can provide personalized guidance and support to employees based on their performance data, learning goals, and career aspirations. These virtual coaching systems can leverage advanced AI techniques, such as reinforcement learning and deep reinforcement learning, to adapt their coaching strategies in real-time and maximize employee performance and potential. Overall, the prospects

of emerging AI technologies in HRM are vast and diverse, offering opportunities to transform traditional HR practices, enhance employee experiences, and drive organizational success in the future. Case Studies and Examples.

Highlight real-world examples of organizations leveraging AI in HRM

Certainly! Here are some real-world examples of organizations leveraging AI in Human Resource Management (HRM):

IBM's Watson Recruitment: IBM's Watson Recruitment utilizes AI to streamline the hiring process by analyzing job descriptions, resumes, and candidate profiles to identify the best-fit candidates. Watson Recruitment assists recruiters in screening resumes, conducting initial interviews, and recommending candidates based on skills, experience, and cultural fit.

Unilever's AI-driven Recruitment Process: Unilever implemented AI-powered recruitment tools to enhance its hiring process. The company uses AI algorithms to analyze candidate data from various sources, including resumes, social media profiles, and online assessments. This enables Unilever to identify high-potential candidates more efficiently and make data-driven hiring decisions.

Accenture's AI-Powered Virtual Assistants: Accenture developed an AI-powered virtual assistant named "Ace" to support HR functions such as onboarding, training, and employee inquiries. Ace utilizes natural language processing (NLP) to understand employee queries and provide personalized responses, improving employee engagement and satisfaction.

Hilton's Recruitment Chatbot: Hilton launched a recruitment chatbot named "Connie" to assist job seekers in the application process. Connie engages with candidates via messaging platforms, answering questions about job opportunities, qualifications, and the application process. The chatbot uses AI to provide real-time assistance, improving the candidate experience and increasing application completion rates.

Google's People Analytics: Google utilizes AI and machine learning algorithms in its people analytics initiatives to optimize HR processes and improve employee satisfaction. Google's people analytics platform analyzes employee data to identify patterns, trends, and insights related to recruitment, retention, performance, and organizational culture. This enables Google to make data-driven decisions to

enhance workforce effectiveness and organizational performance.

These examples demonstrate how organizations are leveraging AI technologies to streamline HR processes, improve decision-making, and enhance the employee experience. By integrating AI into HRM practices, companies can gain a competitive edge in talent acquisition, retention, and development, ultimately driving organizational success.

Benefits and challenges encountered in implementing AI-driven HRM solutions.

Implementing AI-driven Human Resource Management (HRM) solutions offers numerous benefits, but it also comes with its own set of challenges. Let's explore both aspects:

Benefits of AI-driven HRM Solutions:

Efficiency and Productivity: AI automates repetitive tasks such as resume screening, scheduling interviews, and answering routine employee inquiries, freeing HR professionals to focus on higher-value strategic activities.

Improved Decision-making: AI-powered analytics provide HR departments with actionable insights into workforce trends, enabling data-driven decision-making in areas such as recruitment, performance management, and talent development.

Enhanced Candidate Experience: AI-driven recruitment processes offer personalized interactions, faster response times, and seamless application experiences, leading to higher candidate satisfaction and improved employer branding.

Cost Reduction: By automating tasks and optimizing processes, AI-driven HRM solutions can lead to cost savings through reduced administrative overhead, improved resource allocation, and minimized hiring biases.

Predictive Analytics: AI enables HR departments to forecast future workforce needs, identify potential retention risks, and develop proactive strategies for talent management, ultimately contributing to better workforce planning and organizational agility.

Challenges in Implementing AI-driven HRM Solutions:

Data Quality and Bias: AI algorithms rely on large volumes of data to make accurate predictions, but biased or incomplete data can lead to biased outcomes in recruitment, performance evaluation, and other HR processes.

Privacy and Ethical Concerns: Collecting and analyzing employee data raises privacy concerns and ethical considerations regarding data usage, consent, transparency, and security, requiring organizations to navigate regulatory compliance and maintain trust with employees.

Skill Gaps and Change Management: Implementing AI-driven HRM solutions requires upskilling HR professionals to effectively use and interpret AI tools and analytics. Resistance to change and fear of job displacement may also pose challenges in adopting new technologies.

