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About the Journal

Gyan Management is an open-access Bi-annual refereed Journal published by Gian Jyoti Institute of Management and Technology, Mohali since the year 2007. It is dedicated to enhancing teaching and learning in the field of Management & Commerce, Information Technology, and business strategies. The focus of the journal is on collating applied research and reflections relevant to various discipline practices and disseminating knowledge. It establishes an effective communication channel between decision and policymakers in business and academicians, to recognize the implementation of effective systems in the business world.

Gyan Management is published in January and July every year. The journal accepts theoretical and applied research work for publication. It publishes original, research-based papers, articles, cases & book reviews on topics of current concern in all areas of management & technology affecting the business environment.

Aims and Scope

Gyan Management is an open-access Bi-annual refereed journal published by the Gian Jyoti Institute of Management and Technology since 2007. The journal aims to advance knowledge and practice in the fields of Management & Commerce, Business Strategies, and Information Technology through the dissemination of high-quality research. It is a highly reputable and acclaimed journal that includes theoretical and applied research contributing to the understanding and development of management practices and technological innovations.

Gyan Management serves as a vital communication channel between academia and industry, facilitating dialogue between decision-makers, policy influencers, and scholars. The journal publishes original research papers, case studies, articles, and book reviews addressing contemporary issues and emerging trends within these disciplines. By focusing on applied research and practical insights, it supports the implementation of effective systems and strategies in the business world, promoting informed decision-making and enhancing educational outcomes in the management and technology sectors.

Gyan Management

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Articles

Bibliometric Analysis: Unravelling Trends and Patterns in Green Human Resource Management and Sustainability

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Abstract

In the last 10 years, both industry and academia have been interested in the green workplace and sustainable environment. New study fields, such as green human resource management (GHRM) and sustainability, began to appear consequently. A green workplace is the environmentalism of conventional business processes. To assist companies in developing and implementing sustainable strategies and attain corporate sustainability, GHRM and sustainability can play a crucial role. The article offers a current overview of GHRM and sustainability and aids in comprehending development in the field. GHRM and sustainability are examined through bibliometric analysis of the body of existing business and management literature. Utilizing bibliometric analysis and the R Studio program for network and descriptive analysis, we examined 227 publications sourced from Scopus and Web of Science (WOS) datasets. This article examines the research area and rising keywords as well as the trends in the fields of GHRM and sustainability growth from 2010 to 2024. The results imply that GHRM publication started long back and has been steadily increasing ever since. Over the past 10 years, publications in this area of research have increased immensely. As far as the authors are aware, the history of bibliometric analysis on GHRM and sustainability research is examined in this article for the first time. Policymakers, businesses, and academics will be able to better understand the theoretical and practical facets of GHRM and sustainability to pinpoint relevant issues that need to be addressed with the aid of this study. Moreover, these findings could function as a roadmap for subsequent research endeavors concerning GHRM and sustainability.

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Introduction

Globally, we are in the midst of an environmental emergency. One of the most important things about humanity is the environment in which we live. The world of the 21st century is reliant on fashion, machinery, and technology. People are pursuing these luxury items because they enhance daily living standards. However, these companies produce a lot of trash and contaminate the environment (Jabbour & Santos, 2008a, 2008b; Sharma & Gupta, 2015). People throughout the world are becoming more and more affected by environmental challenges, which can lead to a variety of health conditions. According to Ray et al. (2005), certain climate change accords have rekindled the sustainability movement by emphasizing "Doing well by doing good." A study on sustainable development published in 1987 by the Brundtland Commission, also known as the WCED, sparked a growing curiosity in the business environment. Creating a shared goal for world transformation and humankind's future is the report's primary goal. It also addresses future ecological growth, social, and economic issues by not jeopardizing most humanity's ability to live in a natural environment. Corporate leaders are addressing the issue by making environmental protection among the other significant societal objectives (Pinzone et al., 2016). A new term for environmentally beneficial behavior is "green," which has emerged because of widespread concern. There has been global agreement over the last 20 years regarding the significance of environmentally conscious growth that is favorable (González-Benito & González-Benito, 2006). The relevance of "Green HRM" has grown in the current environment since it gives businesses a competitive edge over rival businesses. Integrating environmental concerns into various operations, such as human resource management, is the first step towards being green. Organizations can use green human resource management (GHRM) to implement corporate social responsibility (CSR), create green reward programs, increase environmental awareness, and include sustainability standards in hiring, training, and development processes to meet environmental requirements. By encouraging sustainability, a culture of sustainability grows. In this way, a culture of sustainability that promotes environmental awareness is fostered. As the green movement gains popularity, researchers are becoming more interested in GHRM. There might, however, still be unfilled information in some areas of the literature that require attention.

Examining the evolution and patterns in the literature on GHRM and sustainability is the main driving force behind this research. Citation trends, commonly referred sources, and the impact of GHRM research on related subjects are all part of this process. Bibliographic research facilitates combining multiple information resources into a cohesive structure. This makes it possible to identify

Table 1. Search and Selection Strategy.

Search and Filtering Strategy	Final Results
Search engine: Scopus Search date: February 21, 2024 (TITLE-ABS-KEY "Green Human Resource Management" OR "GHRM" OR "Green HRM" AND TITLE-ABS-KEY "sustainability") AND (LIMIT-TO [SUBJAREA, "BUSI"]) AND (LIMIT-TO [SRCTYPE, "j"])	185
Search engine: WOS Search date: February 21, 2024 "Green Human Resource Management" or "GHRM" or "Green HRM" (Topic) and "sustainability" (Topic) and Business or Management (Web of Science Categories)	102

Note: The methodical procedure followed to obtain the final set of (227) articles for bibliometric analysis is shown in the table.

underrepresented or deficient study areas and guides future scholars on how to close such voids as well as increase the corpus of information on the topic. The aim of carrying out a more thorough analysis of GHRM and sustainability utilizing databases like Scopus and Web of Science (WOS) is another motivation behind this study. Because prior papers employed either of the two datasets (Table 1), we can see the benefit of merging them in this manuscript. Because this approach allows individuals to concurrently obtain a greater amount of information and perspectives from each source, it strives to provide a thorough knowledge of GHRM and sustainability. By combining both datasets, we anticipate examining GHRM and sustainability more thoroughly and perceptively. The findings of this investigation aid in identifying the most crucial researchers, previous or earlier talks, along with suggestions for further research. A suitable method for identifying all the significant scientific information in the research field is bibliographic analysis. According to Forliano et al. (2021), this method assists academics and researchers in locating the most noteworthy research projects and scientific endeavors using descriptive analysis, performance analysis, network mapping, or scientific mapping, several variables were considered to identify the top publications, journals, authors, and nations.

Literature Review

Prominent organizations are progressively beginning to depend more on ecologically sustainable practices and less on environmentally exploitative ones (Schot & Fischer, 1993). In the last two decades, the need for responsible disposal management has been widely acknowledged (González-Benito & González-Benito, 2006). Nations contribute to the introduction of proactive environmental management and teach ways to prevent or lessen environmental degradation (Jackson et al., 2011). When the new millennium emerged, the manufacturing and service sectors accounted for most of the discourse surrounding environmental

management. However, today's environmental management issues encompass all industries, including species extinction, depletion of renewable energies, climate change, and pollution. One of the earliest academic contributions was the book *Greening People: Human Resources and Environmental Management*, edited by Wehr Meyer in 1996. The book contains essays authored by professionals and scholars across various nations, in addition to case studies which look at the relationships between environmental management and HRM (Timming et al., 2021).

The term "green human resource management" (GHRM) is a strategic approach that incorporates environmental considerations into HRM methods, procedures, and policies. According to Chaudhary (2020), GHRM is essential to promoting environmental sustainability in organizations because it incorporates environmental concerns into HR practices. It was emphasized by Ren et al. (2018), that GHRM integrates sustainable procedures and standards across the whole employment lifetime to improve the sustainability of an organization and reduce its environmental impact. To draw applicants with a green attitude, it also incorporates sustainability criteria into the recruiting and selection process (Adjei-Bamfo et al., 2020; Dumont et al., 2017). In a similar vein, Renwick et al. (2013) found that staff members' environmental knowledge and awareness are raised through training and development programs so they can help with environmentally friendly company operations. GHRM is essential to promote the participation of employees and ecological consciousness. According to Gunasekaran et al. (2014), this engagement increases worker productivity, motivation, and satisfaction, all of which have a good impact on the environment. By encouraging environmentally friendly behavior, companies can become green and assist staff in gaining a general understanding of the importance of sustainability (Kim et al., 2019).

It is feasible to create a workplace where sustainability initiatives are appreciated and may be integrated into every day activities by implementing GHRM strategies, such as marketing efforts, green award programs for employees, and sustainable events at work (Brammer et al., 2012). According to Bombiak and Marciniuk-Kluska (2018), by aligning HR procedures with CSR, GHRM integrates the sustainability of the environment into the culture of an organization. Organizations can demonstrate their commitment to sustainability by implementing human resource strategies that facilitate eco-friendly transportation, promote work-life balance, or provide workers with opportunities to participate in local environmental initiatives (Muster & Schrader, 2011). Green HRM integrates compliance requirements into HR policies and practices to assist organizations in navigating complex environmental rules. Doing this guarantees that employees understand their responsibilities concerning the environment.

Method

The initial stage in acquiring the required data, including citation count, references, authors, and countries, is bibliometric analysis (Carvalho et al., 2017). Nonetheless, Scopus and WoS remain the primary sources. A descriptive survey of all articles up to February 2024, was the initial step. The search protocol followed for Scopus and

WOS is given in Table 1. Three hundred sixty-nine publications from Scopus and 254 publications from WOS were shown by the search results which included articles, reviews, book chapters, proceeding papers, and conference papers. Moreover, only papers published in the English language were included. The resulting publications extracted from both the databases after applying these filters were run on R studio. Following the removal of duplicate documents, we were left with a final collection of 227 manuscripts. Biblioshiny was used to visualize the literature maps.

Results

Yearly Publication and Citation Trends

The progression of the annual publication counts between 2010 and 2024 is illustrated in Figure 1. The GHRM and sustainability field has had tremendous growth since 2017, as evidenced by the Yearly Publication of Articles in Figure 1. The majority of papers published in a single year was 63 in 2023, out of all the published articles. The yearly citation trend is displayed in Table 2, where it is evident that papers published in 2017 earned the greatest amount of citations. Despite the maximum number of articles being published in 2023, as of now, it has not gained the maximum amount of citations. The current business climate may be forcing organizations to refocus their attention on environmental sustainability, which could account for the sharp rise in GHRM and sustainability publications. The management and staff must commit to this move towards sustainability. Academics and politicians believe that encouraging human behavior and environmentally friendly acts can help minimize the negative influence that people have on their surroundings (Dornhoff et al., 2019). Consequently, the advent of the scientific community demonstrated a greater interest in encouraging environmentally friendly practices like GHRM.

Journal Publication Trends

To demonstrate the significance of journals, Table 3 displays the 10 most pertinent journals based on H-index ranking. On the ranking list, the "Journal of
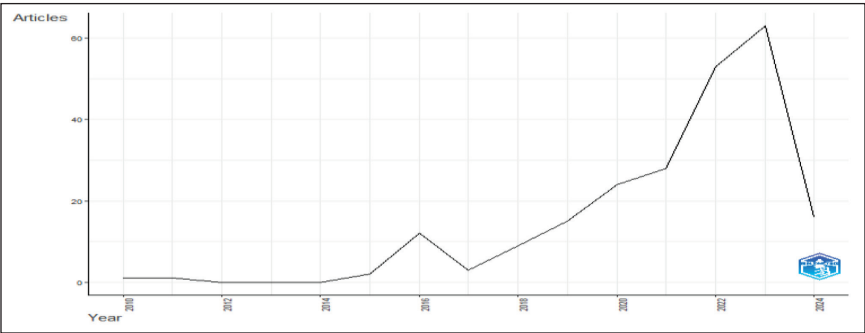
Figure 1. Yearly Publication of Articles.

Table 2. Publication and Citation Trends.

Year	Number of Papers	Number of Citations
2010	1	17.2
2011	1	24
2012	0	0
2013	0	0
2014	0	0
2015	2	17.4
2016	12	18.19
2017	3	34.67
2018	9	19.22
2019	15	11.65
2020	24	14.38
2021	28	11.04
2022	53	5.18
2023	63	2.69
2024	16	2.31

Table 3. Journal Publications.

Rank	Journals	h_index	g_index	m_index	TC	NP	PY_start
1	*Journal of Cleaner Production*	17	20	1.7	2480	20	2015
2	*International Journal of Manpower*	13	20	2.6	716	20	2020
3	*Benchmarking*	11	13	1.222	522	13	2016
4	*Corporate Social Responsibility and Environmental Management*	11	16	1.571	1060	16	2018
5	*International Journal of Human Resource Management*	9	11	0.9	1288	11	2015
6	*Business Strategy and the Environment*	5	11	1	337	11	2020
7	*Human Resource Management*	4	5	0.5	551	5	2017
8	*Administrative Sciences*	3	3	1	22	3	2022
9	*International Journal of Contemporary Hospitality Management*	3	3	0.75	150	3	2021
10	*Quality—Access to Success*	3	3	0.75	12	3	2021

Note: Top 10 journals.

Cleaner Production" leads other journals, which focus on the integration of environmental management with the management of human resources and is an interdisciplinary publication. Additionally, it focuses on research methods related to sustainability, cleaner production, as well as the surroundings. The second journal is the "International Journal of Human Resource Management" with a major contribution.

"Benchmarking, Corporate Social Responsibility and Environmental, International Journal of Human Resource Management," and others are significant periodicals. Despite having high TC and contributing to GHRM and sustainability publications, due to their low H-index, journals like the "Asia Pacific Journal of Human Resource" do not appear in Table 3. In the year 2015, the important publication appeared in the "Journal of Cleaner Production." The amazing thing is that since the "Journal of Cleaner Production" started publishing in 2011, the number of articles published each year has increased.

The Most Productive Authors

The datasets for the 10 most important publications written by each author are shown in Table 4. This table shows the overall citations that the article has obtained from the Scopus and WoS records, as well as the average citation count for the article each year. The most well-known publication, "Green Human Resource Management and Green Supply Chain Management Linking Two Emerging Agendas," which was featured in the "Journal of Cleaner Production" in Jabbour and de Sousa Jabbour (2016), has earned the greatest citations. Renwick et al. (2011) wrote the frequently cited paper, which is solely devoted to GHRM.

The top 10 authors over the previous 10 years are shown in Figure 2. The total number of publications an author publishes in a certain period is used to quantify productivity. However, impact is calculated as the total number of citations received. The size of the circle represents the number of articles the author wrote in that specific year. The darkness of the circle represents the number of citations that are received each year. In 2010, Jackson and Seo were the first authors to contribute to this field of research. Among the authors who helped majorly are D. Renwick, C. Jabbour, and M. Yuslza. With the largest citation count, Jabbour C. is the author who has contributed the most to the fields of environmental concerns and green human resources. From 2011 to now, Jabbour and Renwick have been regular contributors (Rodríguez-Solar et al., 2020).

Country Production Over Time

GHRM and sustainability as a field have grown exponentially. Two hundred twenty-seven papers from 46 countries have been added to the dataset since 2002. Only 22 articles were single-author publications out of 227 articles because the search area is rather fuzzy and the authors would rather work together. International partnerships and multi-author publications are displayed in Table 5. The Single Country Publication (SCP), Multiple Country Publication (MCP), and MCP Ratio are displayed in the table. The term "MCP" denotes the publications by authors

Table 4. Citation Analysis for the 10 Most Pertinent Articles in the Dataset, Ranked by Total Citations.

Author	Year	Title	Journal	TC	TC Per Year
Jabbour C	2016	Green human resource management and green supply chain management linking two emerging agendas	*Journal of Cleaner Production*	444	49.333
Renwick D	2011	State-of-the-art and future directions for green human resource management introduction to the special issue	*Zeitschrift Fur Personal for Schung*	336	24
Ren S	2018	Green human resource management research in emergence a review and future directions	*Asia Pacific Journal of Management*	288	41.142
Jackson S	2010	The greening of strategic HRM scholarship	*Organization Management Journal*	258	17.2
Renwick D	2016	Contemporary developments in green Environmental HRM scholarship	*International Journal of Human Resource Management*	226	25.111
Jabbour C	2020	Pathways towards sustainability in manufacturing organizations Empirical evidence on the role of Green Human Resource management	*Business Strategy and the Environment*	225	45
Chaudhary R	2020	Green human resource management and employee green behavior an empirical analysis	*Corporate Social Responsibility and Environmental*	187	37.4
Jabbour C	2015	Environmental training and environmental management maturity of Brazilian companies with iso14001 empirical evidence	*Journal of Cleaner Production*	147	14.7
Jabbour C	2019	Top management commitment	*Benchmarking*	139	23.166
Yusliza M	2020	Assessing the green behavior of academics the role of green human resource management and environmental knowledge	*International Journal of Manpower*	99	19.8

Note: Top 10 authors.

from different countries whereas "SCP" denotes the publications from the same nation authors. The MCP Ratio's proportional value indicates the degree to wherein each country contributes to worldwide collaboration. Given that 46 countries contributed shows how popular the subject of GHRM is.
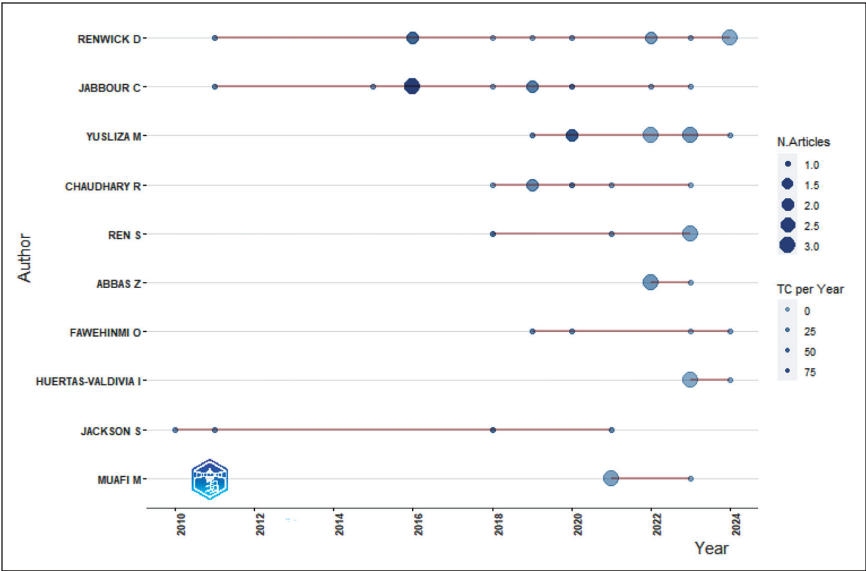
Figure 2. Authors' Production Over Time.

Table 6 displays the top contributing nation results. The production of various countries in this field has also grown over time. This is because environmental concerns are given substantial attention by scholars and policymakers throughout countries due to the constantly expanding environmental threats. There is a shift in the countries' rankings when compared to Table 6. Table 5 shows India as the top country, followed by China, Pakistan, Malaysia, and the United Kingdom in that order. Considering this, we may say that developing nations have made a noteworthy contribution to sustainability and green HRM when compared to developed nations. China held the top spot when it came to the total number of citations, followed by Pakistan, Malaysia, the United Kingdom, and India.

Three-field Plots

A three-field plot is displayed in Figure 3, and the distribution of authors, keywords, and countries is represented. Amid the GHRM processes of change, the nodes show the author's contribution as well as the varied efforts made by the top 10 countries. The width of nodes and edges provides quantitative flow information. The relationship between countries' contributions, authors and keywords to the study domain is displayed. The data demonstrates that Malaysia, the United Kingdom, Brazil, the USA, and Australia have carried out the most studies. The figure indicates that Malaysia has worked or partnered with several authors, Renwick, who has contributed the most, works with other writers and nations to expand the GHRM and sustainability with new subjects. India appears seventeen times in the present investigation and makes use of every keyword associated with GHRM and sustainability. "Green human resource management" is the most

Table 5. Country Contribution.

Country	Articles	SCP	MCP	Freq	MCP_Ratio
India	34	29	5	0.149779736	0.147058824
China	28	13	15	0.123348018	0.535714286
Pakistan	22	13	9	0.0969163	0.409090909
Malaysia	20	15	5	0.088105727	0.25
United Kingdom	10	5	5	0.044052863	0.5
Australia	9	8	1	0.039647577	0.111111111
Indonesia	7	7	0	0.030837004	0
USA	7	2	5	0.030837004	0.714285714
Italy	6	6	0	0.026431718	0
Poland	6	4	2	0.026431718	0.333333333

Note: Top 10 countries.

Table 6. Most Cited Countries.

Country	TC	Average Article Citations
China	2059	73.5
Pakistan	1058	48.1
Malaysia	859	43
United Kingdom	836	83.6
India	812	23.9
Brazil	520	104
USA	480	68.6
Italy	438	73
France	372	74.4

Note: Top 10 countries.

popular and fascinating keyword, according to research from all writers and nations. Among the top 10 most frequent keywords, "green human resource management" is the most often used term (46), according to the three-field plot. Some of the other most often used keywords are sustainability (39), green HRM (18), environment sustainability (13), environment management (13), GHRM (9), environment (7), environmental performance (7), CSR (6), and sustainable development (5).