Integration and Compatibility: Integrating AI-driven HRM solutions with existing HR systems and workflows can be complex and require significant IT infrastructure investments. Ensuring compatibility and seamless integration with legacy systems is essential for successful implementation.

Over-reliance on Technology: While AI can enhance HR processes, over-reliance on technology may lead to dehumanization of HR practices, reducing the personal touch and empathy needed in employee interactions. Balancing automation with human oversight is crucial to maintain employee trust and engagement.

Addressing these challenges requires a holistic approach that considers technical, ethical, and organizational factors. Organizations must prioritize data quality, ethical considerations, employee training, and change management efforts to successfully implement AI-driven HRM solutions and realize their full potential in enhancing workforce effectiveness and organizational performance.

Conclusion

The research paper delves into the pivotal role of artificial intelligence (AI) in shaping the future of Human Resource Management (HRM), emphasizing its significance and potential implications for organizations and HR professionals. AI technologies offer unprecedented opportunities to revolutionize HRM practices, from recruitment and talent management to performance evaluation and employee engagement. By automating routine tasks, providing data-driven insights, and enabling predictive analytics, AI enhances HRM efficiency, effectiveness, and strategic relevance. AI-driven HRM solutions have transformative implications for organizations, enabling them to optimize workforce management, improve decision-making, and gain competitive advantage in talent acquisition and retention. By leveraging AI, organizations can

enhance operational efficiency, reduce costs, and foster innovation in HR practices, ultimately driving organizational success and resilience in a rapidly evolving business landscape. AI-driven HRM introduces new challenges and opportunities for HR professionals. While AI automates repetitive tasks and augments decision-making capabilities, HR professionals must adapt to new roles as strategic advisors, data analysts, and change agents. Upskilling in AI technologies, data analysis, and ethical considerations is essential for HR professionals to effectively leverage AI and drive organizational change. AI-driven HRM raises ethical concerns related to data privacy, bias, transparency, and accountability. Organizations must prioritize ethical principles and regulatory compliance to ensure fair and responsible use of AI technologies in HR practices. Transparency, explainability, and human oversight are critical to maintaining trust and integrity in AI-driven HRM. The future of HRM lies in harnessing AI technologies to create personalized, agile, and employee-centric HR practices. Continuous innovation, collaboration, and adaptation are essential for organizations and HR professionals to navigate the evolving landscape of AI-driven HRM and unlock the full potential of AI in shaping the future of work.

In conclusion, AI is poised to revolutionize HRM, offering organizations unprecedented opportunities to optimize HR practices, drive organizational success, and enhance employee experiences. By embracing AI technologies responsibly and proactively addressing ethical considerations, organizations and HR professionals can leverage AI-driven HRM to shape a future of work that is innovative, inclusive, and sustainable.

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DETERMINANTS OF GREEN PRODUCT PURCHASE DECISION: AN EMPIRICAL STUDY USING SMART PLS-SEM

Preeti Jindal*

Nidhi**

Abstract: *The present study is an attempt to identify factors affecting consumer's decision to purchase green products during COVID 19 pandemic in India. To test the research model and hypotheses Primary data was collected through structured questionnaire. Responses were collected from 232 respondents. This study sheds light on the determinants of consumer decision to purchase green products. In the light of findings, it suggests green product marketing strategies. It will allow businesses to acquire more market-applicable approach to sustain in the competitive market. The present study carried out smart PLS-SEM in R-studio in order to test the proposed conceptual model.*

Key words: *Green marketing, Green product, Social circle, Environment commitment*

Introduction

Green marketing is a holistic concept involving environmentally friendly practices in all the stages such as the production, designing, marketing and selling of goods or services. American Marketing Association, "green marketing is the efforts by the organizations to produce, promote, package, and reclaim products in a manner that is sensitive or responsive to ecological concerns. "Green products mean those products which are not destructing in nature for environment, use less toxic ingredients, recycled packaging and material that is not damaging for the globe (Gurau and Ranchhod, 2005). These products have gained popularity because of its minimal impact on the environment followed by safety, acceptable price, long term health benefit, energy efficiency, long lasting effects, durability, recyclability and reusability (Yesmin, Shayala; Akter, Sharmin, 2018). Witnessing the demand for eco-friendly products, many companies in India such as Mama earth, Dabur, Kama, Patanjali, ITC, Tata, LG etc have started producing these eco-friendly products. Apart from consumers and businesses, even government has also taken several initiatives by

making many regulations in support of protection of environment for example the ban of plastics in many parts of the country. As green marketing is different from the marketing in traditional way, marketers need to know the factors that persuade the consumer to buy the green products. This study aims to resolve the research question that what factors influence the consumer decision to buy the green product.