Most Relevant Keywords

With the help of the most relevant keywords, researchers can find co-occurrences in the linkages between similar words found in each collection between those words. Consequently, the most used keywords were related to one another. The results are displayed using Biblioshiny in Figure 4. Green human resource
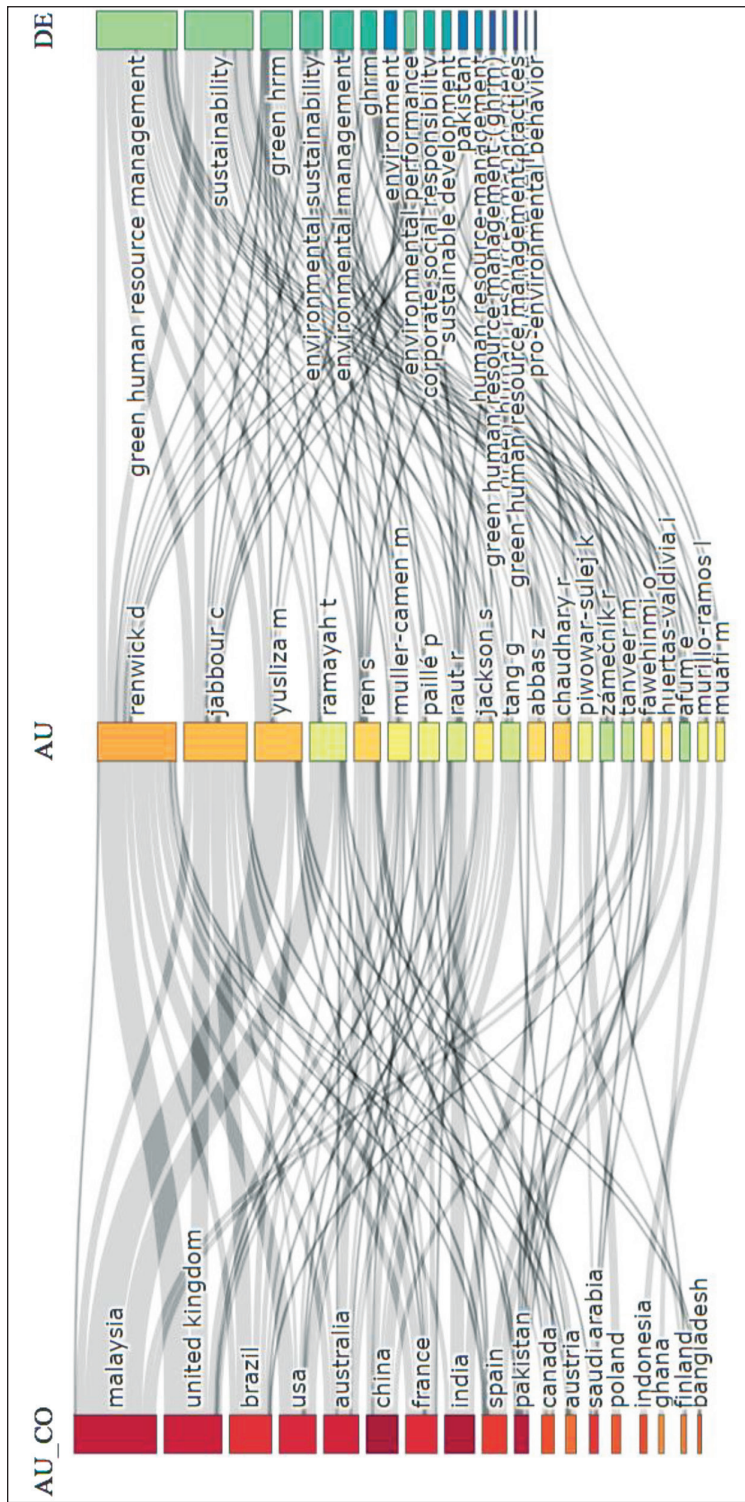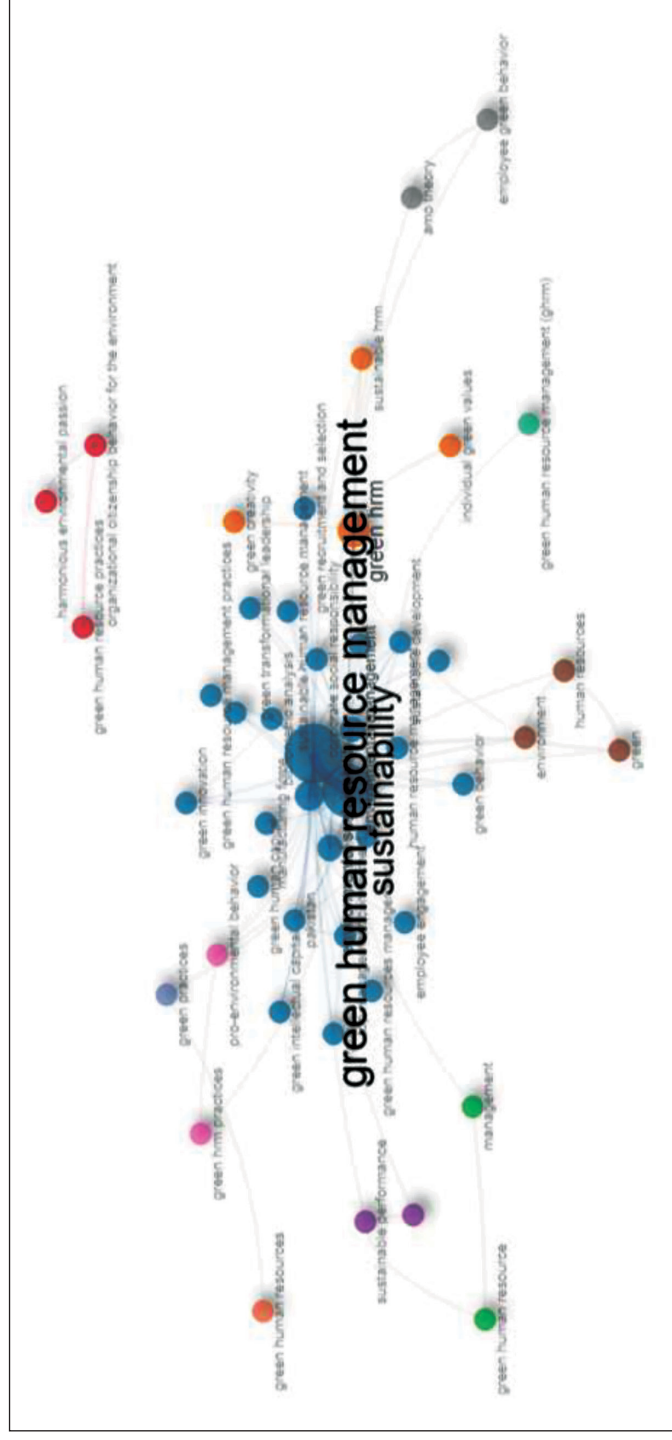
Figure 3. Three-field Plot.

Figure 4. Co-occurrence: Author Keywords Analysis.

practices, harmonious environmental passion and organizational citizenship behavior for the environment are the attributes that are symbolized by Custer 1 in red. The components in Cluster 2 are GHRM, sustainability, environmental performance, environmental sustainability, environmental management, GHRM, CSR, sustainable development, green human resources management, human resource management, Pakistan, GHRM practices, green innovation, HRM, competitive advantage, green transformational leadership, Malaysia, sustainable human resource management, top management commitment, bibliometric analysis, employee engagement, green behavior, green behaviors, green human capital, green intellectual capital, green recruitment and selection and manufacturing firms represent the organizational theme in blue. Having two keywords, green human resource and management, Cluster 3 embodies the concept of GHRM in light green. The two keywords in Cluster 4, sustainable performance and green supply chain management are in purple. The orange-colored Cluster 5 green HRM, green creativity, sustainable HRM and individual green values. Cluster 6 in brown color includes environment, green and human resources. Green HRM practices and pro-environmental behavior make up Cluster 7 in pink color. Cluster 8 comprises two keywords, AMO theory and employee green behavior represented by gray color. GHRM represents Cluster 9, green human resources Cluster 10 and green practices are presented by Cluster 11. The more research that is done on a keyword, the larger its bubble. Every cluster is distinguished by a unique color.

The research looked at the most popular themes over the years. The environment as a topic has been trending the most since 2016. GHRM, sustainability and green HRM came into trend in the year 2020 and the frequency has been growing. Many topics, such as sustainable performance, green HRM practices, GHRM practices, green human resources management, GHRM, human resource management and environmental management dominated the period between 2016 and 2023, as Figure 5 illustrates.

World Collaboration Network

The research plan for GHRM and sustainability should incorporate empirical studies from both developed and developing countries, as well as from a range of geographic locations. The participation of various authors and nationalities demonstrates the social structure. Co-authorship demonstrates important cross-border partnerships in addition to a country's total publication output. Furthermore, the World Collaboration Map shows that developing and emerging nations continue to have low levels of academic participation as given in Figure 6. Green HRM and sustainability remain a topic of great importance that requires more investigation by encouraging green movement, green progress, and involvement from stakeholders. In this sense, academic research is dominated by China, Pakistan, and the United Kingdom, which also work with most other nations, particularly developing nations that promote sustainability and the environment. Researchers in China, Australia, India, the United States, France, Canada, the United Kingdom, and Spain are closely connected. The statistics indicate that the United Kingdom
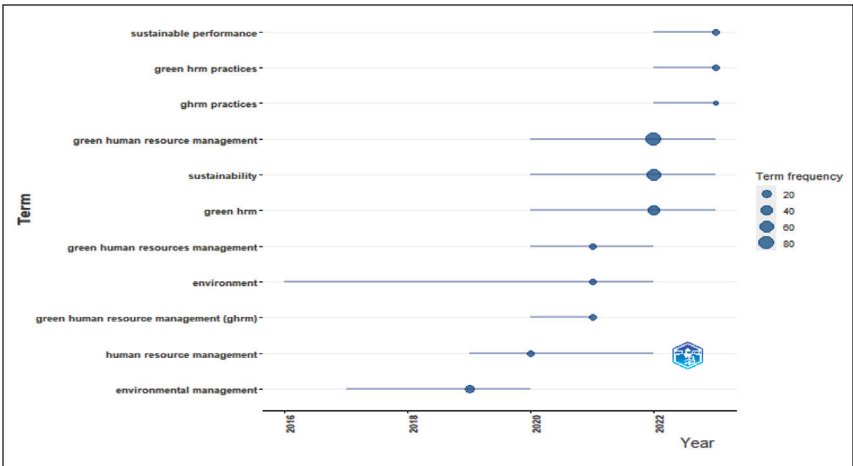
Figure 5. Trend Topics.
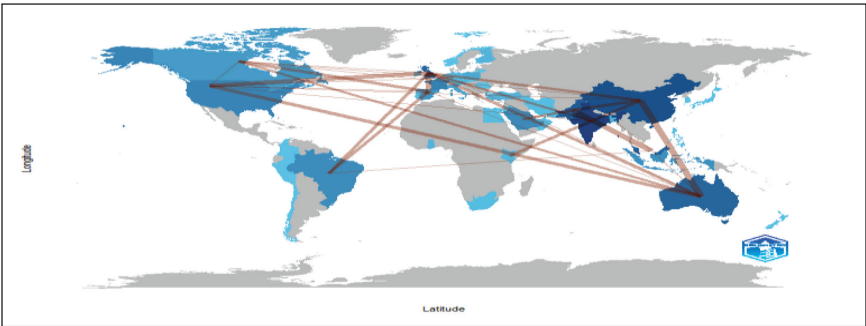
Figure 6. World Collaboration Map.

(working with 12 other nations) is at the top, followed by Australia, China, The United States of America, Malaysia, Pakistan, India, France, and Spain.

Conclusions

Over the past few decades, GHRM and sustainability have been explored separately. Scholars have recently become increasingly focused on how crucial GHRM practices are to advancing sustainability. Over the last 10 years, several studies have determined that GHRM practices are essential to sustainability. The significance of GHRM and sustainability as a developing topic nowadays is highlighted by this study. GHRM aims to address ecological and environmental challenges from an organizational perspective, as well as to be involved in the creation of

greener societal social routes. This HRM specialization addresses one of the most significant problems that humanity has ever encountered. In an increasingly diverse corporate landscape, many organizations are choosing new initiatives like GHRM practices in search of issues to balance sustainability and economic objectives.

Implications

Environmental activists, administrations, corporations, scholars, entrepreneurs, and financial services industry specialists will be able to comprehend the emerging issues with this study. The study's findings will stimulate further research by different groups of academics, decision-makers, and practitioners in the areas of different disciplines about lowering the carbon footprint of the environment. Organizations can use this report as a reference to create complete green HRM policies that support their sustainability objectives. According to the study, the authors support promoting environmental responsibility among employees. These tactics foster employee engagement and a sense of accountability for sustainability goals. The report offers a forward-looking viewpoint on the significance of fostering a sustainable culture within businesses. To put it briefly, this report summarizes the advancements made in this field of study.

Limitations and Future Research

Notwithstanding its significance, there are several shortcomings to the study. First, Scopus and WoS databases were used to gather the data. Findings cannot be generalized because additional sources were disregarded. Second, since papers not written in English were excluded from the study, which solely examined GHRM and sustainability literature produced in English, the findings might not be reliable. In summary, this research represents a bibliometric assessment of the GHRM and sustainability field, with empirical work serving as the foundation for the recommended future directions. To investigate the strategic procedures that companies use to create and carry out Green HRM (GHRM) projects, qualitative research is required. Scholars can opt to conduct a meta-analysis and a systematic literature review in the future. While empirical studies (Millar et al., 2016) highlight the significance of GHRM in accomplishing sustainability goals, more research into the particular frameworks and techniques employed by organizations would be beneficial for the advancement of the discipline.

Declaration of Conflicting Interests

Funding

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Transformational Leadership and Its Relationship with Organizational Citizenship Behavior: A Study of IT Companies in India

Luxmi Malodia[1] and Sudiksha Arora[1]

Abstract

This research explores the role of transformational leadership and its relationship with organizational citizenship behavior. The Indian IT industry is the study's primary emphasis. Eighty workers from the top 10 IT businesses in India provided the data. Accenture, TCS, Infosys, IBM Consulting, NTT Data, Cognizant, Capgemini, HCL Tech, Wipro, and Tech Mahindra are the IT organizations that were chosen for this research. "The Statistical Package for the Social Sciences" (SPSS) was used to analyse this data after it gathered it via Google Forms. According to this study's findings, Indian IT industry workers exhibit high levels of corporate citizenship and transformational leadership. Organizational citizenship behavior and transformative leadership are significantly correlated. The three demographic variables (age, gender, and marital status) were studied, and the study concluded that age and gender have no significant relation with organizational citizenship behavior, and marital status has a negative correlation with organizational citizenship behavior.

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Introduction

The business environment is evolving quickly in the modern day, and globalization, the dynamic dynamics of international rivalry, and a diverse labor force are what are particularly driving India's information technology sector. In order to accomplish their organizational objectives, information technology organizations must effectively and efficiently manage and lead their workforce in this fiercely competitive business climate. One of the most crucial aspects of management is leadership, which helps to fulfill the organization's overall vision and goals by encouraging staff to perform better and maximizing efficiency. A successful leader should be adaptable, dynamic, endowed with positive attributes, and able to motivate their team members to do better.

In order to communicate with people and get higher work output from them, leaders need to have certain personality attributes. The accomplishment and success of an organization greatly depend on its leaders exhibiting both positive personality attributes and an active, dynamic, and successful leadership style. In the modern world, a leader's contribution to raising staff performance within the company is crucial. The leaders of the organization have a significant influence on the employees' voluntary engagement. Both positive and bad effects on employee behavior within the company may be attributed to the leaders. Organizational Citizenship Behavior is the term used to describe the beneficial effects that leadership has on the workforce.

Organizational citizenship is an interpersonal behavior which affects organizational effectiveness. It is people's voluntary interaction with coworkers, staff, and other employees within the company. Organizational citizenship characteristics include altruism (helping behavior), civility, conscientiousness, sportsmanship, and civic virtue. Employees that exhibit "good citizenship" behaviors assist their teammates, offer to work extra, resolve issues amicably, lend a helping hand to others, and do it in a way that benefits the firm as a whole. It goes beyond the stated criteria of the job. Although it is a crucial component of work performance and can significantly enhance organizational performance, the organizational system frequently ignores it. Employees who engage in voluntary activities for the organization's benefit, whether or not they receive compensation, are said to exhibit citizenship behaviors.

Along with education, training, and experience, the leaders also wish to hire and keep personnel who practice good citizenship. These characteristics demonstrate their dedication to the organization, positive outlook, and convictions. Workers that are more trustworthy, on time, and have a greater understanding of the company have stronger bonds with their coworkers. In India, the information technology sector is now highly valued. The industry has made a substantial contribution to rising GDP, employment, and exports. According to National Association of Software and Service Companies (NASSCOM) Strategic Review (2022), the industry accounted for 51% of services exported and contributed 9% to the nation's GDP.

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accounted for 51% of services exported and contributed 9% to the GDP of the country. In a single year, the sector added 4.5 lakh new hires in total. Two million of the 5 million workers in the IT sector now are women, of whom 2 lakhs were hired in the last 10 years. With 1.8 million female employees, it is the largest employer of women in the commercial IT sector. These days, Indian IT firms with global recognition for their IT prowess include Wipro, Tata Consultancy Services (TCS), HCL, Infosys, and others.

Review of Literature

Transformational Leadership

According to Bass and Avolio (1990), who first proposed the idea of transformational leadership, transformational leaders simultaneously promote the growth of groups and organizations and increase the ambitions of their followers for success and self-development. Without using either a carrot or a stick to address followers' immediate self-interest, transformational leaders increase followers' confidence and gradually shift their focus from survival concerns to goals, growth, and development while bringing attention to important issues, the group, and the organization.

These leaders are characterized by their idealized influence (charisma), personalized attention, intellectual stimulation, and motivating inspiration. The four fundamental elements, or "I"s, of transformational leadership are represented by these variables. According to Sahgal and Pathak's (2007) conclusion, leaders are created by a journey of unique life experiences and processes rather than as a result of happenings or events. After researching the four facets of transformational leadership, Raja (2012) came to the conclusion that managers who practice idealized influence, intellectual stimulation, individual consideration, and inspiring motivation increase employee job engagement. According to Givens (2008), managers have the power to shape workers' actions such that they benefit the company.

Transformational leadership significantly improves staff performance and efficiency, hence facilitating the attainment of the organizational objective. The transformational leaders play a very important role among the employees working for the organization.

Organizational Citizenship Behavior

Organ (1988) explained organizational citizenship behavior as "The voluntary behavior of a person that is not a part of the individual's formal job description; is not directly or clearly acknowledged by the formal reward system and that cumulatively enhances the functioning of the organization." Put simply, it's the work that an employee does above and beyond what is required of him or her and beyond the organization's set standards for the position. Extra-role behavior is what is meant by this (Organ, 1988).

According to Ishak (2005), the supervisor-subordinate connection is essential to enabling work performance beyond the confines of the job. According to

Somech and Ron's (2007) research, organizational citizenship activity is positively correlated with perceived supervisor support and collectivism, and negatively correlated with negative affectivity. According to Bukhari and Umair (2009), there is a significant relationship between all three antecedents (civic virtue, conscientiousness, and altruism) along with organizational citizenship behavior, although there is no positive association between the two. Dargahi et al. (2012) demonstrated a strong relationship between the marital status, educational background, and gender of Iranian nurses and civic virtue, sportsmanship, and altruism.

Benjamin (2012) argues a substantial correlation among corporate citizenship behavior, intentions of voluntary turnover, and the human resource development environment. On the other hand, there is no discernible correlation between voluntary turnover intentions and organizational citizenship conduct. It is clear that workers who exhibit "good citizenship" behaviors support their coworkers, volunteer for extra work, steer clear of pointless confrontations, encourage others, aid others, and serve others in a way that benefits the firm as a whole. It goes beyond the stated criteria of the job.

Research Objectives

1. To explore the extent of transformational leadership and organizational citizenship behavior among the employees in a few select IT companies in India.
2. To study the relationship between transformational leadership and organizational citizenship behavior among the employees in a few select IT companies in India.
3. To analyze the organizational citizenship behaviors of employees in a few select IT organizations in India according to their age.
4. To study the organizational citizenship behavior of employees in select few IT organizations in India based on gender.
5. To compare how workers in a few chosen IT organizations in India behave in terms of organizational citizenship behavior according to their marital status.

Hypotheses of the Study

H_1: There is a high level of transformational leadership and organizational citizenship behavior among the employees in a few select IT companies in India.

H_2: There is a significant relation among transformational leadership and organizational citizenship behavior among the employees of a few select IT companies in India.

H_3: There is significant correlation between age and organizational citizenship behaviors among employees in a few numbers of Indian IT organizations.

H_4: There is a substantial correlation between gender and organizational citizenship behavior among employees in a few numbers of Indian IT organizations.

H_5: There is a significant correlation between employees' marital status and the organizational citizenship behavior in a few numbers of Indian IT organizations.

Research Design

The research is exploratory and descriptive in character. The aim of this present research is to explore organizational citizenship behavior and transformational leadership among Indian IT industry workers. Based on a list published by Brand Finance, 10 of the top fifteen firms were selected. Eighty workers from India's top 10 IT organizations made up the sample.

Collection of Data

Questionnaire Method has been used to gather the primary data for this study. Thirty-nine items made up the transformational leadership inventory (Bass & Avolio, 1990). The main four dimensions of the scale are idealistic influence, intellectual stimulation, inspirational motivation, and individualized consideration. It was discovered that the transformative leadership's Cronbach's alpha coefficient was 0.962. The organizational citizenship behavior was examined using the 24-item scale originated by Moorman and Fetter (1990). The scale is further broken down into five dimensions: Civic virtue, sportsmanship, conscientiousness, courtesy, and altruism. It was discovered that organizational citizenship conduct had a Cronbach's alpha coefficient of 0.798.

Results and Discussions

The gathered data was examined to ensure that the study's goals were met. However, the data's normality was examined before a thorough examination was conducted. The normality of the data was checked in order to ascertain whether parametric or non-parametric tests would be used in the process of statistical analysis of the data.

To make sure the data was normal, Shapiro–Wilk & Kolmogorov–Smirnova analyses were performed. The statistics for the two tests—the Shapiro–Wilk & Kolmogorov–Smirnova tests—are shown in Table 1. Kolmogorov–Smirnova reports that the p values for organizational citizenship behavior and transformational leadership, respectively, were determined to be .200 and .200. Shapiro–Wilk states that the p value for organizational citizenship behavior is .469 and the p value for transformational leadership is .103.

These results indicated that the data distribution was typical. Karl Pearson's correlation is used to evaluate the data since it was determined based on these findings that the data was appropriate for parametric testing.

H_1: There is a high level of transformational leadership and organizational citizenship behavior among the employees in a few select IT companies in India.

Table 1. Tests of Normality.

	Kolmogorov–Smirnova			Shapiro–Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Transformational-leadership	0.082	80	0.200	0.974	80	0.103
Organizational citizenship behavior	0.076	80	0.200	0.985	80	0.469

Source: Statistical Package for the Social Sciences (SPSS).

Table 2. Descriptive Statistics.

Variables	N	Minimum	Maximum	Mean	Standard Deviation
Transformational-leadership	80	2.54	5.00	4.0077	0.51769
Organizational citizenship behavior	80	3.58	6.92	5.3120	0.58634

Source: Statistical Package for the Social Sciences (SPSS).

Descriptive statistics shown in Table 2 have been used to show the level of transformational leadership and organizational citizenship behavior. The scale used in the questionnaire for transformational leadership was the 5-point Likert Scale and the scale used in the questionnaire for organizational citizenship behavior was the 7-point Likert Scale.

Transformational leadership, with a mean value of 4.0077, has been identified as highly effective. It has also been revealed that transformational leadership has a wide range of values, with a minimum of 2.54 and a maximum of 5. Given that the mean has a high value of 5.3120, organizational citizenship behavior has also been shown to be high. The findings indicate that there is a wide range in corporate citizenship behavior, with a minimum value of 3.58 and a maximum of 6.92. According to the high degree of transformational leadership and organizational citizenship behavior among Indian IT sector personnel, it can be said that H_1 is embraced.

H_2: There is a significant relationship between transformational leadership and organizational citizenship behavior among the employees in a few select IT companies in India.

Karl Pearson's Correlation results (Table 3) revealed a substantial positive correlation between transformational leadership and organizational citizenship behavior ($r = 0.609$, $p = .000$).

Thus, it can be said that H_2, which claims that employees in India's IT sector exhibit organizational citizenship behavior and transformational leadership in a major way, is neither rejected nor unlikely to be accepted. The positive correlation in this particular case indicates that strong leadership significantly affects the behavior of the organization's employees.

Table 3. Correlations.

			Transformational Leadership	Organizational Citizenship Behavior
Karl Pearson's	Transformational-leadership	Correlation-coefficient	1.000	0.609
		Sig. (1-tailed)	—	0.000
		N	80	80
	Organizational citizenship behavior	Correlation-coefficient	0.609	1.000
		Sig. (1-tailed)	0.000	—
		N	80	80

Source: Statistical Package for the Social Sciences (SPSS).

Table 4. Correlation.

		Age	Organizational Citizenship Behavior
Age	Correlation-coefficient	01	0.140
	Sig. (1-tailed)	—	0.216
	N	80	80
Organizational citizenship behavior	Correlation-coefficient	0.140	01
	Sig. (1-tailed)	0.216	—
	N	80	80

Source: Statistical Package for the Social Sciences (SPSS).

H_3: There is significant correlation between age and organizational citizenship behaviors among employees in a few numbers of Indian IT organizations.

Table 4 shows that Karl Pearson's correlation analysis between age and organizational citizenship behavior revealed a low correlation ($r = 0.140$, $p = .216$). Age has no impact on the citizenship behavior among the employees in the IT industry in India.

Consequently, it can be said that H_3 might not be approved. Additionally, there exists a weakly significant correlation between organizational citizenship activity and age. The lack of a significant relationship found here between age and organizational citizenship behavior suggests that employee citizenship behavior is not related to age.

H_4: There is a substantial correlation between gender and organizational citizenship behavior among the employees of the IT Sector in India.

The findings of Karl Pearson's correlation indicate a negligible association ($r = 0.029$, $p = .797$) between gender and organizational citizenship behavior (Table 5). The organizational citizenship behavior of employees in India's IT industry is not influenced by gender.

Table 5. Correlation.

		Gender	Organizational Citizenship Behavior
Gender	Correlation-coefficient	01	0.029
	Sig. (1-tailed)	—	0.797
	N	80	80
Organizational citizenship behavior	Correlation-coefficient	0.029	01
	Sig. (1-tailed)	0.797	—
	N	80	80

Source: Statistical Package for the Social Sciences (SPSS).

Table 6. Correlation.

		Marital Status	Organizational Citizenship Behavior
Marital status	Correlation-coefficient	01	–0.178
	Sig. (1-tailed)	—	0.114
	N	80	80
Organizational citizenship behavior	Correlation-coefficient	–0.178	01
	Sig. (1-tailed)	0.114	—
	N	80	80

Source: Statistical Package for the Social Sciences (SPSS).

Thus, it may be said that H_4, which claims that there is a low meaningful relationship between gender and organizational citizenship behavior, may not be accepted. When the role of leaders is examined, there is no discernible difference in the citizenship behavior of men and women, as indicated by the low connection between the gender of the employees and organizational citizenship behavior among them.

H_5: There is a significant correlation between employees' marital status and the organizational citizenship behavior in a few numbers of Indian IT organizations.

Karl Pearson's correlation data (Table 6) revealed a negative association ($r = –0.178$, $p = .114$) between organizational citizenship activity and marital status. The marital status of employees adversely affects their corporate citizenship behavior in the Indian IT sector.

So, subsequently H_5, which claims that there is a low meaningful association between married status and corporate citizenship behavior, may not be accepted. It can be inferred from the negative link between organizational citizenship behavior and marital status that employees who are single exhibit higher levels of civic engagement than those who are married.

Summary of the Results

Table 7. Summary.

Objective	Hypothesis	Result
"To study the level of transformational leadership and organizational citizenship behavior among the employees of the IT sector"	"H_1: There is a high level of transformational leadership and organizational citizenship behavior among the employees of the IT sector in India"	Accepted
"To find out the relationship between transformational leadership and organizational citizenship behavior among the employees of the IT sector"	"H_2: There is a significant relationship between transformational leadership and organizational citizenship behavior among the employees of the IT sector in India"	Accepted
"To compare the behavior of employees with regard to organizational citizenship behavior on the basis of age"	"H_3: There is a significant relationship between age and organizational citizenship behavior among the employees of the IT sector in India"	Rejected
"To compare the behavior of employees with regard to organizational citizenship behavior on the basis of gender"	"H_4: There is a significant relationship between gender and organizational citizenship behavior among the employees of the IT sector in India"	Rejected
"To compare the behavior of employees with regard to organizational citizenship behavior on the basis of marital status"	"H_5: There is a significant relationship between marital status and organizational citizenship behavior among the employees of the IT sector in India"	Rejected

Findings of the Research Study

1. The outcomes of the research indicate a significant correlation ($r = 0.609$) between organizational citizenship behavior and transformational leadership among employees in Indian IT companies. The results indicated a robust correlation between organizational citizenship behavior and transformative leadership.
2. There is no age-based link ($r = 0.140$) between employee behavior and organizational citizenship behavior. It claims that in India's IT industry, age has little bearing on corporate citizenship behavior.
3. There is no gender-based association ($r = 0.029$) between employee behavior and organizational citizenship behavior. Which claims that in India's IT industry, corporate citizenship behavior is not much influenced by gender.
4. Based on marital status, there is no link ($r = -0.178$) between employee conduct & the organizational citizenship behavior. Which claims that in the Indian IT industry, organizational citizenship behavior is not substantially correlated with marital status.

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Unveiling the Link: HR Practices and Innovative Work Behavior Among IT Professionals in North India

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Abstract

The purpose of this study is to empirically test the relationship and effect between innovative work behavior (IWB) and human resource (HR) practices, looking at how particular HR policies and practices encourage innovation and creativity in businesses. Businesses are placing a greater emphasis on innovation in order to stay competitive, therefore it's critical to comprehend how HR practices support employee-driven innovation. To test the statistical significance, the data was obtained from information technology (IT) professionals working in the IT sector through reliability-tested scales in northern India via a questionnaire and analyzed using SPSS. Correlation and regression analysis were used to examine the data. The study examined important HR aspects and examined how they affect workers' capacity to generate, promote and execute innovative ideas. Considering the findings, the results showed that IWB is greatly enhanced by HRP that will support employee empowerment, ongoing learning, and intrinsic motivation. For HR managers looking to foster an innovative atmosphere, this article offers insightful information.

Introduction

Organizations nowadays encounter remarkable opportunities and challenges due to the increased competitiveness spurred by globalization, the rapid advancement

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of technologies, and shorter life-spans of product cycles and services in the 21st century. Organizations must deal with an abundance of issues, such as a lack of innovation and a lack of creative behavior in the workplace. Organizations suffer significant losses when they are unable to compete with other organizations due to a lack of innovative behavior. Therefore, innovation and originality are crucial components to obtain a competitive edge to adapt and embrace the changes taking place in the corporate environment to survive, maintain, and expand in the current dynamic and competitive climate. The continuous effort to innovate is crucial for organizations today. Innovation enhances the value of the organization and plays a key role in the rapidly changing environment to cope with the essential changes to gain a competitive edge over the rival organization (Janssen, 2000). Given the growing significance of innovation, researchers are increasingly trying to determine when and why people behave in innovative ways within their organizations. Scholars contend that achieving such important employee contributions requires the creation and execution of human resource management (HRM) (Guest, 1987). In order to obtain a competitive edge, HRM is commonly regarded to be the management of people and the workplace, comprising both line management and HR specialists. Although extensive study has been conducted over the past two decades, and strategic HRM researchers have agreed that HRM is linked to organizational outcomes, the understanding of the "HRM-performance" relationship, including innovative behavior, is still subject to debate (Nishii et al., 2008). Literature has indicated the importance of innovative work behavior (IWB) and how HRM practices play an essential role in it. Researchers in different articles studied different HRM practices with IWB. Previous research studies have linked the existence of HRM practices, mainly focusing on enhancing skills, motivation, or different opportunities to encourage extra-role behavior on the employee's side in any particular context.

In general many studies look into the connection between HRP and IWB and has been seen in broad acceptance in the Hotel industry in Pakistan (Jan et al., 2021), the Manufacturing industry in Pakistan (Yasir & Majid, 2020) and Dutch (Bos-Nehlas & Veenendaal, 2019), ICT companies in Thailand (Koednok & Sungsanit, 2018), universities in Vietnamese and cape town (Opoku et al., 2020; Tran et al., 2020), Indian SMEs (Singh et al., 2021) but this study highlights the gap that HR practices and IWB are not covered in the information technology (IT) sector. In developing nations, not enough is known about the best HR practices for managing IT experts for global competitiveness (Kong et al., 2011). The IT/ITES sector is viewed as one of the fastest-growing sectors in India. To be successful in the market, IT companies need to adequately prepare employees for a global environment (Raman et al., 2013). The Indian IT industry is up against a ton of competition and obstacles in the international market. Employees must innovate and adapt to changes to remain competitive. The report will highlight various HR practices influencing innovative behavior among employees and how to improve it as well. Since there is a great need for research in this field due to the service sector's explosive growth, particularly in the IT sector, this study has looked at how HR practices affect innovative behavior.

Literature Review

For reviewing the literature, the bibliometric analysis technique was used. The keywords used for identifying the articles on the topic were "HRM Practices" OR "HR Practices" AND "Innovative work behaviour" OR "Innovative work behavior." A total of 27 articles were identified. The VOS viewer software was used to analyse the core authors with six clusters (Figure 1). It was found that HR practices have a significant impact on IWB in different sectors in India and other countries, but the main gap identified from this literature is that the IT sector is still unexplored in this topic (Table 1).

Research Objectives

1. To identify the relationship between HRP and IWB among IT employees.
2. To examine the impact of HRP on IWB among IT employees.
3. To determine whether there is an association between demographic variables and IWB among IT employees.

Hypotheses Development

Based on the objectives and literature review, the following hypothesis is proposed by the researcher:

H_1: There is a significant association between HRP and IWB among IT employees.
H_2: There is a significant impact of HRP on IWB among IT employees.
H_3: There is a significant difference in the levels of IWB among IT employees with regard to demographic variables (i.e., marital status, gender, age, years of experience, educational qualification)
H_{3a}: There is a significant difference in the levels of IWB among IT employees with regard to marital status.
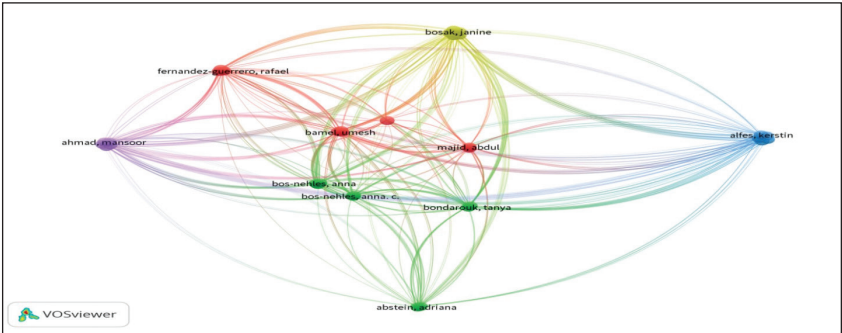
Figure 1. Network Visualization of Authors.

Source: Vosviewer.

Table 1. Literature Review.

Title	Authors and Years	Sample	Research Method and Techniques	Findings	Source Title
"Proud of my organization: Conceptualizing the relationships between high-performance HR practices, leadership support, organizational pride, identification and innovative work behaviour"	Deepa et al. (2024)	370 employees in India	Survey (purposive and snowball sampling)	High-performance HR practices influence IWB	"International Journal of Organizational Analysis"
"The impact of high commitment work practices on radical innovation: Innovative work behaviour and knowledge sharing as mediators"	Thneibat (2024)	408 employees; pharmaceutical, manufacturing and technological industries in Jorden	Survey	HRM practices impact IWB	"International Journal of Productivity and Performance Management"
"Middle-managers' innovative behavior: The roles of psychological empowerment and personal initiative"	Mustafa et al. (2023)	110 middle managers	Survey	Focuses on the psychological factors that affect middle managers' IWB and how HR practices might encourage middle managers to take initiative at work	"International Journal of Human Resource Management"
"Impact of HRM practices on innovative behaviour: Mediating role of talent development climate in Indian firms"	Datta et al. (2023)	307 and 403 employees working in Indian MNCs	A qualitative and quantitative approach	HRM practices serve as significant for employees' IWB and highlight TDC's mediation effect	"International Journal of Human Resource Management"

(Table 1 continued)

Title	Authors and Years	Sample	Research Method and Techniques	Findings	Source Title
"Collaboration-based HR systems and innovative work behaviors: The role of information exchange and HR system strength"	Colakoglu et al. (2022)	204 employees working in seven manufacturing sectors across 50 departments in Turkey	Survey	HR practices influence their IWBs: Idea generation, promotion, and execution	"European Management Journal"
"High-performance work systems and innovative work behavior among Telecom employees: The mediating roles of organizational climate for innovation and psychological empowerment"	Phairat and Potipiroon (2022)	710 individuals; the telecommunication sector in Thailand	Two-stage cluster sampling	Psychological empowerment and the perceived climate for innovation acted as a full and sequential mediating factor between HPWS and employees' IWB	"ABAC Journal"
"Do HR practices facilitate innovative work behaviour? Empirical evidence from higher education institutes"	Zreen et al. (2021)	367 participants working in Pakistani universities	Survey	Training and development, as well as the selection, are key factors in encouraging innovative work behavior	"Human Systems Management"
"HRM practices and innovative work behavior within the hotel industry in Pakistan: Harmonious passion as a mediator"	Jan et al. (2021)	220 employees; working in hotels; Pakistan	Survey	Harmonious passion mediates the relationship between HR practices and IWB	"Journal of Human Resources in Hospitality and Tourism"

(Table 1 continued)

Title	Authors and Years	Sample	Research Method and Techniques	Findings	Source Title
"The mediating effect of meaningful work between human resource practices and innovative work behavior: A study of emerging market"	Singh et al. (2021)	199 employees; Indian SMEs	Cross-sectional study	HR practices (training, staffing, and participatory decision-making) are positively associated with IWB and performance-based evaluation and reward are negatively associated with IWB	"Employee Relations"
"High-involvement HRM practices and innovative work behavior among production-line workers: Mediating role of employee's functional flexibility"	Yasir and Majid (2020)	894 employees; manufacturing industry	Survey	Ability, motivation, and opportunity-enhanced practices are the three aspects of HI HRM practices that directly impact IWB	"Employee Relations"
"New times for HRM? Well-being oriented management (WOM), harmonious work passion and innovative work behavior"	Salas-Vallina et al. (2020)	362 senior managers; Spanish firm	Survey	WOM significantly impacts IWB	"Employee Relations"
"High involvement HR systems and innovative work behaviour: The mediating role of psychological empowerment, and the moderating roles of manager and co-worker support"	Rehman et al. (2019)	51 software firms in Pakistan; 800 employees	Survey	Motivation-enhancing HR practices directly influence IWB	"European Journal of Work and Organizational Psychology"

(Table 1 continued)

(Table 1 continued)

Title	Authors and Years	Sample	Research Method and Techniques	Findings	Source Title
"Perceptions of HR practices and innovative work behavior: The moderating effect of an innovative climate"	Bos-Nehles and Veenendaal (2019)	463 participants working in four Dutch Manufacturing companies	Survey	HR practices (information sharing, training and development and supportive supervision) are favorable with IWB and compensation is negatively associated with IWB	"International Journal of Human Resource Management"
"Perceptions of HRM and their effect on dimensions of innovative work behaviour: Evidence from a manufacturing firm"	Veenendaal and Bondarouk (2015)	328 workers working in Dutch manufacturing companies	Survey	Three dimensions of IWB are influenced by perceived HR practices	"Management Revue"
"How do high performance work systems influence organizational innovation in professional service firms?"	Fu et al. (2015)	195 employees; 120 Irish accounting firms	Survey	High-performance work systems significantly associated with employees' IWB	"Employee Relations"
"Exploring HRM meta-features that foster employees' innovative work behaviour in times of increasing work-life conflict"	Abstein and Spieth (2014)	Service and manufacturing industries in Germany	Qualitative, interview-study approach	HRM contributes to IWB and diminishes the feeling of work-family conflict	"Creativity and Innovation Management"
"The relationship between line manager behavior, perceived HRM practices, and individual performance: Examining the mediating role of engagement"	Alfes et al. (2013)	1796 participants; service sector; UK	Survey	HRM practices influence IWM through employee engagement	"Human Resource Management"

H_{3b}: There is a significant difference in the levels of IWB among IT employees with regard to gender.

H_{3c}: There is a significant difference in the levels of IWB among IT employees with regard to age.

H_{3d}: There is a significant difference in the levels of IWB among IT employees with regard to years of experience.

H_{3e}: There is a significant difference in the levels of IWB among IT employees with regard to educational qualification.

Research Methodology

1. Data collection and sample

The sample was selected from the IT companies working in the northern region of India. Middle-level management from IT organizations are the study's respondents. Questionnaire surveys were used to collect the data. The questionnaire included questions on HRP and IWB. The eligibility requirements set forth for the sample selection process were used to choose the respondents. A total of 250 respondents from IT organizations in the northern region received questionnaires. After the screening process, all irrelevant or incomplete responses were eliminated and the remaining samples included 180 (72%) respondents. A non-probability snowball strategy was used to generate additional connections with respondents. The questionnaire was created in both modes, that is, a self-administered questionnaire and via E-mail digitally.

2. Measure

The data for this study were gathered through a survey method. The questionnaire is divided into three pieces. There are 35 items on the HR practices scale. Responses are gathered using a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The 10-item IWB Scale is included in the second section. The Likert scale included five points, with 1 denoting "never" and 5 denoting "always." Demographic variables are included as research control variables in the third section.

3. Data analysis

SPSS version 30.0.0. software was used to analyse the researcher's hypothetical model using correlation, regression, independent *t*-test, and one-way ANOVA.

Finding and Analysis

According to reliability analyses, the Cronbach alpha values of every construct are higher than the generally accepted cut-off point of.70. IWB was measured by the 10-item scale of which the alpha value is 0.939. HRP was measured by the

Table 2. Reliability Analyses.

Variable	Number of Items	Cronbach Alpha
Human resource practices	35	0.801
Innovative work behavior	10	0.939

Table 3. Summarizes Correlation Results.

		HRP	IWB
HRP	Pearson correlation	I	0.358
	Sig. (2-tailed)		0.000
	N	180	180
IWB	Pearson correlation	0.358	I
	Sig. (2-tailed)	0.000	
	N	180	180

Notes: At the 0.001 level (2-tailed), Correlation is significant.

35-item scale of which Cronbach alpha is 0.801 (Table 2). So, it is clear from these results that our scales are valid for measuring the research variables and moving forward with additional analyses to test the study's hypotheses.

H_1: Correlation analysis.

HRP and IWB have a weak positive and statistically significant Pearson correlation ($r = 0.358$, $p < .001$). H_1 was therefore supported. This explains that HRP is significantly correlated with IWB. The results are summarized in Table 3.

H_2: Regression analysis.

The hypothesis examines the substantial effect of HRP on IWB. To test H_2, the dependent variable IWB was regressed on the predictive variable HRP. HRP significantly predicted IWB, $F (1,178) = 26.179$, $p < .001$, which shows that HRP can play a key role in shaping IWB ($b = 0.465$, $p < .001$). These findings show that HRP has a statistically significant effect on IWB. Additionally, $R^2 = 0.128$ shows that the model predicts 12.8% of the variance in IWB. The results are summarized in Table 4. Hence, H_2 is supported. This demonstrates that IWB was affected by HR practices.

H_3: Descriptive analysis.

Table 5 reports the demographic details of respondents in the form of gender, age, educational qualification, marital status, and years of experience.

The first demographic variable was gender, in which respondents comprised 109 (representing 60.4%) males and 71 (representing 39.4%) females. After that, marital status in which respondents comprised 52 (representing 28.9%) married and 128 (representing 71.1%) unmarried/single. Next, age in which respondents comprised 51 (representing 28.3%) fall under the age group of 18–25 years, 115 (representing 63.9%) fall under the age group of 26–35 years, 13 (representing 7.2%) fall under the age group of 36–45 years. Next, the educational qualification of the respondents, in which most of them are post-graduate (representing 49.4%).

Table 4. Regression Results.

Hypothesis	Regression Weights	Beta Coefficients	R^2	F	p Value	Hypothesis Supported
H_2	HRP→IWB	0.465	0.128	26.179	.000	Yes

Notes: $p < .001$.

Table 5. Demographic Variables.