Need of Study

It is observed that many studies (Vijayasree et al., 2022; Chen et al., 2022; Chitra and Govindasamy, 2020; Sujith, 2017; Mohd Noor et al. (2016); Chopra and Vinayek, 2013; Pandey, 2012) have been done on customers' perception towards green product. But to the best of knowledge of researcher expect very few studies no comprehensive study has so far been conducted to explore the factors affecting customers' purchase decision of green product during the ongoing uncertainty of the COVID-19 pandemic. Hence, the present study contributes to the field by investigating and exploring factors influencing customers' green product purchase during the COVID-19 crisis.

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Research Objective

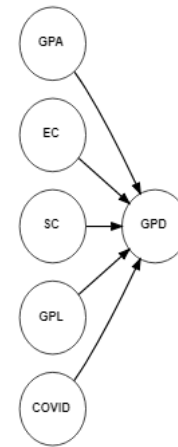
To identify factors affecting consumer's green product purchase decision during the ongoing uncertainty of COVID 19 pandemic.

Literature Review

The concept of Theory of Planned behavior TPB (Ajzen, 1991) is used in this study to focus on the consumers decision to purchase green products. The first factor is the attitude towards behaviour such as consumer's evaluation about the benefits of purchasing green products, having an interest to protect the environment, and realization of supporting the initiative taken by the environmentally friendly companies. The second factor is subjective norm such as the existence of consumer's peer, reference groups and opinion leaders which also purchase and consume green products. And, the third factor is perceived behavioural control which is related to, for instance, the consumer's perception about the degree of easiness to acquire and utilize the green product. On the basis of the findings of past studies (Ginsberg and Bloom, 2004; Chen & Chai, 2010; Saxena & khandelwal, 2010; Burgos-Jiménez, Vázquez-Brust, Plaza-Úbeda, & Dijkshoorn, 2013; Mobley, Vagias, & DeWard, 2010; Koo and Chung, 2014; Bratu, 2019; Liobikiene and Poškus, 2019; Joshi and Rahman, 2015; Sun et al., 2021; Jian et al., 2020)the present study identifies the fear of COVID-19 pandemic, environment commitment, green product literacy, green product awareness, and social influence as an important variables that have an bearing impact on the actual behavioral action (i.e. the decision to purchase green products). The study develops following conceptual model as shown in fig 1:

Hence, proposed hypotheses of the study are as follows:

- H1:** Green awareness significantly affects the consumer's decision to purchase green products.
- H2:** Environment commitment significantly affects the consumer's decision to purchase green products
- H3:** Social influence has a positive influence on consumers' green product purchase attitudes
- H4:** Green product literacy has a positive impact on consumers' green product purchasing attitudes.
- H5.** Fear of COVID significantly affects green product purchase decisions of consumers



Research Methodology:

Research Design: the present study is descriptive cum analytical in nature.

Sampling unit: The present study captured those individual customers who have been using green product.

Design of Questionnaire: To measure the construct of the study, total of 21 variables adapted from past studies have been used in the present work. Five-point Likert scale (i.e., 1 = strongly disagree to 5 = strongly agree) was employed to measure the respondent's responses.

Data Collection: The present study mainly collected primary data from customers in India. For collecting primary data the researcher conducted online survey through questionnaire method. Before initiating the survey, questionnaire's face and content validity was established on the basis of expert opinion. Then, the final version of questionnaire was distributed on social media in form of google link.

Period of Study: The online survey was conducted in the period of November 2022 to January 2023.

Size of sample and sampling technique: Determination of the number of samples with what was said by (Hair 2010). According to Hair(2010) sample size should be equal to or greater than 10 times the number of variables. In the present study researcher used 21 statements, and hence covered 232 respondents. The sampling technique in this study is non-probability sampling, which is convenience sampling.

Secondary Data: To some extent, the present study made use of secondary data and it was collected from books, journals, newspapers, magazines and internet.

Data Analysis: To establish cause and effect relationship among independent and dependent variables the present study conducted smart PLS-SEM using r-studio version 4.3.1 (Neeraj Kaushik, 2021). The reason behind the use of Smart PLS-SEM is that it works well with comparatively less size of sample and requires no distributional assumption (Hair et al., 2018).