	N	Min	Max	Mean	Std. Deviation	Frequency	Percentage
Gender	180	1	2	1.39	0.49		
Male						109	60.4
Female						71	39.4
Marital status	180	1	2	1.71	0.455		
Married						52	28.9
Unmarried/single						128	71.1
Age	180	1	4	1.80	0.583		
18–25 years						51	28.3
26–35 years						115	63.9
36–45 years						13	7.2
46–59 years						1	0.6
60 years and above						0	0
Educational qualification	180	1	4	1.71	0.722		
Graduate						75	41.7
Post-graduate						89	49.4
Professional course						10	5.6
Others						6	3.3
Total work experience	180	1	5	1.47	0.828		
1–5 years						125	69.4
6–10 years						35	19.4
11–15 years						12	6.7
16–20 years						7	3.9
21 years and above						1	0.6

The last demographic variable was years of experience in which the respondents have experience of more than 21 years, comprising 1 (representing 0.6%) respondent, 7 (representing 3.9%) having experience between 16 and 20 years, 12 presenting 6.7%) having experience between 11 and 15 years, 35 (representing 19.4%) having experience between 6 and 10 years and the last 125 (representing 69.4%) having experience between 1 and 5 years.

Table 6. Difference in Job Satisfaction in Married and Single.

				Levene's Test for Equality of Variances				t-test for Equality of Means				
											95% Confidence	
							Sig.	Mean	Std. Error	Interval of the	
	Mean		SD	F	Sig.	t	df	(2-tailed)	Difference	Difference	Difference	
											Lower	Upper
DV	Married	3.8096	0.7673	0.358	0.550	0.348	178	0.728	0.04165	0.11976	–0.19469	0.27798
	Single	3.7680	0.7119									

H_{3a}: Independent sample T-test.

To compare the IWB of married and single, a *t*-test of independent samples was used. The scores varied significantly (t (178) = 0.348, p = .728), with the mean score for married people (M = 3.81, SD = 0.76) being higher than that of single people (M = 3.76, SD = 0.71). There was no statistical significance in the magnitude of the mean differences (mean difference = 0.042, 95% IWB: –0.195 to 0.278). The findings are summarized in Table 6. Hence, H_{3a} was NOT supported. The results showed that there was no noticeable change in the degree of IWB among IT professionals based on their marital status.

H_{3b}: Independent sample T-test.

To compare the IWB among males and females, an independent samples *t*-test was used. The scores varied significantly (t (178) = –0.318, p =.751), with the mean score for males (M = 3.7661, SD = 0.7112) being lower than that of females (M = 3.8014, SD = 0.7539). There was no statistical significance in the magnitude of the mean differences (mean difference = –0.035, 95% IWB: –0.254 to 0.183). The findings are summarized in Table 7. Hence, H_{3b} was NOT supported. This explains that there was no significant change in the levels of IWB among the employees with respect to gender.

H_{3c}: One-way ANOVA.

The hypothesis tests whether IWB differs across varied age groups within the IT professional. IT professionals were put together into five Groups (A: 18–25 years; B: 26–35 years; C: 36–45 years; D: 46–59 years; E: 60 years and above). The findings of the ANOVA indicate that there is no significant distinction between the groups' scores for IWB. Table 8 shows the summary of the findings. Hence, H_{3c} is NOT Supported ($F_{3, 176}$ = 0.573, p > .05).

H_{3d}: One-way ANOVA.

The hypothesis tests if IWB differs across levels of experience among IT professionals. So, these employees were put together into five Groups (A: 0–5 years; B: 6–10 years; C: 11–15 years; D: 16–20 years; E: 21 years and above). The findings

Table 7. Difference in Innovative Work Behavior Between Males and Females.

		Mean	SD	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
				Levene's Test for Equality of Variances			t-test for Equality of Means				95% Confidence Interval of the Difference	
DV	Male	3.7661	0.7112	0.100	0.752	−0.318	178	0.751	−0.03535	0.11107	−0.2545	0.18383
	Female	3.8014	0.7539									

Table 8. Summarizes One-way Anova Results.

Groups	Mean	Std. Deviation	Leneve's Statistics	Sig.	F	Sig.
		Test of Homogeneity of Variances			ANOVA	
1	3.7490	0.78673	0.579	0.561	0.573	0.633
2	3.8122	0.67215				
3	3.6769	0.96190				
4	3.0000	–				

Table 9. Summarizes One-way Anova Results.

Groups	Mean	Std. Deviation	Leneve's Statistics	Sig.	F	Sig.
		Test of Homogeneity of Variances			ANOVA	
1	3.6984	0.72200	0.350	0.789	1.902	0.112
2	3.9657	0.74120				
3	4.1000	0.66195				
4	3.8714	0.63170				
5	3.0000	–				

of the ANOVA indicate that there is no significant distinction between the groups' scores for IWB. Table 9 shows the summary of the findings. Hence, H_{3d} is NOT Supported ($F_{3, 175} = 1.902, p > .05$).

H_{3e}: One-way ANOVA.

The hypothesis tests if IWB differs across levels of educational qualification among IT professionals. So, employees were put together into four Groups (Group 1: Graduate; Group 2: Post-Graduate; Group 3: Professional Courses; Group 4: Others). The findings of the ANOVA indicate that there is no significant distinction between the groups' scores for IWB. Table 10 shows the summary of the findings. Hence, H_{3e} is NOT Supported ($F_{3, 176} = 0.651, p > .05$).

Table 10. Summarizes One-way Anova Results.

	Test of Homogeneity of Variances				ANOVA	
Groups	Mean	Std. Deviation	Leneve's Statistics	Sig.	*F*	Sig.
I	3.7400	0.85298	2.759	0.044	0.651	0.583
2	3.7910	0.62752				
3	3.7500	0.66374				
4	401667	0.44121				

Discussion and Conclusion

This study sought to explain the connections between employees' creative behavior and HRM practices (training and development, job security, autonomy, rewards, etc.). All of the constructs' measuring scales were adapted from the pertinent literature. This study adds to literature knowledge by showing the connection between HRM practices and creative work practices, who work in the IT sector. The proposed model's variables were examined in connection to one another using SPSS version 30.0.0. The findings showed that IWB and HRM practices are positively correlated. The results were consistent with earlier studies (Bos-Nehlas & Veenendaal, 2019; Yasir & Majid, 2020; Koednok & Sungsanit, 2018; Opoku et al., 2020; Singh et al., 2021; Tran et al., 2020). By observing the direct effects of HR practices on IWB, we have thereby developed a profound grasp of the effects that HR practices have on employees' creativity. Innovation is essential for long-term success because nowadays organizations operate in a highly competitive and dynamic environment, as creative and original ideas reside in the minds of employees, people are essential to innovation. In the course of their regular work, employees become thoroughly acquainted with the operation and procedures of the company. They are able to highlight any gaps and find possible areas for advancements or enhancements. Employees not only come up with ideas, but also help to secure support for them and eventually see to it whether they are executed successfully because of their conviction, enthusiasm, and dedication. Organizations must understand how to encourage and mold workers' creative work behaviors.

    There are various constraints to this study. The stated hypotheses mentioned in this study were examined based on the perceptions of middle-level employees in the North Indian IT sector, which is the first aspect of the current study. The findings may be more broadly applicable if future research additionally examines how top-level and lower-level employees perceive HR practices and IWB. Therefore, it is important to use caution when attempting to generalize the study's findings to other domains. Second, cross-sectional data served as the foundation for the analysis. In order to get over this restriction, additional research can evaluate the suggested links using longitudinal data from a different industry or geographic area.

Implications of the Study

As a result of answering the research objectives, the study's conclusions have significant conceptual and practical ramifications for the worldwide scenario in general and the IT sector of India in particular. The study adds to the HRM literature by validating the links that already exist. The findings will assist managers in making sure that HRM practices are planned to minimize job shifts, employee churn, and feel motivated, which will encourage IT professionals to stay with their existing company even if they are offered opportunities by rivals. Also, if they feel valued at the company, they will remain loyal to their work and that will help to build a long-term relationship with the company. The study affirms that IWB and HR practices are positively correlated. The findings support the widespread implementation of HR practices, which are thought to be crucial for Indian IT companies.

Declaration of Conflicting Interests

Funding

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Impact of Digital Transformation on the Traditional Business Model

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Abstract

Digital technologies are transforming and disrupting traditional business models; furthermore, they have a profound impact on traditional business models. By using digital tools in every part of their business, companies can perform more accurately, economic efficiency or reduce costs, and provide customers better value or satisfaction.

As the industry opens up new business opportunities, companies must adapt to new realities. This study analyse how digital transformation will impact future business performance and customer satisfaction. Digital technology has opened up new ways for businesses to interact with customers through social media, email, and paid advertising. Whereas before, businesses simply delivered goods to customers in need and made a few bucks, they are now leveraging these digital channels to create and meet customer needs.

This scenario in which we exist is all about digital mode, and the pandemic has made it more reasonable to adapt frequently. Digital transformation is a must-have for traditional companies looking to compete in today's digital economy. Digital transformation helps companies to increase productivity, reduce expenses, boost revenue and enhance customer experience.

A traditional business structure has a physical presence and serves customers locally through concrete establishments that provide services or products. In the case of a digital business setup, anyone from all over the world can use the internet to access the company's services and products.

Finally, in this study, we address that digital transformation is a complex journey, and businesses need to carefully plan and implement their digital transformation

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initiatives to maximize their success and how it impacted and paved the way for change from traditional businesses to digital business models.

Introduction

Digitalization is the process of applying digital technology to all aspects of human society. The commencement of new technology into society throughout history has had a great impact on the working of society and people's lives.

The digital era has brought a challenging phase for the companies. It has changed the method the companies were interacting with their existing as well as new customers, transforming their business operations, processes, and models. It helps to minimize statistics and bottlenecks in the supply chain and can lower some of the running expenses related to complicated and time-consuming activities. Digital change can transform business as stated by the digital transformation in the present meantime. With the development of the new transformed digital technologies, the traditional system of conducting business is being disrupted, and many of them have to adapt to the ongoing digitalization.

Digital transformation or change is the requisition of technology that induces innovation to incorporate new business models, operations, software, and systems, which are resulting towards successive profitable revenue and profit, competitive advantages, and higher efficiencies. Digital change is more like a cherry on the cake for an existing profitable business organization.

With the advancement of digital technology, it became trouble-free for corporate and small businesses to keep a record of financial transactions, understand their customer base. It fabricates a drastic change in the brand positioning of a product and how the company address consumer needs and delivers their product to satisfy required needs of customers and build a strong relationship with the consumer which helps in generating goodwill for the company among the customer, it enhances the business performance and enable them to interact and engage in more revenue generation.

Since the beginning of 21st-century digitalization has played a vital role in shaping businesses and transforming the procedure of traditional businesses to modern methods, furthermore pandemic turned the tables around more frequently as post-Covid era people are more dependent on digital technology, repercussions of this are more and more businesses are shifting from their traditional methods to modern methods.

A traditional business model explains how a firm will make money and create income. In general, it involves offering goods and services to consumers in return for money. Traditional company strategies frequently depend on tangible assets like physical storefronts, factories, and offices. However, in the current scenario of digitalization, businesses are more dependent on intangible and digital means as their core.

Industries and marketplaces have changed as a result of the rapid development of digital technologies, compelling traditional enterprises to adapt or risk obsolescence. This article examines how traditional business processes have been transformed by the digital age and the subsequent impacts on their viability and competitiveness.

Literature Review

The present research consists of an in-depth review of the literature with a particular focus on research dealing with digitalization on a traditional business model with the goal of enhancing knowledge about digitalization endeavors.

Under normal circumstances, well-established small and medium-sized businesses (SMEs) create a new business plan. Either diversification or replacing the fading current business models with this new paradigm is the goal (Snihur & Wiklund, 2019). Because they are regularly being forced to reinvent their business models through the use of digital technology, corporations cannot succeed by sticking to their current business models indefinitely (Li, 2020).

As this is going on, a lot of conventional businesses are pursuing the digitalization path toward more digitalized business models and anticipate integrating digital technologies into every aspect of their operations to support them (Fletcher & Griffiths, 2020).

Although larger enterprises benefit from more established infrastructures and cheaper fixed costs of production, SMEs can operate in a local business environment and explore new strategic choices more quickly (Fletcher & Griffiths, 2020). Furthermore, SMEs have exhibited elasticity and flexibility in carrying out strategic moves, allowing them to make swift adjustments under unpredictable settings (Williams et al., 2017). Meanwhile, large businesses might obtain organizational flexibility after their digital technology adoption has reached a mature stage. Organizations with a low degree of digital maturity cannot hasten the maturity process by simply hiring vendors who provide "outside the box" solutions (Fletcher & Griffiths, 2020). An established company's organizational complexity may rise as a result of the development of new business models (Snihur & Wiklund, 2019), and as a result, the organizational design may need to be modified to account for this complexity (Egfjord & Sund, 2020) and (Leih et al., 2020). Prior to pursuing a major business model transition, organizations may encounter core rigidities and resource stickiness (Teece, 2007). In contrast to agile start-ups, established companies are likely to encounter tensions between their current business model and the recently created one. The advantages of a new business strategy for the performance of the organizations continue to be erratic, aside from these possible issues (Sohl et al., 2020). Those businesses that leverage the digital technology that has arisen from their innovative pursuit of transformation will replace established ones if they are unable to capitalize on opportunities brought about by changes in the environment (Svahn et al., 2017). The fixed & permanent costs associated with operating retail stores make management difficult, but businesses can benefit from their presence if these distribution channels can be

creatively integrated with the digital business model (Fletcher & Griffiths, 2020). Digital technology has caused established businesses to shift their positions across a range of industries and has given rise to previously unimaginable new companies from unimagined areas (Hasenpusch & Baumann, 2017).

Research Statement Outlining the Goals and Objectives of the Research

Digital transformation and advancement have apprehended the interest of the maximum number of firms and small business models due to the several advantages they deliver and also follow the current scenario of the market. It includes a broad range of initiatives, starting from the introduction of new technologies to the transformation of business models and organizational culture. The purpose of this study is to thoroughly examine the disruptive effects of digital technologies on established traditional business models, looking at how the incorporation of digital components alters operational structures, customer engagement tactics, value generation processes, and revenue streams. This study aims to offer insightful perspectives on the changing dynamics of businesses in the digital era and practical advice for organizations navigating the path of digital transformation through a thorough exploration of case studies and emerging trends and also the challenges faced by the organizations and the firms due to digitalization. The study will aim at achieving the objectives shared below:

1. Better consumer satisfaction
2. Increasing the efficiency of business
3. Enhanced mobility
4. Improved business operations
5. Reduction of cost
6. Competitive analysis and forecasting
7. Better coordination and collaboration

Digital Transformation—Concept and Drivers

In the rapid-fire economy of today, digital transformation is essential for contemporary companies and small household firms to stay strategically, economically and operationally competitive. Digital transformation make reference to the integration of computer-based technology into the strategy, processes, and products of a company. Organizations plough money into digital transformation to improve their ability to compete by better involving and serving their customer.

An organization's entire structure may need to be examined and reinvented as part of a digital transformation program, which frequently has a broad reach. This comprehends everything from supply chains and workflows to staff skill sets and organizational structures to consumer interactions and value propositions to stakeholders.

Successful digital transitions result in long-term benefits for businesses. Organizations may effectively adjust to client expectations now and when they develop as a result of digital technologies and procedures. Additionally, digital transformation creates the framework and competencies necessary for utilizing quickly developing technologies that can give an edge in the marketplace.

The Digital revolution compelled all organizations to redefine their structure to bear the transformation of the digital world. Digital transformation is a comprehensive, broad strategic and comprehensive approach that goes on the far side of merely implementing technologies, it entails an upheaval in culture and gives an organization a great chance of deep rethinking and revolting how they can survive in the time of digital era.

Organizations are spending a huge amount of capital toward improving the digitalization structure of their venture. It is anticipated that those investments will exceed $6.8 trillion dollar by 2023. The investment is frequently without any apparent return while there are a number of failures, but rather than that it has multiple causes; they are generally a result of up looking at the various processes essential to carry out a transformation agenda of change.

Digital technologies or change not only facilitate the creation of a greater variety of new business models but also thrive as a new means of communication or interaction with stakeholders and customers. Digitalized technology not only allows for the extension or automation of business models but also as well as to their transformation.

There are numerous elements and circumstances that play a major part in the success of this transformation process, which depends on several factors and conditions that act as external or internal triggers for organizations. The drivers of digital transformation can be categorized as customer, technology, or organizational development, and are factors that facilitate or even force companies and small business owners to adopt digital solutions to keep up with digital changes in their industry. Possessing and understanding these drivers is crucial for mastering the transformation phenomenon and ensuring its successful implementation, which may help them in profit maximization, cost-effectiveness, advertisement and maintaining the transaction as well as customer records.

Methodology

The research presented in this article focuses on the impact of digitalized transformation on traditional business models. It is based on an inclusive, comprehensive and thorough assessment and review of numerous existing and trustworthy research from various professional sources.

The process that involves implementing and embracing digital technologies is known as "digital transformation"; therefore, the DTI applies three different digital maturity stages—foundation, adoption, and acceleration. In the first step, with the intention to obtain literature on digital transformation, a literature search was conducted with keywords like "digital" and "transformation" and we obtained

many academic journal papers, and through their concise information, we started our research.

In the second phase, corporations and small businesses were included as the target audience for digital transformation, the timing of publishing was regulated, and papers without peer review were eliminated.

In the third step, we read each article's abstract and conclusion. We then screened the papers' references to regulate them and how were they relevant to the research topic of "The impact of digital transformation on traditional business model," and we finally selected a few papers based on how well the content fit the description.

In the fourth step, a survey was conducted among the shopkeepers and firm owners on how much are they aware of the new innovative technology that they can use in their day-to-day operations and if they are already using what is its impact on their business. The consumers were also included in the survey and asked about their preference between online shopping and by visiting the shop and what problems they faced while availing of these digital facilities.

Overall, digital transformation research shows a trend of increasing year by year and has become a hot research issue. However, the research on digital transformation and its impact on traditional business is still in the exploratory stage, and there are obvious shortcomings and should also be analysed and the researchers further work on this topic.

Impact

Digitalization has many effects on conventional business. Retail businesses are the most affected; digitalization has been absorbed by heavyweights in the industry, like Amazon and Flipkart, as well as smaller retailers. Along with a host of additional advantages that are advantageous from the standpoint of revenue and margin, digitalization gives retailers the chance to increase staff motivation, lower operating costs, communicate more efficiently with current consumers, and attract new ones (Deloitte, 2017). Small businesses and stores have seen a major impact from digitalization. The future lies in digitization, as e-commerce businesses have shown via their success to be a must for an organization's online presence. Digital transformation has become a core business strategy across sectors due to the rising need for innovation, agility, and customer engagement (Marr, 2023). With the COVID-19 epidemic, this change has occurred more quickly. Up to 70% of SMEs have boosted their use of digital technology as a result of the pandemic, according to preliminary results from company surveys carried out globally. According to Technopark consultants and the National Organization of Software and Services Companies, India's retail market will be valued at around 1.5 trillion dollars by 2030.

Digitalization (Mimani, 2022) has made a significant impression on small businesses and shops. Demonetization, which occurred in November 2016 and resulted in the overnight removal of about 86% of the currency, proved to be a watershed moment for digital payments. This paved the way to adapt digital payment methods around the country, which later became popular among the people
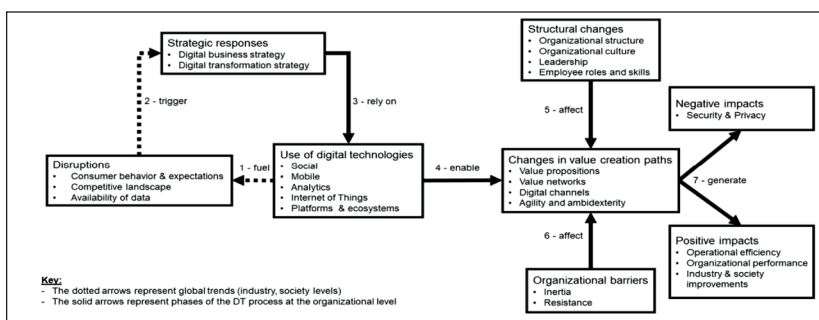
Figure 1. Building Blocks of DT Process (Vial, 2019).

due to its convenience (Figure 1). Companies like Paytm, Phone pe and Google Pay grabbed this opportunity with the introduction of UPI. From small Kirana stores to supermarkets, they are everywhere. Small shops and businesses allow their customer to pay online, thus inducing digital payments. In order to avoid fraud, small businesses keep a sound box which provides alerts on payment. At a cost of ₹125 a month, they can avail of this sound box from any digital payment company. With an increase in digital payment, it paved the way for digital book-keeping. Micro, small & medium enterprises are more dependent on digital book-keeping rather than the traditional pen-and-paper method of accounting. The promptitude of an application is of significance when dispensing monetary state-ments for the commitment-building procedure of its consumers. By utilizing cell phone bookkeeping apps, bookkeepers can speedily generate monetary particu-lars. The quicker the refining of monetary statements for comprehensive details or independent detailing happens, the further the time needed to direct the account-ing phase is minimized. The artificial intelligence bookkeeping should be thoroughly precise ahead of the monetary expressions that can be arranged (Rajput et al., 2022).

Challenges to Combine Digital Transformation in Traditional Business Models

The concept of virtual transportation has garnered significant attention in recent years, emerging as a critical concern for traditional businesses and organizations. The widespread adoption of technological innovations across various industries has reshaped organizational behavior, market structures, and consumer attitudes. However, companies have encountered several challenges while integrating digi-tal transformation into their business models.

One of the primary obstacles is the substantial financial investment required for digitalization. Additionally, a lack of awareness and understanding often hin-ders firms from fully leveraging digital opportunities, as many adopt ineffective strategies that fail to align with customer needs. Cybersecurity threats also pose

significant risks to organizational assets, further complicating the transition. Moreover, as industries increasingly embrace digital transformation to enhance their business processes, competition has intensified considerably, driving companies to continuously innovate and adapt.

Survey (Consumers)

The primary data for our study was based on both rural and urban areas. We conducted a field survey by comparing the number of people living in rural and urban areas and how much are they familiar with the new emerging digital technology and how they are using it in their day-to-day activities while purchasing their day-to-day essentials. As per our survey, 65.7% are from urban areas and 34.3% belong to rural areas, thus providing a vivid picture of both the segments. The demographic distribution of the surveyed participants between urban and rural areas is presented in Figure 2.

In the survey, we found (Figure 3) that people are becoming familiar towards digital technology and are preferring to use these technologies. The emergence of new digital technology has made the lives of people easier than the previous traditional method of purchasing goods from nearby shops or markets. As per the data, 57.1% are very familiar, 27.1% are quite familiar, 10.0% are somewhat familiar, and the remaining 5.7% are not familiar at all.

Furthermore, we analysed the challenges faced by the consumer (Figure 4). According to the statistics, 54.3% find security threats as a major challenge, while 17.1% think data limitation, 16.6% technology barriers, and 10.0% integration challenges.

Nowadays, consumers of rural as well as urban areas are using various online platforms for shopping and are regularly using online payment methods, which, as a result, played a massive role in increasing the sale of various goods because the digital platform has enhanced the wants of the consumers within the society.
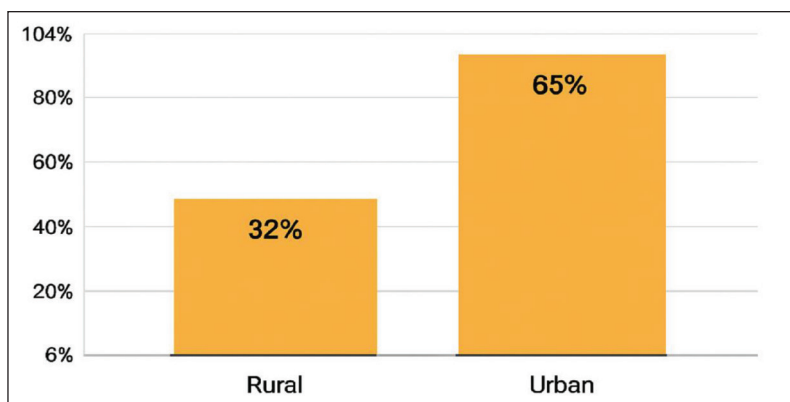
Figure 2. People Living in Rural and Urban Areas.
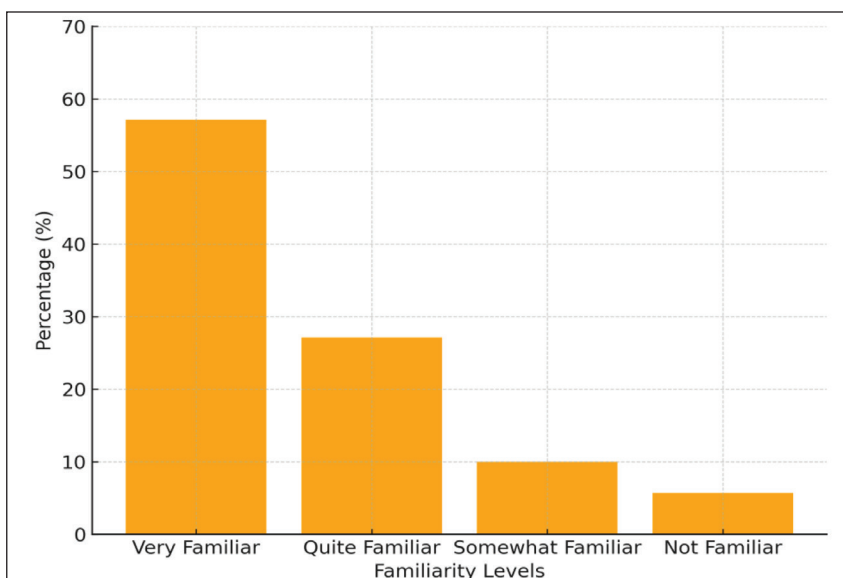
Figure 3. Familiar Towards Digital Technology.
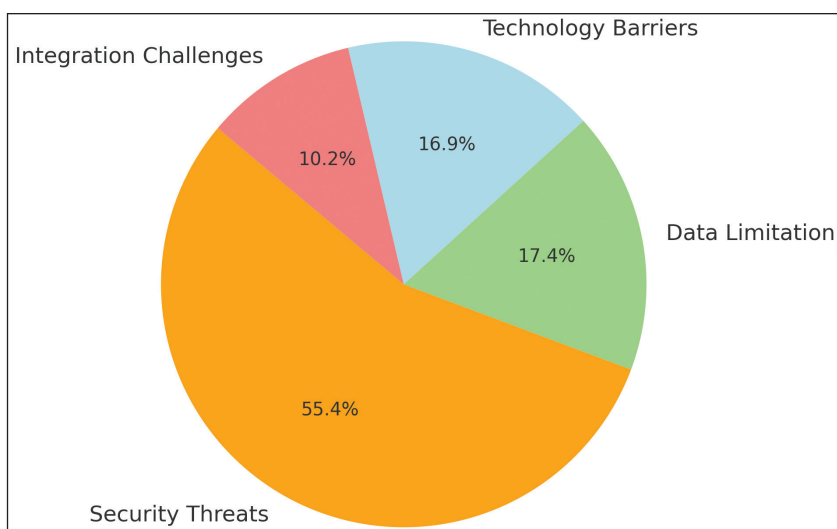
Figure 4. Challenges Faced by the Consumer.

There are various factors which influenced shopping habits with the introduction of digitalization (Figure 5). As per the statistics, 27.1% people are using online reviews to shape their decisions, 20.0% people research products online before buying, 14.3% have increased reliance on online shopping, and 7.1% people are embracing contactless payment methods.
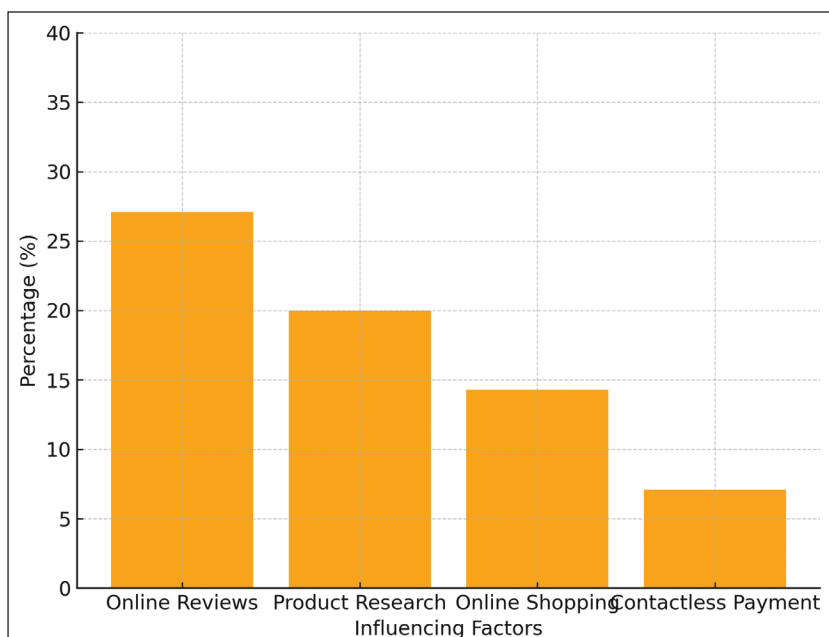
Figure 5. Factors Influencing Shopping Habits.

Survey (SMEs)

We have gathered primary data from different SMEs (Figure 6), with textile shops accounting for 33.3%, grocery shops 29.2%, hardware shops 16.7%, and real estate 12.5%.

There are various challenges faced by SMEs (Figure 7) in adapting to the current transformation, below given statistic provides a glimpse of challenges faced by different SMEs with majority 33.3% of small enterprises think that Employees are hesitant to embrace new technologies and processes, 25% firms are reluctant to rapid changes in the market and technology makes it difficult to keep up, 16.7% believe investing in new technology and training is too expensive, 12.5% think that they do not have necessary skills, while the remaining 12.5% have not encountered any significant challenges in adopting digital transformation.

Furthermore, when we inspected the impacts of digital transformation (Figure 8), we found that 41.7% have seen a significant increase in efficiency and productivity, 20.8% SMEs have enhanced decision-making, 16.7% believe it has improved customer experience, another 16.7% expanded reach and market access, while the remaining 4.2% have enhanced profit.

If we talk about the financial impact due to digital transformation (Figure 9) there is a drastic effect as the statistic shows, 41.3% enterprises experienced significant growth in sales and profitability since implementing digital transformation initiatives, 33.3% have effective digital marketing strategies have brought in
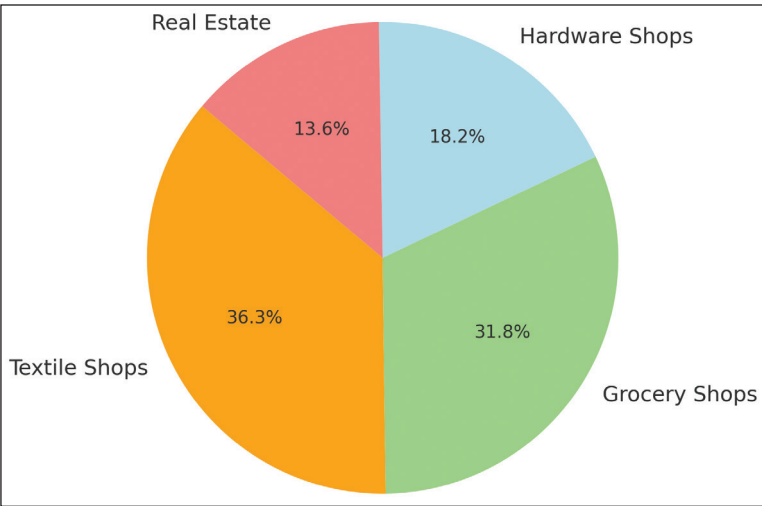
Figure 6. Different Business SMEs.
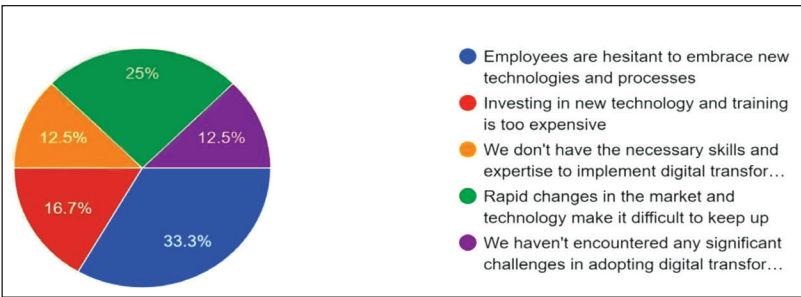
Figure 7. Challenges Faced by SMEs.
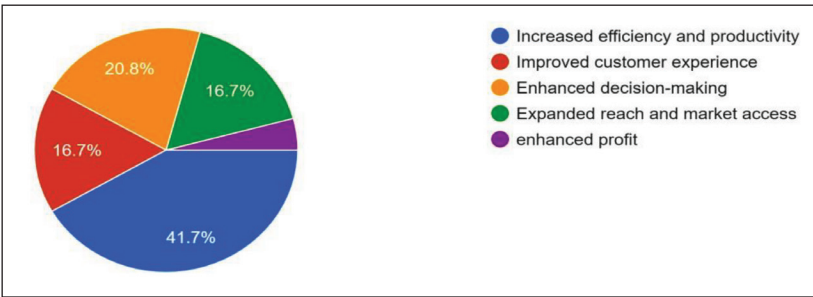
Figure 8. Impacts of Digital Transformation.
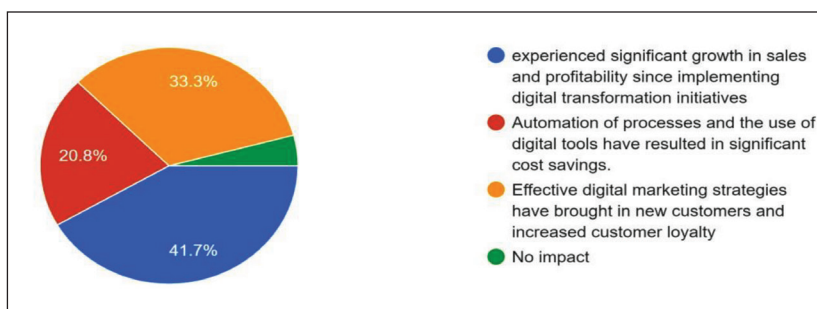
Figure 9. Financial Impact Due to Digital Transformation.

new customers and increased customer loyalty, 20.8% think that automation of processes and the use of digital tools have resulted in significant cost savings, while a very slight percent of 4.2% firms believe to have no impact.

Conclusion

The findings of the study highlight how digitalization has a profoundly positive impact on both SMEs and customers. Consumers have adopted digital technology in a noticeable and widespread way; most of them are very familiar with online platforms and digital payment methods. Online reviews, product research, and contactless payment preferences are just a few of the variables that have affected consumers' buying behaviors. These transformations are evidence of a larger shift in consumer behavior brought about by the ease and accessibility that digital platforms provide.

However, SMEs have a unique set of obstacles when it comes to accepting digital change. Barriers include employee reluctance, the rapid rate of technology advancements, and the perception of increased expenses related to implementing new technologies. Notwithstanding these obstacles, a sizable percentage of SMEs report benefits from digital transformation efforts. Significant results include increased productivity, better decision-making skills, better client experiences, a wider market reach, and more profitability.

The effect on SMEs' finances is also remarkable, as many of them have seen notable increases in sales and profitability, which they attribute to the efficient utilization of digital marketing, process automation, and cost savings from digitalized technology and advancements. These results highlight how digitization may help SMEs successfully traverse the digital realm by addressing issues and fostering financial success.

All things considered, the research points to a paradigm change in traditional business environments. Digitalized transformation is a complete reorganization of how companies run, interact with customers, and make money. It goes beyond simple technology changes. The perception that effective digitalization adaption is a critical factor in determining competitiveness and sustainability in the modern business environment is supported by insights from both customers and SMEs.

Declaration of Conflicting Interests

Funding

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Tax Aggressiveness and Financial Distress: A Systematic Literature Review (2015–2023)

Vaani Arora[1]

Abstract

Introduction: While the government aims to maximise its tax revenues to properly administer its affairs, companies try to minimise their tax liabilities through acceptable tax management and unacceptable tax evasion. Tax management among companies is a means of temporarily exaggerating earnings to defer financial distress. Consequently, companies' tax-aggressive activities generate cash and increase liquidity. However, the reputational costs resulting from the companies' engagement in aggressive tax planning also pose financial constraints for creditors.

Research Gap: Researchers have studied the relationship between financial distress and tax aggressiveness, but the results are mixed.

Objectives of the Study: This systematic literature review aims to analyse the existing literature on the relationship and suggest further research opportunities.

Research Methodology: This article analyses the existing literature using the PRISMA methodology, using 15 peer-reviewed articles from 13 leading journals published between 2015 and 2023.

Findings of the Study: The reviewed literature shows mixed results regarding the nexus of tax aggressiveness and financial distress. Some studies show that aggressive taxation practices are higher in firms facing financial distress, while others show a negative or insignificant impact. Studies also depict that firms involved in tax-aggressive activities often face a higher likelihood of bankruptcy.

Implication of the Study: Based on the results of this study, the relationship between tax aggressiveness with financial distress can be comprehended under different set-ups. Moreover, the study also identifies further research opportunities on the subject.

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Introduction

Tax is the largest source of income for the government, and a major portion of it comes from direct taxes (Gober & Burns, 1997). Corporate tax is a direct tax that companies pay to the government against their profits, reducing their available distributed profit to the shareholders (Putri et al., 2017).

While the government aims to maximise its tax revenues for the proper administration of its affairs, companies try to minimise their tax liabilities through acceptable tax management as well as unacceptable tax evasion (Aliani et al., 2016). Companies adopt different techniques, such as investment in fixed assets, profit shifting to tax haven countries, base erosion, thin capitalisation, intellectual property structuring, capital structuring, etc., to reduce their tax liabilities. Acceptable tax management methods include tax planning and avoidance measures, which take advantage of loopholes in the tax legislation, whereas tax evasion is aggressive measures that violate taxation rules and are illegal in nature.

Various definitions of tax avoidance are provided in the literature. Hanlon and Heitzman (2022) defined tax avoidance as a continuum of strategies of tax planning that has legal tax management activities on one end and illegal tax evasive activities on either end. Malkawi and Haloush (2008) refer to tax evasion as financial manipulations as a means of tax sheltering. According to Dyreng et al. (2010), tax avoidance includes all transactions that result in a reduction in the tax liabilities of a company.

The academic literature is rich in studies that examine tax aggressiveness as the antecedent as well as the result of internal and external corporate phenomena. Duhoon and Singh (2023) illustrate four major predictors of tax saving behaviours, namely, tax knowledge (Bhalla et al., 2022), low effective tax rate (Cooper & Nguyen, 2020; Gober & Burns, 1997), higher debt financing (Fatica et al., 2013; Pramajaya et al., 2019) and higher investments in tax haven jurisdiction (Ngelo et al., 2022).

There has been an increasing focus of researchers on the determinants as well as consequences of tax avoidance in the last decade. Existing literature on the subject suggests that tax avoidance is more prevalent in companies in financial distress, based on the cost-benefit trade-off theory (Edwards et al., 2016) and the agency theory (Desai & Dharmapala, 2006). Research also shows that the tax aggressiveness level among firms affects their likelihood of default. The resource-based view suggests that tax-aggressive practices act as cash-generating activities and provide liquidity to the firm, making it less likely to default (Gabrielli & Greco, 2023; Hasan et al., 2017; Magerakis, 2022; Medioli et al., 2023). However, tax aggressiveness also taints the reputation of the firm, resulting in financial constraints and distress.

Despite the extensive research, aspects remain unclear regarding the precise mechanisms employing which tax aggressiveness influences financial distress and vice versa. The role of tax aggressiveness in alleviating financial distress under different economic conditions is still debated. Moreover, the extent to which these two variables act as moderating factors in each other's outcomes, such as in capital structure decisions or firm performance, is not fully understood.

Financial distress is the firm's inability to service its debt or other obligations, which can be due to challenges with cash flow and profitability, leading to either restructuring or bankruptcy (Andrade & Kaplan, 1998). The prediction of financial distress among companies before entering into insolvency or bankruptcy is of utility to various stakeholders of companies, including investors and the government. It helps companies implement strategic measures to avoid insolvency at times of financial vulnerability and other stakeholders to analyse the company's performance more efficiently (Batista da Silva et al., 2023).

Based on the systematic review of the literature, this article aims to address the relationship between tax aggressiveness with financial distress. Analysing the methodology and findings of 15 peer-reviewed articles from 13 leading journals published between 2015 and 2023, this article gives insight into how financial distress impacts corporate tax aggressiveness, and tax aggressiveness impacts financial distress, and the moderating role of either variable on their determinants and consequences.

The remaining study has been organised as follows. The second section defines the keywords used for the study and describes the sample and research methodology used in the analysis. It also discussed the descriptive analysis of the sample. The third section lays out the results of the systematic analysis of shortlisted articles. The fourth section discusses the scope for future research based on the analysis. Finally, the fifth section concludes the study and discusses the contribution.

Research Methodology

Since tax aggressiveness has been defined differently by different authors, this study integrates terms used synonymously with tax aggressiveness, namely, tax avoidance, tax evasion, tax management and tax planning. Similarly, to include articles that use different definitions of financial distress, the terms bankruptcy and insolvency are also considered to synthesise an array of literature on the subject.

The potentially relevant literature was meticulously acquired by conducting a comprehensive search in the Scopus and Web of Sciences databases, which are most extensively used for peer-reviewed journals, following the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) framework. To extract relevant studies from both databases, the Boolean search string used was: ('Tax Aggressiv*' or 'Tax Avoid*' or 'Tax Evas*' or 'Tax Manag*' or 'Tax Plan*') and ('Bankrupt*' or 'Insolven*' or 'Distress*') and ('Corporat*' or 'Compan*'). The study only included peer-reviewed academic journal articles published in English. Peer-reviewed articles are considered for the study to focus on thorough, evidence-based research. Further, the subject area was limited to
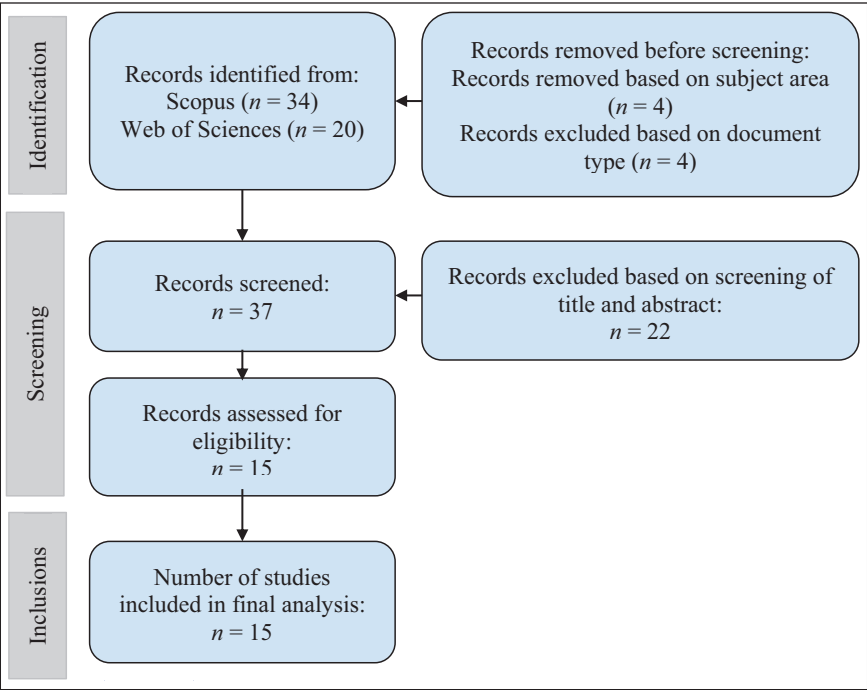
Figure 1. PRISMA Framework.

'Economics, Econometrics and Finance' and 'Business, Management and Accounting' for the Scopus database and 'Business Finance', 'Management', 'Business' and 'Economics' for the Web of Sciences database. Further, the language was restricted to 'English' only. The refinement resulted in an initial sample of 26 articles on the Scopus database and 20 on the Web of Sciences database. After eliminating repeated articles, the initial sample totalled 37 articles.

For the next screening step, the titles, abstracts and keywords of the articles were carefully reviewed. Articles that analysed tax aggressiveness and its relationship with financial distress or their moderating or moderating role on each other were included to give a final sample of 15 articles. Figure 1 represents the design of the study.

Analysis of the arrived sample shows that studies on the relationship between tax aggressiveness and financial distress have emerged only after 2015. An overview of the studies included in this review is presented in Table 1, depicting the year-wise frequency, the country-wise frequency and the journals in which these articles were published. Panel A of Table 1 shows a significant increase in research on the topic in the year 2023. Panel B of the tables shows that a majority of research is conducted in the US and Indonesia. Panel C shows that 11 out of the 13 journals in which the articles are published are ABDC journals, with nine journals belonging to the B category or above.