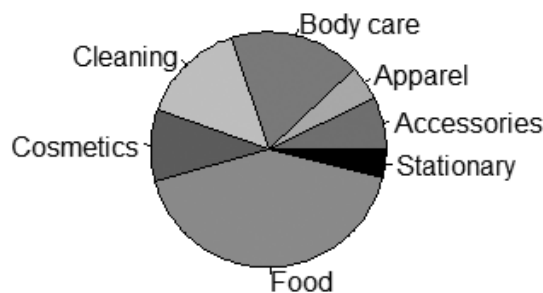
Results and Discussion

Descriptive statistics: Table 1 depicts the variety of green products purchased by respondents. It is evident from the table and pie chart that those who did purchase green products, majority of respondents gave preferences to the food products made from organic ingredients, herbs or ayurveda followed by body care products. Cosmetic, cleaning, and accessories products were a given second preferences while buying green products by the customers. But Apparel and stationary products were the least preferable green products to the respondents.

Table 1: Most conventionally consumed green products

Green product purchased	No. of Respondents
Accessories	17
Apparel	11
Body care	42
Cleaning	33
Cosmetics	23
Food	97
Stationary	9

Source: Primary Data



Structural Equation Modeling

The present study carried out smart PLS-SEM in R-studio in order to test the proposed conceptual model. Smart PLS-SEM incorporates two-level of

examination, such as assessment of measurement model and structural model.

Measurement Model: MM is known as outer model it is used to check the validity and reliability of constructs. It links statements to their identifiable latent construct.

Reliability: Table 2 represents reliability (Cronbach’s alpha) of all latent constructs followed by internal consistency (Henseler’s rho A and composite reliability) and convergent validity (average variance extracted). Since the value of Alpha, rho C, and rho A are greater than 0.7 for all the constructs and the average variance extracted (AVE) exceed cut-off point of 0.5 (Byrne, 2013; Hair et al., 2017), reliability is achieved in the study.

Table 2: Reliability

Construct	alpha	Rho C	AVE	Rho A
GPA	0.765	0.817	0.607	1.560
EC	0.923	0.933	0.778	1.090
SC	0.831	0.898	0.746	0.841
GPL	0.808	0.881	0.712	0.859
COVID	0.749	0.834	0.557	0.803
GPD	0.741	0.838	0.566	0.752

Source: Primary Data

Discriminant validity: After assessing the construct reliability, the discriminant validity test was carried out by cross-loading, HTMT ratio of correlations and fornelllarcker criterion.

Cross loading: Table 3 depicts the result of cross-loading. To achieve discriminant validity the statements should be loaded strongly on their own construct than others and must have the threshold value of 0.50. The findings of measurement model indicate that all the items have loading above 0.50.

Table 3: Cross Loading

Constructs	GPA	EC	SC	GPL	COVID	GPD
GPA1	0.682	0.225	0.342	0.028	0.175	0.150
GPA2	0.640	0.155	0.160	-0.340	0.058	0.022
GPA3	0.973	0.178	0.352	0.038	0.457	0.486
EC1	0.077	0.901	0.328	-0.084	-0.223	0.030
EC2	0.133	0.821	0.335	-0.117	-0.120	0.001
EC3	0.262	0.952	0.294	-0.188	-0.205	0.043
EC4	0.294	0.849	0.293	-0.205	-0.087	0.006
SC1	0.475	0.249	0.848	-0.044	0.277	0.518
SC2	0.179	0.313	0.870	0.177	-0.003	0.470
SC3	0.321	0.307	0.873	0.161	0.090	0.384
GPL1	0.055	-0.117	-0.003	0.810	0.292	0.139

GPL2	0.009	-0.108	0.128	0.888	0.253	0.321
GPL3	0.019	-0.183	0.087	0.833	0.145	0.287
COVID1	0.177	-0.264	-0.045	0.063	0.728	0.395
COVID2	0.402	-0.008	0.375	0.194	0.815	0.631
COVID3	0.544	-0.048	0.066	0.293	0.743	0.386
COVID4	0.035	-0.539	-0.188	0.248	0.693	0.281
GPD1	0.461	0.022	0.314	0.197	0.652	0.790
GPD2	0.265	-0.145	0.259	0.329	0.617	0.844
GPD3	0.372	0.280	0.601	0.217	0.226	0.670
GPD4	0.198	-0.029	0.492	0.224	0.269	0.690

Source: Primary Data

Note(s): GPA-Green Product Awareness, EC-Environment Commitment, SC-Social Circle, GPL-Green Product literacy, COVID-Fear of Covid-19, GPD-Green Purchase Decision

FornellLarcker(FI) Criterion: Table 4 depicts the score of fornelllarcker criterion. The findings show that the square root of AVE for the each construct was higher than its correlation with another corresponding construct in the study which, in turn, indicates that constructs possess discriminant validity.