Table 1. Distribution of Sample Based on Year, Area, and Publication.

Panel A: Year-wise Distribution	
Year	Frequency
2015	2
2017	1
2018	2
2020	2
2021	1
2023	7

Panel B: Area-wise distribution	
Area	Frequency
US	6
Indonesia	4
Australia	2
Vietnam	1
China	1
Cross country	1

Panel C: Distribution of articles in publication outlets		
Journal	Frequency	ABDC rating
Advances in Accounting	1	A
Asian Journal of Accounting Research	1	C
Cogent Business and Management	2	–
Contemporary Accounting Research	1	A*
Economic Modelling	1	A
Financial Management	1	A
International Journal of Economic Research	1	–
International Journal of Finance and Economics	1	B
Journal of Banking and Finance	1	A*
Journal of Contemporary Accounting and Economics	1	A
Management and Accounting Review	2	C
Management Decision	1	B
National Tax Journal	1	A

Results of Systematic Analysis

This part is divided into three sections. The first section elaborates on the existing literature on the impact of financial distress on tax aggressiveness among firms, the second section discusses the research on how tax aggressiveness impacts financial distress and the last section discusses the moderating role of financial distress on the relationship of aggressive tax practices with its antecedents.

Impact of Financial Distress on Tax Aggressiveness

Tax avoidance acts as a synergy-motivating tool for financially distressed firms having higher risk appetite by minimising tax expenses, allowing firms to garner higher profit margins and increase liquidity to finance using internal funds (Ariff et al., 2023). Managers of firms under distress have a higher incentive to employ strategies involving greater risks, particularly risk-shifting behaviour. Dictated by the cost-benefit trade-off theory, the costs of tax-aggressive activities in financially distressed firms are lesser than the potential benefits (Edward et al., 2013; Richardson, Taylor, et al., 2015). Moreover, the agency theory suggests that managers act in their self-interest rather than in the best interest of the shareholders during times of financial distress and engage in more tax-aggressive activities to overstate the income and increase associated compensation (Desai & Dharmapala, 2006).

Using a sample of 80 listed companies, Kamayanti et al. (2023) studied how corporate social responsibility, corporate governance and financial distress affect tax avoidance in Indonesia between 2016 and 2020 and found that firms facing distress have a higher degree of tax avoidance. Zhou et al. (2023) studied a sample of 51,205 firm-year observations from US-listed companies between 1988 and 2018 and found tax avoidance to be more pronounced in firms closer to financial distress and bankruptcy. These results are aligned with Dang and Tran (2021), who conducted a similar study between 2008 and 2020 using a sample of 369 Vietnamese-listed companies. On the contrary, Kalbuana et al. (2023) also studied the impact of CEO narcissism, corporate governance, company size and financial distress on tax avoidance using a sample of 29 Indonesian listed companies and found no relation of financial distress on the level of tax avoidance. These findings can be supplemented by Sun et al. (2023). Sun et al. (2023) examined the role of tax planning behaviour in mitigating a firm's financial constraints in Chinese listed companies between 2010 and 2018 and found a positively significant association which was stronger for non-state-owned enterprises, big firms and non-political firms. However, the study also suggested that tax planning increased financial constraints in the long run.

Furthermore, Richardson, Lanis, et al. (2015) examined the impact of board independence and financial distress on tax aggressiveness using a sample of 753 listed companies in the US between 2006 and 2010 and found a positive relation, which was magnified during a global financial crisis. Richardson, Taylor, et al. (2015) also conducted a similar study in Australia using a sample of 203 listed companies in Australia and found similar results, signifying that during an external financial crisis, firms under distress are more tax-aggressive than those with sound finances. Ariff et al. (2023) carried out a cross-country examination on the association of financial distress with tax avoidance affected by the COVID-19 pandemic using a sample of 38,958 companies from 2015 to 2020 and found financially distressed firms to exhibit higher tax avoidance during the pandemic signalling that the pandemic enhanced the relationship. Kustono et al. (2023) also examined the impact of the pandemic on the causes of tax avoidance in the hospitality sector on the basis of political costs, monitoring mechanisms and financial decisions and found that firms facing financial distress exhibit a higher level of tax avoidance during the pandemic as well as non-pandemic times. These studies

indicate that firms under distress adopt more tax-aggressive measures in the incidence of an external shock.

Impact of Tax Aggressiveness on Financial Distress

The impact tax aggressiveness has on financial distress faced by firms can be explained using the resource-based view, which dictates that tax-aggressive measures act as cash-generating activities that help firms avoid financial constraints and minimise the likelihood of facing financial distress. However, the reputational costs associated with engaging in tax-aggressive activities make the firms susceptible to scrutiny and resistance from creditors, resulting in lowered liquidity and a greater likelihood of facing distress.

Dhawan et al. (2020) studied the impact that tax aggressiveness and thin capitalisation have on bankruptcy risk in Australian firms between 2005 and 2016 and found that firms engaging in tax avoidance, along with thinly capitalised firms, faced higher bankruptcy risk. Bayar et al. (2018) additionally examined how corporate governance affects the relationship between tax avoidance and financial constraints using data from 35,000 US firms between 1990 and 2015 and found a negative relationship, which was higher for firms with weaker corporate governance.

Gabrielli and Greco (2023) also studied the impact of tax planning on the likelihood of financial default in different stages of the corporate life cycle among US firms between 1989 and 2016. They found tax planning firms to be less likely to default in the introduction and decline stages and more likely in the growth and maturity stages. On the contrary, Assagaf (2017) studied the relationship using data from seven Indonesian firms between 2014 and 2021 and found that tax aggressiveness had no significant impact on the financial distress faced by firms.

The Moderating Role of Financial Distress on the Antecedents of Tax Aggressiveness

Research reveals that financial distress moderates the impact of antecedents of tax aggressiveness. Kubich et al. (2020) studied the moderating role of financial distress on the relationship between CEO/CFO debt and tax avoidance using a sample of 4735 firm-year observations from US-listed companies from 2007 to 2012 and found that the positive relationship is magnified in firms with greater likelihood of default. Chen et al. (2018) also conducted a study using 29 broker mergers and 22 closures in the US between 1988 and 2008 to examine the moderating impact of financial distress in firms undergoing merger deals on tax avoidance and found that more financially constrained firms had a higher tax avoidance level.

Scope for Future Research

This study provides a thorough coverage of existing literature on the relationship between corporate tax aggressiveness and financial distress and highlights the scope for future researchers to study the extent further and the factors that affect

the relationship. One of the most important concerns among academicians regarding conducting a study on corporate tax aggressiveness is related to its definition and measurement. With numerous definitions and measurement proxies available, operationalising based on suitability is a challenge. Dunbar et al. (2010) identify nine measures of tax aggressiveness employing effective tax rates and book-tax differences. Moreover, companies do not readily disclose their tax liability and avoidance strategies. Thus, the availability of data also poses a challenge. In the future, researchers can focus on comparing various proxies of tax aggressiveness in terms of its effectiveness as a determinant of financial distress.

Furthermore, there exists a need for longitudinal studies to examine the dynamic nature of the relationship over time. Moreover, the present literature is predominantly conducted on samples from the US, Indonesia and Australia. Research can be expanded by examining a sample from other developed and developing countries. Upcoming researchers can also focus on cross-country research to provide insight into how institutional differences influence this relationship along with the segmentation of developing and developed nations.

Conclusion

Tax aggressiveness, characterised by strategic manoeuvres to minimise tax liabilities, has become a focal point in contemporary corporate finance literature. Due to the risk associated with tax-aggressive activities, companies are often levied with higher costs of debt and lower credit ratings, indicating a likelihood of default. Additionally, the cash-generating nature of tax-aggressive activities often incentivises managers to indulge, to avoid financial constraints. Researchers have increasingly explored the relationship between tax aggressiveness and financial distress in the past decade.

The reviewed literature presents mixed observations regarding the relationship between tax aggressiveness with financial distress. Some studies exhibit that tax aggressiveness is higher in firms facing financial distress, supported by the cost-benefit trade-off theory and the agency theory, whereas other studies show a negative or no significant impact therein. Studies also indicate that firms involved in tax-aggressive activities often face a higher likelihood of bankruptcy. This can be justified by the reputational damage caused to these firms, which further poses financial constraints. Research also shows that tax aggressiveness has a negative impact on financial distress, which the resource-based view can explain.

Based on the investigation of existing literature, future researchers can explore the relationship by considering more facets that affect the relationship. Research can also be conducted to further study how the relationship is different for developing and developed countries.

Declaration of Conflicting Interests

Funding

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Derivatives as Risk Management Tools: Insights from a Systematic Review of the Literature

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Abstract

This study investigates how the management of corporate risks, particularly through the use of derivatives, influences a company's capital structure and its overall characteristics. The investigation utilizes a systematic literature review (SLR) approach to analyse previous research on the strategies organizations implement to address financial, operational, and strategic risks using derivatives. The findings indicate that effective risk management, particularly through hedging, stabilizes cash flows, reduces costs linked to financial distress, and enhances the company's market value. The study emphasizes the necessity of incorporating risk management practices into corporate governance frameworks to improve decision-making quality. Additionally, the study points out areas requiring further investigation and proposes future research on the role of artificial intelligence (AI) and machine learning in risk management. The study provides valuable insights for researchers and practitioners, aiding in the connection between academic knowledge and real-world applications in risk management.

Introduction

The role of corporate risk management (CRM) has emerged as an essential aspect in contemporary business strategies, playing a key role in protecting businesses from various uncertainties that could jeopardize their financial health and future

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success. As the world's markets become more linked and volatile, the need to identify, evaluate, and reduce risks has grown significantly. CRM involves a variety of methods and tools aimed at handling both financial and operational risks, ensuring that businesses can navigate challenges like market volatility, credit risks, regulatory shifts, and geopolitical events.

Fundamentally, CRM depends on the strategic utilization of derivatives, insurance, and other financial instruments that assist companies in shielding themselves from potential losses. These tools not only shield businesses from potential downsides but also allow them to improve their capital structures, maintain liquidity, and increase the overall worth of the company. The incorporation of risk management into the framework of corporate governance and decision-making highlights a wider acknowledgment that managing risk is about more than merely avoiding losses; it is also about seizing chances for expansion and innovation in a world that is becoming more complex.

This introduction lays the groundwork for delving into the various facets of CRM, including its effects on the capital structure, characteristics of the firm, and its wider implications for business strategy in a complex global economy. Despite the increasing focus on enterprise risk management (ERM) as a key strategy for improving an organization's ability to withstand challenges, there's still disagreement on the best approaches and their effects on a company's success. While recent studies have made progress in examining different parts of ERM, the variety of methods and situations these studies cover have resulted in scattered findings. This situation poses a difficulty for both academics and professionals in figuring out the best way to apply ERM in various company contexts. Furthermore, the quick progress in technology, especially in data analysis and artificial intelligence (AI), has introduced new dimensions to ERM that are not fully understood or included in current models. As companies deal with more complicated risks, the importance of having a thorough and unified understanding of ERM practices and their results has become more crucial.

This research aims to fill these gaps by analyzing and summarizing the latest studies on ERM, with the goal of pinpointing top practices, common obstacles, and areas that need more investigation. By doing this, it seeks to offer a more precise guide for the successful application and development of ERM in today's business settings.

1. To examine the research methodologies and previous studies on CRM.
2. To highlight the research gaps and future direction of risk management.

Methodology

A systematic literature review (SLR) displayed in Table 1 was carried out to offer a detailed and sophisticated insight into the previous research related to corporate social responsibility (CSR) within the particular domain of the hotel sector. An SLR is a commonly employed research technique designed to pinpoint, assess, and scrutinize the current scholarly works on a particular theme or area in a thorough and critical way. The chosen keywords were merged employing Boolean

Table 1. Corporate Risk Management Literature Review.

Author(s)	Year	Main Focus	Key Findings	Theoretical Framework	Methodology
Allayannis & Weston	2001	Examines the relationship between the value of firm and foreign currency	Firms using derivatives have higher market values, as derivatives reduce risk and enhance value creation opportunities	Modern Portfolio Theory (MPT), Risk Management Theories	Empirical study on US non-financial firms
Graham & Rogers	2002	Investigates whether firms use hedging to manage tax-induced financial constraints	Hedging increases debt capacity by reducing cash flow volatility, optimizing capital structure, and minimizing tax burdens	Trade-Off Theory of Capital Structure	Empirical analysis using tax and hedging data
Carter et al.	2002	Focuses on the impact of fuel hedging in the airline industry	Fuel hedging reduces operational risk and leads to more stable cash flows, improving firm profitability	Modern Portfolio Theory (MPT), Risk Aversion Theory	Case study of US airlines
Kaplan & Mikes	2012	Presents a framework for handling various kinds of risks within companies	Operational and strategic risk management should be integrated into a broader corporate strategy to ensure long-term success	Stakeholder Theory, Risk Management Frameworks	Conceptual framework with real-world examples
Beasley et al.	2005	Analyses the factors influencing the implementation of enterprise risk management	Organizations with robust corporate governance frameworks (e.g., risk committees) tend to have more effective risk management	Agency Theory, Corporate Governance Theories	Survey and empirical analysis
Jensen & Meckling	1976	Discusses the role of agency costs in corporate decision-making, including risk management	Managers may engage in risk management to align their actions with shareholder interests, reducing agency conflicts	Agency Theory	Theoretical analysis
Liebenberg & Hoyt	2003	Examines the factors leading to the appointment of Chief Risk Officers (CROs)	Firms appoint CROs when they face complex risks, indicating the need for specialized risk management roles within the firm	Corporate Governance Theories, Stakeholder Theory	Empirical study based on US firms
Pagach & Warr	2011	Investigates firm characteristics related to the hiring of CROs	Firms in high-risk industries, with complex operational environments, are more likely to hire CROs to manage risk	Agency Theory, Stakeholder Theory	Empirical analysis using firm-level data

(Table 1 continued)

(Table 1 continued)

Author(s)	Year	Main Focus	Key Findings	Theoretical Framework	Methodology
Stulz	1996	Provides a conceptual rethinking of risk management in firms	Argues that risk management should focus on risks that have the greatest impact on firm value, rather than minimizing all risks	Trade-Off Theory of Capital Structure, Risk Management Theories	Theoretical framework with practical applications
Tufano	1996	Studies risk management practices in the gold mining industry	Firms in the gold mining industry actively manage price risks through derivatives to stabilize revenues	Modern Portfolio Theory (MPT), Risk Aversion Theory	Empirical study on gold mining companies
Minton & Schrand	1999	Analyses how cash flow volatility affects firm investment and financing costs	Firms with higher cash flow volatility face higher costs of debt and equity, prompting them to manage risk through hedging	Trade-off Theory of Capital Structure	Empirical study using financial data from firms
Nocco & Stulz	2006	Discusses the theory and practice of enterprise risk management (ERM)	ERM integrates risk management across the firm, helping firms to better manage risks holistically and improve firm value	Enterprise Risk Management Theories, Stakeholder Theory	Theoretical analysis with practical case studies
Froot et al.	1993	Explores the relationship between corporate investment and risk management practices	Firms that manage risks can better align investment and financing decisions, improving overall financial stability	Corporate Finance Theory, Risk Management Theories	Theoretical analysis with empirical examples
Guay & Kothari	2003	Investigate the extent of derivatives use among firms	Firms using derivatives hedge only a small fraction of their risk exposure, indicating limitations in risk management practices	Modern Portfolio Theory (MPT), Risk Aversion Theory	Empirical analysis using data on derivatives use
Bartram et al.	2011	Examines the effects of derivatives use on firm risk and value	Derivatives reduce firm risk but have mixed effects on firm value depending on the firm's overall risk profile	Modern Portfolio Theory (MPT), Risk Management Theories	Empirical study using global data
Brown & Kapadia	2007	Analyses the relationship between firm-specific risk and equity market development	Firms in more developed equity markets tend to engage in better risk management practices to lower firm-specific risks	Capital Market Development Theory, Risk Management Theories	Empirical study using global market data
Smith & Stulz	1985	Investigates the factors that drive firms to hedge	Firms hedge to manage financial distress costs, reduce taxes, and align with managerial incentives, contributing to firm value	Agency Theory, Tax Shield Theory	Theoretical and empirical analysis

logic operators, such as "OR" and "AND," through the use of logical connectors. The task of examining academic literature included a methodical search for articles, working papers, and reports that had been peer-reviewed and were published in prestigious journals and academic databases like Scopus. Terms like "corporate risk management," "financial risk," "operational risk," "strategic risk," "derivatives," "hedging," and "capital structure" were used.

Results and Discussion

Many studies explore how the use of financial instruments like options, forwards, futures, and swaps affects the performance of companies. The evidence gathered suggests that companies employing these financial tools can lower the fluctuations in their earnings and the expenses related to financial distress, ultimately enhancing their overall worth. For instance, findings from Allayannis and Weston (2001) indicated that firms utilizing foreign currency derivatives for hedging purposes typically have a greater market value than those that do not. Research also shows that managing risk can influence a company's financial structure by easing financial constraints and reducing the cost of borrowing. For example, Graham and Rogers (2002) showed that companies that manage risk through derivatives are better positioned to incur debt due to the stabilization of their cash flows, which enhances their financial structure. While the field of financial risk management is well-explored, there is an increasing focus on operational and strategic risk management. Operational risk management, which includes efforts to mitigate supply chain risks and enhance IT security, is crucial for ensuring the continuity of business operations. On the other hand, strategic risk management addresses issues related to market competition, regulatory changes, and technological disruptions.

Research conducted by Kaplan and Mikes (2012) highlights the necessity of incorporating risk management into the strategic decision-making process to enhance a company's long-term performance. The role of corporate governance in CRM is also a subject of extensive investigation. Organizations with robust governance structures are more inclined to implement effective risk management practices. The implementation of CRM strategies can differ significantly across various sectors. Industries such as energy, finance, and manufacturing, for instance, possess unique risk profiles and therefore utilize distinct risk management approaches. For example, energy firms typically prioritize addressing risks linked to fluctuations in commodity prices, while financial institutions focus on managing risks associated with credit and interest rates. Studies by Carter et al. (2002) in the airline industry, for example, show how hedging against fuel prices can reduce operational risk and boost profitability.

Conclusion

This research has in-depth explored how CRM, especially through the strategic application of financial derivatives, plays a crucial role in forming the capital

structures of companies and affecting their overall traits. The results indicate that firms that adopt risk management strategies, like using financial derivatives for hedging, can more effectively manage their cash inflows, lower the expenses related to financial difficulties, and, in turn, boost their market worth. Additionally, incorporating risk management into the governance of a company has been demonstrated to enhance the decision-making capabilities of businesses, enabling them to better deal with market fluctuations. By combining previous studies and presenting concrete evidence, this research provides valuable perspectives for scholars and professionals alike. It closes the gap between academic theories and real-world applications, showing how proficient risk management can act as an essential instrument for companies operating in complex and unpredictable markets. Furthermore, the research highlights the significance of strong corporate governance in executing successful risk management approaches, providing a detailed roadmap for future studies and practical applications in this field. As data analytics, AI, and machine learning progress quickly, upcoming studies might investigate the ways these technologies can be incorporated into risk management strategies. Grasping the potential of AI-powered models to forecast and reduce risks efficiently could be essential for enhancing corporate governance and the process of making decisions.

Declaration of Conflicting Interests

Funding

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Capturing Monthly Anomaly from Outbreak of COVID-19 on Indian Stock Market: A Sectoral Analysis

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Abstract

This study examines the month-of-the-year effect during the global COVID-19 pandemic, which has extensively impacted financial markets worldwide, leading to unprecedented changes in volatility and causing significant domestic and global disruptions for investors for a brief period. To investigate this phenomenon, we analyzed 14 Indian sector indices selected from the Bombay Stock Exchange (BSE) Sensex. We applied an econometric model to explore the leverage effects. The outcomes show that the sector indices IT, Manufacturing, Metal, Oil & Gas, FMCG, Utilities, and PSU exhibited a December effect. However, the BSE Telecom sector demonstrates similar returns across all months. Furthermore, this confirms conflicting empirical findings regarding calendar anomalies. The commonly observed January effect did not show statistical significance for any of the 14 sectors. Additionally, the results were augmented using a conditional variance equation for residuals. These findings contribute to the diversification of investment strategies by exploring a more comprehensive range of sector stocks and by informing investment decisions.

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Introduction

Calendar anomalies in asset pricing, such as the day-of-week, weekend, month-of-the-year, turn-of-the-month, and January effects, have intrigued researchers for decades. Understanding return volatility is crucial for investors, and Eugene Fama discusses market efficiency. These findings illustrate the high efficiency of market hypotheses, forming a solid basis for financial economics research. A thorough literature review tests this hypothesis. Despite significant support for the efficient market hypothesis (EMH), interest in market psychology and behavioral decision-making persists. Evidence suggests stock prices often deviate from rational economic realities, indicating common anomalies in the stock market. These anomalies have drawn the attention of policymakers and participants, highlighting their significance in capital markets. According to Schwert (2003), calendar irregularities are infrequent, as empirical works inconsistent with asset-pricing models suggest. This inefficiency in markets creates opportunities for irregular profits. Numerous investigations have been conducted to examine calendar-based irregularities in the day-of-the-week effect across various market sectors. Dubois and Louvet (1996) found evidence of the turn-of-the-month effect, which was further supported by Compton et al. (2006). Stock market price fluctuations influenced by the calendar effect create patterns in the capital market. These patterns emerge from seasonal influences that occur at regular or specific time intervals throughout the year. Such market anomalies contradict the EMH, which assumes market efficiency and perfect competition, implying no one can achieve abnormal profits. Nonetheless, there has been minimal research conducted on advanced economies, and even fewer studies have examined Asian markets, particularly the swiftly expanding stock market in India.

This study examines the month-of-the-year effect during the COVID-19 pandemic on 14 sector indices from the Bombay Stock Exchange (BSE) Sensex. Previous research largely focused on popular indices, but this study considers broader sectoral indices, offering updated insights into their predictability for economic policymakers and investors. Utilizing an Exponential GARCH model, the data captures volatility clustering.