Table 4: FornellLarcker Criterion

Const ructs	GPA	EC	SC	GPL	COVID	GPD
GPA	0.779	.	.	.	.	.
EC	0.210	0.882	.	.	.	.
SC	0.383	0.333	0.864	.	.	.
GPL	0.026	-0.162	0.103	0.844	.	.
COVID	0.424	-0.218	0.149	0.257	0.746	.
GPD	0.440	0.037	0.538	0.321	0.609	0.752

Source: Primary Data

Heterotrait-Monotrait ratio (HTMT): Table 5 depicts HTMT ratios which are found to be below the threshold value of 0.85 (Henseler et al., 2015) to represent appropriate discriminant validities of all latent variables in the study.

Table 5: Heterotrait-Monotrait ratio (HTMT)

Const ructs	GPA	EC	SC	GPL	COVID	GPD
GPA	.	.	.	.	.	.
EC	0.278	.	.	.	.	.
SC	0.452	0.397	.	.	.	.
GPL	0.218	0.187	0.198	.	.	.
COVID	0.434	0.341	0.298	0.372	.	.
GPD	0.403	0.197	0.696	0.380	0.775	.

Source: Primary Data

Multi-collinearity Check: According to Hair et al.

(1995), low VIF values are preferred to ensure a low degree of multicollinearity among variables. Table 6 indicates that VIF values of all constructs are below the threshold limit of 3 (Hair et al., 2019), thus indicating that multicollinearity does not exist in the present study.

Table -6: VIF (Variance Inflation Factor)

Construct	VIF
GPA	1.496
EC	1.320
SC	1.308
GPL	1.110
COVID	1.467

Source: Primary Data

Structural Model: The second aspect of smart PLS-SEM is to build and assess structural model. The purpose of structural model is to evaluate the hypotheses relationships among the constructs. The structural model indicates the causal relationship between independent and dependent constructs. According to Hair et al. (2017), the bootstrapping approach is used for evaluating the significance of the path coefficient.

A positive value on the path coefficient indicates that the related variable has a positive effect; on the other hand, if the path coefficient value is negative, the related variable has a negative effect. The value of the t-statistic will be compared with the table value. If the t-statistic value is greater than the table value, the related variable is declared to have a significant effect. For the confidence level of 95% ($\alpha = 5\%$), the table value is used as a reference of 1.96.

Judging from the evaluation results using the Path Coefficient output in table 7, it can be concluded that the variable Green Product Awareness, Environment Commitment, Social Circle, Green Product Literacy, Fear of COVID have a positive effect on consumers' green product purchase decisions. And in the evaluation value of T-statistics, it is concluded that the variables Fear of COVID, Social circle and Green product literacy have significant effect on purchasing decisions because it is > 1.96 , therefore hypothesis H5, H4, H3 are accepted. While the Green product awareness and Environment commitment have no significant effect in creating the desire of customer to purchase a green product because the T-statistical value is $1.813 < 1.96$, therefore hypothesis H1, H2 are rejected.

Cohen (1988) reported that it is important to examine

Table -7: Structural Model Assessment

Hypothesis Relationship	Path coefficient	SD	T-Stat.	Confidence Intervals	f-square	decision
GPA -> GPD (H1)	0.068	0.050	1.301	-0.025 0.183	0.009	Rejected
EC -> GPD (H2)	0.012	0.073	0.169	-0.161 0.149	0.001	Rejected
SC -> GPD (H3)	0.419	0.043	9.660	0.343 0.503	0.258	Accepted
GPL -> GPD (H4)	0.155	0.049	2.552	0.074 0.265	0.052	Accepted
COVID -> GPD (H5)	0.480	0.066	7.035	0.305 0.575	0.315	Accepted

Source: Primary Data

the effect sizes (f-square) of the indicators. F-square is the change in R-square when an exogenous (independent) variable is removed from the model. With effect sizes, the values of F-square 0.00 – 0.15 mean small size, 0.15 – 0.35 mean medium and over 0.35 mean large effect. This study’s F-square show that construct fear of COVID and social circle have medium effect and green product literacy has small effect size.