The structure of this research article is organized as follows: A review of relevant literature is found in the second section; the second third outlines the data sampling and methodological approach; the fourth section examines the outcomes derived from applying the methodology; and the article concludes with the fifth section, which offers final remarks and insights.

Literature Review

The following literature review presents various market anomalies, particularly the calendar effects. Commonly tested anomalies are Day-of-week effects that result from various outcomes of the market reaction to the news by the close of the trading week (Damodaran, 1989). However, Huynh (2021) provides no day-of-week anomaly but evidence of the existing leverage effect in all the indexes, showing strong evidence of the GARCH effect. Chia and Liew (2010) show the

existence of significant Monday positive and negative Friday anomalies (Archana & Safeer, 2014), providing a weekend effect in Indian stock markets (Kazemi Lari et al., 2013). Evident higher negative return after 2008 in the southeast Asian markets. Furthermore Acharya et al. (2022) found a September effect in Sensex and Nifty from 1996 to 2021. Al-jarrah (2011) exhibits no turn-of-the-month effect anomaly in the Amman stock exchange. Waleed et al. (2018) exhibit the January phenomenon and unusually elevated returns on the initial and final trading sessions of each. Al-rjoub and Alwaked (2010) find negative returns during the financial crisis. Harshita et al. (2019) found evidence that the month of the year affects Indian stock market returns.

Studies examining month-of-the-year effects through different sectors contribute significantly to the body of knowledge on market anomalies. Notably, there is a lack of comprehensive investigations into calendar-based irregularities within sector-specific indices in the Indian capital market. Despite the importance of these studies, there exists a notable shortage of investigation on sectoral indices within individual countries, especially India, where limited calendar anomalies have been identified in sector-based indices.

Cengiz et al. (2017) identified anomalies in Turkey's automotive, cement, and textile sectors. Squalli (2006) reports inefficiencies in Dubai's markets. Adnan and Johani (2023) observed that the Manufacturing sector adversely impacted pharmaceuticals, IT, and telecommunications, which were expected to benefit from the outbreak, compared to non-manufacturing sectors. Alam et al. (2021) found that food, pharmaceutical, and healthcare indices showed significant positive returns on announcement days, while the transportation industry underperformed on the Australian Securities Exchange. Barua and Barua (2020) and Ghosh and Saima (2021) indicated larger bank susceptibility. Chen et al. (2007) during the SARS epidemic, Taiwanese hotel stocks experienced substantial negative cumulative abnormal returns. Chowdhury (2020) observed significantly negative returns for Bangladeshi tourism companies post-event. Clark et al. (2021) found that hotels outperformed restaurants and casinos financially among 154 publicly traded hospitality firms from 23 countries. He et al. (2021) demonstrated that Chinese transportation, mining, electricity and heating, and environmental industries suffered during the pandemic, whereas manufacturing, IT, education, and healthcare industries showed resilience. Hossain and Biglari (2020) noted COVID-19's significant negative impact on Bangladesh's FMCG industry. Liew and Puah (2020) concluded that healthcare, IT, and telecommunication services were more pandemic-resistant. Maneenop and Kotcharin (2020) found that airline stocks declined more than market returns after major COVID-19 announcements, with investors reacting differently during these events. Balash and Faizliev (2024) determined that the Russian stock market's response to changes in major foreign markets supports the hypothesis that unexpected shocks and global factors influence Russian oil and gas index fluctuations.

The aforementioned studies examine calendar anomalies observed in both established and emerging financial markets. It is important to note, however, that research conducted in emerging markets has produced inconsistent findings. In this field of study, the stock markets of India have also become a subject of

increasing interest (Dash et al., 2011). The results were observed for the adverse effects in August, November, December, and March. The January effect is evident by Pandey (2002). Tadepalli et al. (2021) uncovered industry-specific irregularities in Indian financial markets, especially during periods of global economic turmoil and downturns. This research marks the first investigation into the monthly effect in India's market. These discoveries carry substantial relevance for proactive investors crafting industry-focused tactics and for regulatory authorities seeking to comprehend sectoral trends during economic occurrences.

This study empirically examines the existence of the month-of-the-year effect during the Global Pandemic COVID-19 in Indian sectoral indices using the daily stock closing prices from 01/01/2020 to 10/30/2021.

Data Sample and Descriptive Statistics Analysis

This research utilizes daily closing prices from 14 sector indices of the BSE in India, which is renowned for its extensive stock listing history and share volume, commonly referred to as the S&P BSE Sensex. This index encompasses 30 stocks representing 14 key sectors: BSE Information Technology, BSE Auto, BSE Bankex, BSE Manufacturing, BSE Metal, BSE Oil and Gas, BSE Energy, BSE Finance, BSE Fast Moving Consumer Goods, BSE Utilities, BSE Telecom, BSE Realty, BSE PSU and BSE Power. The closing price data was obtained from the Capitaline database, maintained by Capital Market Publishers India Pvt., Ltd. The study examines a well-known form of calendar anomaly, specifically the month-of-the-year effect, on Indian sector indices to evaluate their performance during the COVID-19 Global Pandemic. The research period spans from 01/01/2020 to 10/30/2021, comprising a total of 6,384 observations across the 14 sector indices. Table 1 presents the descriptive statistics for the stock Indices returns for BSE sector indices are shown in Table 1 for BSE IT, BSE Auto, BSE Bankex, BSE Manufacturing, BSE Metal, BSE Oil & Gas, and BSE Energy.

Table 1. Descriptive Analysis of Returns for the Sector Indices.

	BSE Sensex	IT	Auto	Bankex	Manufac	Metal	Oil	Energy
Mean	0.0793	0.1679	0.0702	0.0437	0.0779	0.1435	0.0460	0.0951
Median	0.1945	0.1758	0.1273	0.1361	0.1754	0.3777	0.1438	0.1495
Max.	8.5947	8.0297	9.7632	10.169	9.1329	7.9466	8.6649	9.6992
Min.	−14.101	−9.6898	−14.339	−18.400	−13.397	−12.712	−13.179	−13.722
SD	1.6531	1.7459	1.9190	2.2936	1.5120	2.4330	1.8060	2.0912
Skew.	−1.7760	−0.5563	−0.9319	−1.2987	−1.6279	−0.8166	−0.9144	−0.4851
Kurt.	19.935	9.7597	13.343	14.574	23.277	6.4962	13.6508	11.854
JB	5689.2	891.71	2098.7	2673.4	8013.6	282.94	2218.93	1507.6
p value	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
N	456	456	456	456	456	456	456	456

Source: Eviews output.

Table 2. Descriptive Analysis of Returns for the Sector Indices.

	Finance	FMCG	Utilities	Telecom	Realty	PSU	Power
Mean	0.0488	0.0438	0.1059	0.0948	0.1228	0.0604	0.1166
Median	0.1589	0.0772	0.1485	0.0357	0.2200	0.1809	0.1923
Max.	8.3154	7.9156	6.2590	9.8988	8.3481	6.6597	4.8250
Min.	−17.504	−11.007	−8.7420	−11.852	−11.207	−11.501	−8.8041
SD	2.1448	1.3509	1.6265	2.1474	2.3173	1.8402	1.6305
Skew.	−1.5965	−0.6760	−0.8910	−0.1664	−0.5525	−1.2840	−0.9675
Kurt.	15.504	20.231	7.2889	8.1645	6.2653	10.0157	7.0269
JB	3164.3	5675.9	409.86	508.88	225.79	1060.48	379.27
p value	.0000	.0000	.0000	.0000	.0000	.0000	.0000
N	456	456	456	456	456	456	456

Source: Eviews output.

In contrast, Table 2 presents BSE Finance, BSE fast-moving consumer goods, BSE utilities, BSE Telecom, BSE Realty, BSEPSU, and BSE Power. As evident from Table 1 and Table 2, there is a vast deviation in the mean returns in the stock index performance for all 14 sector indices. Among the sector indices, BSE IT and BSE Metal show the highest average returns at 0.16 and 0.14, respectively. The lowest returns, at 0.04, are seen in BSE Bankex, BSE Oil & Gas, BSE Finance, and BSE Fast Moving Consumer Goods. Notably, from January 2020 to October 2021, all sector indices maintained positive returns, with none falling into negative returns.

Methodology

To evaluate the impact of the month-of-the-year effect on stock returns, we utilized 12 dummy variables representing each month's underlying seasonality (where Rt represents the returns of the BSE Sensex and BSE sector indices at time 't'). For January, the dummy variable was assigned a value of 1, while all other months were set to 0. This process was repeated for each month of the year. We conducted a regression analysis without an intercept to prevent a dummy variable trap.

The results for the month-of-the-year-effect were tested using the following regression equation:

$$R_t = \mathrm{Jan}_j D_1 + \mathrm{Feb}_j D_2 \mathrm{Mar}_j \beta_3 + \mathrm{Apr}_j D_4 + \mathrm{May}_j D_5 + \mathrm{Jun}_j D_6 + \mathrm{Jul}_j D_7$$
$$+ \mathrm{Aug}_j D_g + +\mathrm{Sep}_j D_9 + \mathrm{Oct}_j D_{10} + \mathrm{Nov}_j D_{11} + \mathrm{Dec}_j D_{12} + \varepsilon_t \qquad (1)$$

The hypothesis for the study of month-of-the-year-effect study is as follows:

H_0: The monthly returns of the underlying asset do not exhibit any seasonal patterns.
H_1: Seasonality of underlying asset's monthly returns.

Model Framework

This study utilizes OLS regression to investigate seasonal patterns in market behavior, specifically the month-of-the-year effect. The ARCH family model addresses this issue because stock returns exhibit non-systematic characteristics due to time-varying fluctuations in the return series. Before analyzing the ARCH effect in the return series, the LM test for heteroscedasticity was conducted, and the null hypothesis of no ARCH effect was rejected. The findings indicate that the return series is heteroscedastic, confirming the presence of the ARCH effect. Consequently, ARCH, GARCH (1, 1), and EGARCH models were implemented to investigate volatility in the Indian sectoral stock index return series.

In the ARCH model, where σ_t^2 conditional variance error value u_{t-1}^2, the equation is as follows:

$$\sigma_t^2 = \alpha_0 + \alpha_1 u_{t-1}^2 \tag{2}$$

The generalized (ARCH) model is parsimonious and reports its constraints of the ARCH model.

For the generalized (ARCH) model, the conditional variance equation is as follows:

$$\sigma_t^2 = \alpha_0 + \alpha_1 u_{t-1}^2 + \beta \sigma_{t-1}^2 \tag{3}$$

The GARCH (1, 1) model assumes that volatility's effect on a return series diminishes over time. In the variance equation, the ARCH coefficient (α) indicates how yesterday's error influences today's volatility, while the GARCH coefficient (β) represents persistence. Volatility is considered highly persistent when the (β) coefficient exceeds the (α) coefficient or $\alpha + \beta \leq 1$.

EGARCH model

$$h_t^2 = \alpha_0 + \sum_{j=1}^{q} \alpha \frac{u_{t-j}}{\sqrt{ht-j}} + \sum_{j=1}^{q} \gamma_j \frac{u_{t-j}}{\sqrt{h_{t-j}}} + \sum_{i=1}^{p} \beta_i \log\left(h_{t-i}\right) \tag{4}$$

The conditional variance of the return is represented logarithmically, resulting in an exponential form of the leverage effect, which contrasts with the quadratic approach. This ensures that the conditional variance remains positive. The model exhibits asymmetry, with the leverage parameter (γ) equaling zero when $\gamma = 0$. If $\gamma_1 = \gamma_2 = \gamma_3 = 0$. In cases where γ is negative, it indicates that positive information generates less volatility compared to negative information.

Nelson (1991) introduced the EGARCH model, which shows promise in examining leverage effects. This phenomenon refers to the inverse relationship between returns and volatility, where volatility tends to decrease as returns increase, and vice versa. The EGARCH model yields four key components: constant, ARCH, GARCH, and a leverage effect element.

Empirical Analysis

We employed a regression model to evaluate the stationarity of the data series. The Augmented Dickey–Fuller (ADF) test was utilized, with its null hypothesis asserting that "the series are non-stationary or have a unit root." Unit root analysis was

Table 3. Unit Root Test Output from ADF Test.

		Closing Price		d (Closing Price)	
S. No.	List of Sectors Indices	t-Statistic	ƿ	t-Statistic	ƿ
1	BSE-Auto	−0.2621	.9275	−21.5785	.0000
2	BSE-Bankex	−0.3466	.9150	−20.3509	.0000
3	BSE-Energy	−0.3683	.9116	−21.3777	.0000
4	BSE-Finance	−0.2417	.9302	−20.6409	.0000
5	BSE-FMCG	−0.8175	.8128	−23.1322	.0000
6	BSE-IT	0.1764	.9709	−20.8441	.0000
7	BSE-Manufac	0.0808	.9640	−22.6378	.0000
8	BSE-Metal	0.2417	.9749	−20.1427	.0000
9	BSE-Oil	−0.3977	.9067	−21.8922	.0000
10	BSE-Power	0.8553	.9949	−18.7447	.0000
11	BSE-PSU	0.4569	.9851	−6.80206	.0000
12	BSE-Realty	0.8103	.9942	−19.4632	.0000
13	BSE-Telecom	−0.8821	.7936	−23.0098	.0000
14	BSE-Utiliti	1.0245	.9969	−19.3097	.0000
15	BSE-Sensex	0.1983	.9723	−6.617825	.0000

Source: Eviews output.

conducted on closing prices and their first differences, with the outcomes displayed in Table 3. The null hypothesis of non-stationarity was rejected due to the significant ADF test coefficient ($p < .05$) across all sectors. These findings suggest the absence of unit roots, implying that the series is stationary at this level. Consequently, we can conclude that our regression analysis for testing calendar anomalies in the stock return series is not affected by spurious regression errors.

EGARCH Results

Nelson (1991) specifies that the EGARCH model helps explain the leverage effect and asymmetric information properties in a stock return series. The resulting output was a conditional mean equation that used a dummy variable regression equation. Details of the results of the BSE sensor are presented in Table 4. Tables 5 and 6 present the results for the 14 sector indices obtained using the EGARCH model. The results of February, August, September, and December returns differed significantly from those of the other months. The findings indicate that across all 14 sectors, the widely recognized January effect was not statistically significant.

Furthermore, the December effect is significant in BSE IT, Manufacturing, Metal, Oil & Gas, FMCG, Utilities, and PSU ($p < .05$). Concurrently, the BSE Telecom sector shows no significant variation in returns across all months. Additionally, the findings were enhanced through the application of a conditional variance equation to the residuals.

Table 4. EGARCH Results for BSE Sensex.

BSE Sensex			
Months	Coefficient	z-Statistic	þ
January	−0.0459	−0.5302	.5959
February	0.3197	2.5259	.0115
March	−0.1837	−1.5283	.1264
April	−0.2232	−1.6830	.0924
May	−0.0608	−0.6043	.5456
June	0.0081	0.1242	.9011
July	0.1068	1.5344	.1249
August	0.1948	2.5347	.0113
September	0.1685	2.1990	.0279
October	0.1190	1.3120	.1895
November	0.1534	1.0357	.3003
December	0.4257	3.0905	.002
C(13)[const]	0.0208		.3911
C(14)[ARCH]	−0.0249		.4347
C(15)[GARCH]	−0.2036		0
C(16)[EGARCH]	0.9887		0
R^2		0.0023	
Durbin–Watson stat		2.3333	

Source: Eviews output.

Table 5. Leverage Effect Using EGARCH Model.

	IT	Auto	Bankex	Manufac	Metal	Oil	Energy
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Mean Equation							
JAN	0.1207	0.1019	−0.1261	−0.0695	−0.556	−0.2233	−0.0168
þ	.1768	.5939	.3549	.5082	.0148	.2316	.9214
FEB	0.0898	−0.3987	0.6109	0.18569	0.8632	0.3542	0.6035
þ	.5445	.1416	.0008	.2136	.0019	.0795	.0059
MAR	−0.1764	−0.255	−0.4263	0.11407	0.3259	−0.2336	−0.5316
þ	.2377	.4793	.0292	.3923	.1854	.5206	.0089
APR	−0.5595	−0.2951	−0.2341	−0.3045	1.4925	0.1489	−0.1677
þ	.0001	.4055	.2463	.0131	0	.7279	.406
MAY	−0.1249	0.0676	−0.1782	0.076	−0.3572	0.1853	0.337
þ	.3023	.8462	.3312	.4461	.138	.4763	.0698
JUN	0.3257	−0.0588	−0.1657	−0.0512	−0.3727	−0.1285	−0.0599
þ	.0001	.7707	.2052	.4053	.051	.4418	.6834
JUL	0.1045	−0.2357	−0.0832	0.0972	0.17885	−0.2759	0.1903

(Table 5 continued)

(Table 5 continued)

	IT	Auto	Bankex	Manufac	Metal	Oil	Energy
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Mean Equation							
p	.2515	.1047	.4806	.1811	.1703	.0747	.2435
AUG	0.2724	−0.0369	0.1424	0.1447	0.2665	0.1934	0.118
p	.0289	.8082	.2564	.0948	.1104	.2572	.4492
SEPT	0.373	0.3565	−0.0552	0.2219	−0.2295	0.1465	0.4542
p	.0004	.0181	.6744	.0253	.2952	.3292	.0099
OCT	−0.131	0.0578	0.6255	0.037	−0.1872	−0.0772	0.0225
p	.2983	.7282	.0001	.8042	.3586	.6879	.8992
NOV	−0.2928	0.5936	0.4645	−0.119	0.4176	0.3378	−1.1217
p	.0445	.0237	.0501	.585	.0406	.1691	0
DEC	0.5227	0.4604	0.1838	0.4673	0.9925	0.7417	0.2278
p	.0001	.0649	.4397	.0076	.0001	.0038	.2882
Variance Equation							
[const]	0.0454	−0.1009	0.0505	0.0183	0.1258	−0.0953	0.0081
p	.016	0	.0264	.4145	0	.001	.6071
[ARCH]	−0.0339	0.1668	−0.0493	−0.0203	−0.0878	0.1522	−0.0168
p	.1421	0	.1053	.4688	0	.0001	.4874
[GARCH]	−0.1944	−0.1166	−0.1531	−0.1636	−0.1613	−0.0992	−0.1203
p	0	0	0	0	0	0	0
[EGARCH]	0.9904	0.9813	0.989	0.9884	0.9617	0.9749	1.0029
p	0	0	0	0	0	0	0
R^2	−0.016	0.005076	0.0158	−0.0197	−0.0032	0.0073	−0.0094
D–W stat	2.1718	2.106	2.0047	2.225	2.0773	2.2183	2.2036

Source: Eviews output.

Table 6. Leverage Effect Using EGARCH Model.

	Finance	FMCG	Utility	Telecom	Realty	PSU	Power
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Mean Equation							
JAN	−0.0816	0.0452	−0.0224	0.4141	0.089	0.1225	−0.1172
p	.5455	.6657	.9056	.0852	.8269	.4879	.7172
FEB	0.5504	−0.2804	0.4917	0.0029	−0.0499	0.1818	0.1876
p	.0031	.0561	.0119	.9927	.885	.4489	.4057
MAR	−0.3477	0.4079	0.1883	−0.3709	−1.3315	−0.261	−0.4341
p	.0566	.0324	.561	.2577	0	.4462	.0101
APR	−0.2323	−0.3757	0.4464	0.0583	0.0879	0.0732	0.1962
p	.179	.0905	.0848	.8441	.7548	.7986	.3792
MAY	−0.2021	0.0602	0.2332	0.0844	0.1789	0.3842	0.3285

(Table 6 continued)

(Table 6 continued)

	Finance	FMCG	Utility	Telecom	Realty	PSU	Power
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
Mean Equation							
p	.2089	.5833	.3289	.7172	.6194	.1549	.1544
JUN	−0.0484	0.0272	0.1396	−0.0957	0.3079	−0.1999	−0.0126
p	.6994	.7573	.4944	.7317	.4477	.3561	.9583
JUL	−0.071	0.0006	−0.2244	0.1334	0.4249	−0.0676	−0.1132
p	.5329	.9941	.2891	.4435	.3574	.7432	.7218
AUG	0.1472	0.2146	0.3936	0.0538	0.1012	−0.0763	0.4226
p	.2103	.0098	.0118	.8364	.7839	.6696	.1453
SEPT	−0.0152	0.1949	0.067	0.1275	0.3685	0.0402	0.153
p	.8914	.0321	.7544	.6514	.2515	.8479	.5376
OCT	0.3575	−0.1806	0.1186	−0.084	0.2005	0.1275	0.2431
p	.0082	.2108	.5426	.7394	.5466	.5565	.3645
NOV	0.5281	0.3546	0.5234	0.316	0.753	0.7649	0.8382
p	.0125	.0732	.1669	.2938	.2685	.0261	.1678
DEC	0.2378	0.4703	0.7773	0.3144	0.8755	0.7879	0.1871
p	.1716	.0012	.0013	.5151	.0672	.0058	.5889
Variance Equation							
[const.]	0.0474	−0.1286	−0.1048	−0.1116	1.8973	−0.073	1.2927
p	.0968	.0002	.0347	.0066	0	.0346	0
[ARCH]	−0.048	0.1715	0.2141	0.2281	0.1248	0.1417	0.0938
p	.2221	0	.0024	0	.0769	.0028	.0133
[GARCH]	−0.1656	−0.1463	−0.0877	−0.0835	0.2313	−0.0852	0.2207
p	0	0	.0069	.0271	0	.0001	0
[EGARCH]	0.9885	0.9755	0.9209	0.9532	−0.2458	0.9663	−0.5306
p	0	0	0	0	0	0	0
R^2	0.0149	−0.0086	−0.0005	0.0093	0.0397	0.0157	0.0287
D–W stat	2.0191	2.2328	1.9219	2.183342	1.9257	2.0854	1.9626

Source: Eviews output.

Negative EGARCH coefficient values were observed for BSE Realty (−0.24586) and BSE Power (−0.53064). These two sectors appear to lack a leverage effect and show minimal response to negative information related to the global pandemic. In contrast, the other 12 sectors demonstrated positive and significant effects, suggesting they were more responsive to unfavorable news about the global pandemic compared to positive information.

Discussion

The study examined Indian sector indices during the early stages of the worldwide COVID-19 crisis, specifically investigating calendar anomalies, emphasizing the

month-of-the-year effect. The findings indicate that the well-known January and December effects, considered famous anomalies, do not persist in this context.