Table 8: R-Square Value

R Square	0.5988122
Adj Rsq	0.5899364

Source: Primary Data

R2 is the principal criterion used to evaluate the structural model. The R2 value (table 7) revealed that the 58.9 % variance in the endogenous construct (green purchase Decision – GPD) is explained by the five exogenous constructs (Fear of COVID, Social circle, Green product literacy, Green Product Awareness, Environment Commitment). This shows that descriptive power of Green product purchase decision is satisfactory because R-square should be greater than 0.26 for variance explained (Hair et al., 2013).

Conclusion

Fear of COVID 19 has positive and significant effect on the purchasing of green products

The finding of study revealed that fear of COVID has positive and significant impact in influencing customer to purchase green products. The findings of study is related with Chen et al. (2022) who identified fear of COVID 19 pandemic has an influence on customer purchase intention towards green product in Malaysia. Sun et al. (2021), also examined the green consumption behavioral intention and consumers’ positive and negative impact of COVID-19 pandemic in the context of China. Panjaitan and Sutapa (2010) found out that green product has a great impact on human health.

Social Circle has positive and significant effect on the purchasing of green products

The findings of present study revealed that social circle has a significant influence in inducing the customers to purchase green product. This findings of this study is in the line with the results of Chen et al. (2022) Xie et al. (2019) and Dhir et al. (2021). This means that influence of friends and relatives is important factor in promoting consumption of green product in India.

Green product literacy has positive and significant effect on the purchasing of green products

The findings of the present study identified green product literacy as important and significant factor in reflecting customer’s decision to purchase green product. These results reiterate the points put forward by Sun et al. (2021) and Chen et al. (2022). So the manufacturer should emphasis on making labels more informative, providing reliable information in simple and user-friendly way through product labels and creating awareness among customers about availability of the variety of green products. This practice will result in generating more sales.

Green product awareness has positive but insignificant effect on the purchase decision of green product:

Table 6 indicates that awareness about green product affects green product purchase decision but it is insignificant. It implies that general awareness regarding the benefits of green product is not found to be crucial influencing factor when it comes to green product purchase decision during COVID 19 pandemic. It is different from previous studies conducted by Sujith (2017), Saxena; Khandelwal(2010),Mohd Noor (2016),Ginsberg and Bloom, (2004) which resulted in the conclusion that the customer awareness has a positive and significant effect on purchasing decisions.

Environment Commitment has positive but insignificant effect on purchase decision of green product:

The findings of the study shows that environment commitment affects green product

purchase decision but it is insignificant. This means that personal commitment to protect and improve the quality of environment is not found to be significant factor in motivating the customers to purchase the green product during COVID 19 pandemic. These findings are not consistent with the results of Sharma et al. (2012), Mohd Noor (2016), Chen & Chai (2010).

Recommendations

The study contributes to green marketing literature by exploring factors determining customers' green product purchase decision. The result revealed that fear of COVID 19, social circle, green product literacy are the crucial factors that reflect customer decision to purchase green product. Health consciousness is promoting green product consumption in India during an ongoing uncertainty of COVID 19. So, the advertising message needs to be convincing enough to boost immunity power for the users during COVID 19 pandemic which will help in motivating customers to shift from buying conventional products to Green products. Since the influence of family and friends is significant to motivate the customers to use green products, the marketers should pay attention towards providing the standard quality product which in turn will lead to positive word of mouth resulting in increased acceptance of green product. The present study concludes that marketers should not only focus on creating awareness about ecological benefits of green product but also an emphasis on educating customer about the eco-labeling, packaging and making the green products available in full range of variety. Green product literacy and knowledge is necessary to identify green product.

Limitations and Direction for future research

The present study is cross-sectional; the future work can use a longitudinal tactic to afford findings that are more precise. The sample population was limited to Indian citizens, which may restrict the generalizability of the outcomes.

The future research studies can undertake NCA (Necessary Condition Analysis) and IPMC (Importance performance Map Analysis) in order to identify which independent variable is most important.

In addition to this, the future research studies can use control variables to tackle the issue of endogeneity.

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