Conclusion and Implication

This study aims to investigate the month-of-the-year effect during the global COVID-19 pandemic, which has significantly impacted global financial markets, and to examine the impact of COVID-19 on 14 Indian sector indices selected from the BSE Sensex from 2020 to 2021. An econometric model was applied to determine the appropriate fit, and the analysis was conducted using OLS, GARCH, and EGARCH models, with particular attention to the leverage effect. The results indicate that the widely recognized January effect is only significant for a subset of the 14 sectors examined. Moreover, the December effect is significant for BSE IT, Manufacturing, Metal, Oil & Gas, FMCG, Utilities, and PSU. The BSE Telecom sector does not exhibit significantly different returns across all months.

Additionally, the results were augmented using a conditional variance equation of the residuals. As a result, a trading approach that exploits the December effect could potentially yield above-market returns and generate profits, thereby challenging the EMH. This study's results indicate that investors might have a rare chance to benefit from unusual returns during the worldwide economic downturn triggered by the pandemic, which has impacted various sector indices. The study identified a December effect in specific sectors but did not find significant evidence for the January effect. As a result, the study's findings indicate that, from an investor's perspective, not all Indian sector indices may present opportunities for generating superior returns.

Scope for Further Study

The analysis may be extended beyond the time of a global pandemic and compared to the two major global financial crises during periods of normalcy and recession. Check for calendar irregularities in Indian stock market returns by examining day-of-week and festive season effects, among other abnormalities.

Authors Contribution Statement

Dinesh K: Conceptualization, writing the original draft, writing the review and editing, Methodology, Software, Data analysis.
Janet Jyothi D'Souza: Supervision.
All authors have discussed the results and contributed to the final manuscript, including revisions and edits. All authors approve of the content of the manuscript and agree to be held accountable for the work.

Data Availability

The datasets analyzed in this study can be obtained from the corresponding author, subject to a reasonable request.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

This article does not contain any studies involving human participants or animals performed by any of the authors.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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Parent–Child Conflict About Media Use: A Comparison Between Television and Internet

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Abstract

The media diet of youth has grown steadily day by day. Greater exposure to marketing stimuli shown in media sometimes creates different opinions with regard to product preferences in parent and child and leads to parent–child conflict. Thus, this study endeavors to first study the media habits of television (TV) (traditional media) and internet (modern media) of youth across gender and age and second to investigate and compare the parent–child conflict arising due to exposure to TV and the internet. The study used a sample of 714 individuals who are young and are media users between the ages of 15–24. The results of the present study have been analysed through analysis of frequency, χ^2 test, EFA and hierarchical regression analysis following SPSS 19.0. The study found significant differences in TV viewing and internet usage across age and gender. Moreover, TV exposure is accountable for parent–child conflict significantly but internet exposure does not increase the incidence of the situation of conflict in the family.

Introduction

Marketers are still targeting youth, in fact; youth continue to be an important market segment. India is the youngest country in the world with approximately 430 million. The maximum population in India is in the age category of 15–34 years. Further,

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with the age of earning of an Indian youth getting lowered by 10 years and most of these earnings along with studying, the purchasing power of this segment is on an increase (Mehra, 2008). In other words, they decide on their personal acquisitions and also influence family purchase decisions. In addition, in a relatively newer setting, Indian parents, especially in dual carrier families (when both parents work) and shift from joint to nuclear families, have allowed adolescent children to have more of an influence in some family decisions (Chadha, 1995). However, parents working, often find less time to spend with children. Thus, the children get to know greater means of using their free unique time. This result creates more gadgets being used and a multimedia world set up in the age of tender babies. Therefore, the television (TV) in the house is multiple and several electronic media are used simultaneously, in the multimedia environment. But then parents also see their children employ social networking to watch blogs, videos, and pictures, listen to music, watch TV, play online games, use emails and posts and even keep up with the news. This predicts a splitting of time per media. Children spend more than seven hours (Rideout et al., 2010) on media per day in the United States. Young people (18–24 years) are the most exploited online users than any other age group (George and Scerri, 2007). Hintze and Lehnus (1998) observed that children spend more time viewing TV, also listening to tunes and on the Internet than with newspapers and magazines. Young adults have depicted their inclination to browse the internet over watching TV when surveyed in a comprehensive survey (CNW News Release, 2007). Although it was very clear to the masses that most of the young internet users preferred surfing the internet (87%) instead of TV (13%). In line with statistics in the United States, 77% of Nigerian parties surfed the internet and the remaining 23%) surfed TV.

Previous Research

TV Viewing Habits of Youth

Since, few studies depicted about time spent by Indian youth with media, the time spent by youth in Indian families watching TV, the dominant mass medium in India, is substantial—generally two or more hours daily (Census, 2011; Kaur & Singh, 2011). Additionally, it has been suggested that amongst Indian children TV watching is the most preferred activity and additionally almost 55% of children state TV watching as their favorite activity (Indiantelevision.com, 2006). On weekdays, one to two hours of time per day is spent by children watching TV and the viewing amount increases significantly on weekends (Kaur & Singh, 2011). Marketers therefore use TV as a means of communication because it offers access to children at an earlier age than other mediums (Kaur & Singh, 2006). In 2016, TV business revenues in India were estimated at $8.8 billion (RBI, 2016) an annual growth of about 13.2% that of 2014 (IBEF, 2016).

The majority of those studies have studied children's TV viewing habits in different developed nations. On average, American children are seen to view TV for 4.8 hours and two-thirds of youth view TV five hours daily (Gortmaker et al., 1996). Australian children spend 163 minutes a day watching TV, while TV

viewing increases with children's age Hesketh et al. (2006). Similar is the case in India. It is seen that Young Indian people spend much time watching TV for they are doing glued to TV sets. Indian adolescents watch TV for two to three hours daily, report many researchers (Abrol et al., 1991; Verma & Larson, 2002). Entertainment is the preferred medium for viewing TV, as indicated by Wadkar (1998); they also choose to watch programs which are adult oriented like movies and film songs (Jaiswal & Jaiswal, 1992), and view TV in excess to print media (Sethi et al., 1997).

TV Exposure and Parent–Child Conflict

TV exposure has its own positive points and negative points with children. Given that on TV there is information about merchandise/services available in the marketplace, getting to know the modern lifestyle styles, and entertaining viewers (Livingstone & Lunt, 2002), TV watching is needed as this pleases the viewers' lives and relieves viewers of daily pressure (Verma & Larson, 2002). Despite these positive things about TV viewing, TV viewing affects the relationship of children with parents negatively. TV is watched by the young generation and it thus has a way of developing an understanding of the content shown on TV. With respect to CDs, school stationery, candies, toys, and clothing, they themselves develop their own preferences (Buijzen & Valkenburg, 2005). On the other side, parents might have a different set of preferences for these products/services than do children. This is the point at which parent–child conflict arises because of counter preferences among parents and children with respect to these products/ services. Goldberg and Gorn (1978) showed that children were not happy when parents denied purchase requests made by the children for the products and services that were portrayed on TV. Consequently, parent–child conflict and child dissatisfaction resulted. For that reason, they ended up sad from watching TV.

Youth Internet Surfing Habits

Young viewers spend heavy time watching TV, but despite that TV time spent watching traditional TV has come down from three hours to 22/3 hours. From 2005 to 2009 overall, TV consumption increased 38 minutes per day, and many young viewers watched TV on their cell phones and computers Rideout et al. (2010). This is why the internet is termed a vital buzz of entertainment and a rapid communication medium in India. "We currently have 120 million base users of internet and rank third largest in the world after China and the US," (Gnanasambandam et al., 2012). Moreover, the users are also comparatively younger than in other developing nations. As of March 31, 2013, the internet subscribers in India pegged by the Telecom Regulatory Authority of India is 164.81 million with three-fourths of the online population below the age of 35 more or less and half the online population below 35 years of age across the globe (*The Hindu*, August 24, 2013). However, relatively less Internet usage by an Indian user than their counterparts in developed economies, the user largely uses the Internet as being social networking system and as a means of communication.

Just like that, it serves the purpose of swaying Indian consumers' purchase decisions towards products like apparel, books and services like financial services, travel, etc., used by those residing in India who use the internet, and the numbers can be easily compared with that of more developed nations (Gnanasambandam et al., 2012). Amongst the users of the internet, there are no more users who do not do any activity while surfing the internet on desktops and computers but only smartphone users who surf the internet 24×7 (IBEF, 2014). Teenagers spend an average of seven and a half hours per week online and consider it a very useful educational resource (Jung et al., 2005).

Teens in India spend more time online and their online time is spent more than 26% for their entertainment and about 2% for education (Natu, 2005). Relaxation, career opportunities, as well as self-development of the Indians, are brought into the knowledge of Indian students through the internet. But they surf the internet because it's easy to surf and offers extensive exposure (Roy, 2009). The research shows that India's youth continue to spend 23% online time on email and 25% through social media (*The Hindu*, August 24, 2013). Especially teenagers, more men surf online games than other social activities. For instance, similar to the girls, these users start shying away from the outside world and tend to avoid socializing more than the girls tend to (Natu, 2005). According to Liang et al. (2001), teenagers in Taiwan surf the internet features for games, entertainment, search for information, chat, half of them think that the internet can improve interpersonal relationships and school performance. In addition, previous research also found a number of significant differences in net usage among users in different groups such as age bands and males and females (Hong et al., 2003; Rees & Noyes, 2007; Teo & Lim, 2000).

Parent–Child Conflict and Internet Exposure

An increase in internet user base and usage in population especially amongst young ones has raised apprehension about the influence of use on society. The identification of some desirable consequences of internet exposure. An example is the internet which makes it possible to learn by itself (Eastman & Iyer, 2004); helps users to download various electronic resources Sam (2005); entertains and notifies internet users (Valkenburg & Soeters, 2001) and allows users to find new friends and chat with old friends (Leino, 2006). Additionally, parent–child conflict is associated with the exposure of young surfers to the internet because internet exposure increases requests by children to purchase merchandise, they "find" on web pages (Cox, 1999). Parent–child conflict arises due to a lack of approval by parents for a child's purchase requests. Second, Mesch (2006) found that children spend more time surfing the internet and face more family conflicts. If they use the internet for learning, searching for information, school-related purposes less family conflict will be faced. Internet indulgence of adolescents involves no family conflicts.

The aforesaid points towards the discussion of increasing exposure not only to the internet of young users but also to TV which is an already established media. Therefore, it is important to carry out (a) a comparative study of how young adults

use both media (TV and internet) and (b) a study of the influence of TV/internet exposure on parent–child conflict. The study has selected this age category 15–24 years because it is supposed that young adults are always believed to be associated with technology and the World Wide Web (www). Furthermore, TV is a penetrated media and should not be underwritten in an era of digitalization.

Research Methodology

Three cities, that is, Amritsar, Jalandhar, and Ludhiana were chosen for data collection. These cities represent the traditional division of Punjab, that is, Majha, Doaba, and Malwa, respectively.

To reach the respondents, 15–24 years of respondents were contacted through schools and colleges. Data was acquired from schools and colleges in every city using judgment sampling and admitting students from different socio-economic and cultural backgrounds. While distributing a total of 800 questionnaires to respondents, 714 questionnaires were returned representing 89.25% usable responses. The sample consists of 51.40% representing 15–19 years (51.3% are boys), and 59.8% respondents with household income less than INR 50,000 approx. (less than $820) per month. Almost all (61.6% nearly 62) of them say their mothers are their main caregivers. Further, whereas the total of graduate respondents' fathers was 44.4%, 48.7% were graduate mothers.

Measures

TV Viewing. TV watching of respondents has been measured by asking a series of questions from them. They were requested to state the number of hours per day they view TV (<1 hour, 1–2 hours, 2–3 hours, >3 hours), the period of viewing TV (morning, afternoon, evening, and night), overall causes for viewing TV programs (to escape pressures of daily life and to seek companionship) and types of programs (entertainment programs, informative programs and educational programs) they watch. The responses of general reasons for viewing TV programs and types of programs have been measured on a three-point scale ranging from "mostly" = 3 to "rarely" = 1.

Internet Surfing. The respondents were asked to share the number of hours surfing the internet per day (<1 hour, 1–2 hours, 2–3 hours, >3 hours, according to need), places (internet café, friend's home and bedroom) at which they use the internet and online activities they engage in frequently (search information online, web interesting topics and leisure activities online). The responses to online activities in which respondents engage have been measured on a three-point scale ranging from "mostly" = 3 to "rarely" = 1.

Parent–Child Conflict

The parent–child conflict with respect to six products and services—food items, apparel, toiletries, watches (minor involvement) as well as family holiday/tour

packages and student coaching centers (major involvement) (Kim & Lee, 1997) has been measured. The responses have been addressed on a point scale from "often" = 4 to "never" = 1.

Data Analysis and Findings

It is divided into three parts. The first part "Media usage habits of Indian young media users" exhibits the descriptive statistics of media variables. The second part reports the results of the χ^2 test of TV exposure/internet exposure on the basis of age and gender is referred to as "Profiling of respondents across age and gender" and the third part "Impact of TV exposure/internet exposure on parent-child conflict" reveals the hierarchical regression analyses results.

Media Usage Habits of Indian Young Media Users

Table 1 revealed that the majority of young viewers (45.9%) view TV for one to two hours daily followed by 21% of young viewers who view TV for two to three hours daily. Only 15.5% of respondents express to view TV for more than three hours daily. Second, they were asked to reveal the time of viewed TV and results in this regard represents that 59.8% of respondents view TV at night. Moreover, 33% of young viewers report watching TV in the evening. Thirdly they were asked to reveal the type of TV programs preferred to be watched by them. They revealed that they mostly view entertainment programs like serials and comedy shows as their mean value is close to 3. They also report to watch informative programs (mean value = 2.27) and educational programs (mean value = 1.95) sometimes. The young viewers also believe that they "sometimes" view TV programs as to seek companionship and to escape from the pressures of daily life (mean values are close to 2).

   The frequencies in Table 2 depict that 36.7% of internet users reported surfing the internet as per need. This was followed by the 24.4% of internet users who started to surf the internet for one to two hours per day. Only 12% of internet users stated to surf the internet for two to three hours or more than three hours daily. respectively. They were asked to specify the place where they surf the internet frequently. The results in this context reveal that nearly 82% of internet users started to surf the internet at home mainly in the bedroom. This is followed by the use of the internet in the companion's home (25.5%), and in internet café (18.2%). Further, the respondents depicted that they sometimes engage in online activities such as searching for information for knowledge and doing schoolwork (mean value = 2.40), leisure (listening to music and TV programs [mean value = 2.35]), and internet usage for interesting topics (S2, mean value = 2.33).

Profiling of Respondents Across Age and Gender

Thereafter, profiling of the TV viewers and internet surfers has been done across respondents' ages and genders. For this purpose, χ^2 indices have been employed

Table 1. Frequencies of TV Variables.

Number of Hours	Frequency of Viewing Television Daily	
	Frequency	Percentage
<1 hour	128	17.8
1–2 hours	327	45.8
2–3 hours	148	20.9
>3 hours	111	15.5
Total	714	100
Day time	Time of Viewing TV	
	Frequency	Percentage
Morning	9	1.3
Afternoon	45	6.3
Evening	233	32.6
Night	427	59.8
Total	714	100
Statements	Types of TV Programs	
	Mean	SD
Entertainment programs	2.68	0.51
Informative programs	2.28	0.57
Educational programs	1.95	0.65
	Reasons for Viewing Television Programs	
I watch television programs to escape from the burdens of life	1.93	0.73
If there is no one at home, I watch television programs to pursue companionship	2.00	0.71

Note: [a]1%, [b]5%, [c]10%.

and the results are depicted in Table 3. It has been shown that statistically significant differences exist in TV viewers across age and gender in their TV viewing patterns. The majority of male respondents in the age category of 15–19 years watch TV up to two hours daily in contrast to the female respondents belonging to the age category 20–24 years who watch TV more than two hours daily. Male viewers (33.9%) watch TV in the night in contrast to female viewers (18.0%) who watch TV in the evening. With regard to entertainment programs, female viewers (37.0%) mostly watch these programs in comparison to male viewers (19.9%) who watch these programs sometimes. In the case of informative programs, younger (15–19 years) female viewers watch these programs mostly, while older (20–24 years) male viewers watch these programs sometimes. Educational programs are mostly viewed by male viewers as compared to female viewers. Most of the older viewers (21–24 years) (25.4%) watch TV in order to escape the pressures of daily life in contrast to younger viewers (15–19 years) who rarely watch

Table 2. Frequencies of Internet Exposure.

Number of Hours	Frequency of Surfing Internet Daily	
	Frequency	Percentage
<1 hour	102	14.4
1–2 hours	174	24.5
2–3 hours	86	12.1
> 3 hours	90	12.5
As per need	262	36.7
Total	714	100
Internet surfing places	Internet surfing places	
	Frequency	Percentage
Internet café	130	18.2
Companion's home	183	25.6
Room particularly bedroom	584	81.8
*Percentages > 100 due to manifold responses		
Online Activities	Mean values	SD
Search material for education and doing schoolwork	2.40	0.58
Internet surfing for recent topics	2.33	0.62
Leisure (listen to audio, video, blogs, television program)	2.35	0.64

Note: [a]1%, [b]5%, [c]10%.

TV for this reason. In addition to this, more female viewers (25.1%) watch TV to seek companionship than male viewers (17.9%).

Significant differences are seen among youth with respect to their internet surfing patterns across age and gender. Most of the respondents surf the internet whenever they are in need of it irrespective of their age and gender. But, differences have been explicated in a number of hours they surf the internet daily. Most younger female respondents (15–19 years) use the internet for up to two hours every day and older male users (20–24 years) use the web for more than two hours daily. Older internet users (11.1%) surf the internet at internet café as compared to younger internet users (44.3%). Older male internet users surf the internet at a friend's home in contrast to younger female internet users. Most of the older male internet users use the internet in the bedroom, while younger female internet users surf in a common room. With regard to searching for information online, female users (26.3%) surf the internet mostly to search for information as compared to male users (30.1%) who surf the internet only sometimes for such purposes. Younger internet users (25.5%) surf the internet mostly for leisure activities while older internet users (24.6%) surf the internet for this purpose only sometimes. Older internet users (22.7%) surf the internet mostly to search for topics in contrast to younger internet users (27.6%) who surf the internet sometimes for this purpose.

Table 3. Profiling of Media Users Across Age and Gender.

TV Viewers

Variables of TV	Age (%age) 15–19	Age (%age) 20–24	χ^2	Gender (%age) Male	Gender (%age) Female	χ^2
TV viewing (per day)			13.512[a]			6.352[c]
<1 hour	8.0	9.9		9.1	8.8	
1–2 hours	26.8	19.0		26.5	19.3	
2–3 hours	10.2	10.5		9.5	11.2	
>3 hours	6.4	9.1		8.0	7.6	
Time of watching TV			4.094			14.615[a]
Morning	1.2	1.5		1.1	1.8	
Afternoon	4.1	2.0		3.6	2.2	
Evening	17.2	15.2		14.4	18.0	
Night	29.6	30.0		33.9	25.1	
Entertainment programs			4.328			35.521[a]
Mostly	34.3	34.3		31.5	37.0	
Sometimes	16.0	13.0		19.9	8.9	
Rarely	1.1	1.3		1.7	1.2	
Informative programs			6.073[b]			29.448[a]
Mostly	15.4	18.2		22.3	11.3	
Sometimes	31.9	28.0		26.9	33.1	
Rarely	4.1	2.4		3.9	2.5	
Educational programs			0.790			14.877[a]
Mostly	9.0	9.4		12.5	5.9	
Sometimes	30.5	27.3		28.2	29.7	
Rarely	11.9	11.9		12.5	11.3	

Internet Users

Variables of Internet	Age (%age) 15–19	Age (%age) 20–24	χ^2	Gender (%age) Male	Gender (%age) Female	χ^2
Internet use (per day)			8.538[c]			16.760[a]
<1 hour	9.0	5.3		6.4	7.8	
1–2 hours	12.9	11.5		12.6	11.8	
2–3 hours	5.3	6.7		8.1	3.9	
>3 hours	5.7	6.9		8.1	4.5	
According to need	18.5	18.2		17.8	18.9	
Internet use at Internet café			9.423[a]			1.847
Yes	7.1	11.1		10.6	7.6	
No	44.3	37.5		42.4	39.4	
Internet use at a friend's home			10.157[a]			6.133[a]
Yes	10.5	15.0		15.5	9.9	
No	40.9	33.6		37.5	37.0	
Internet use in the bedroom			8.177[a]			3.410[c]
Yes	40.1	41.9		44.8	37.1	
No	11.3	6.7		8.3	9.8	
Search information online			4.463			37.998[a]
Mostly	21.3	23.9		18.9	26.3	
Sometimes	27.5	22.5		30.1	19.4	
Rarely	2.7	2.1		4.4	1.2	

(Table 3 continued)

	TV Viewers						Internet Users					
	Age (%age)			Gender (%age)				Age (%age)			Gender (%age)	
Variables of TV	15–19	20–24	χ^2	Male	Female	χ^2	Variables of Internet	15–19	20–24	χ^2	Male	Female	χ^2
TV as to escape pressures			11.124[a]			0.435	Leisure activities online			8.499[a]			0.458
Mostly	13.6	9.8		11.9	11.5		Mostly	25.5	18.9		24.1	20.3	
Sometimes	20.4	25.4		24.5	21.3		Sometimes	22.0	24.6		24.5	22.1	
Rarely	17.4	13.4		16.7	14.1		Rarely	3.9	5.0		4.5	4.5	
TV as to seek companionship			1.361			29.349[a]	Web surfing topics			8.372[a]			2.253
Mostly	12.0	13.2		11.1	14.1		Mostly	18.8	22.7		23.1	18.3	
Sometimes	25.6	23.5		24.1	25.1		Sometimes	27.6	22.7		26.2	24.1	
Rarely	13.7	11.9		17.9	7.7		Rarely	5.0	3.2		3.8	4.5	

Note: [a] 1%, [b] 5%, [c] 10%.

Table 4. Factor Analysis of Parent–Child Conflict Across Product Categories.

Products/Services	Mean Values	SD	Factor Loadings	Communalities
Watches	2.34	1.04	0.744	0.553
Food items	2.42	0.95	0.729	0.532
Apparels	1.76	0.87	0.704	0.496
Toiletries	2.14	0.96	0.700	0.490
Students' coaching centers	2.34	1.00	0.674	0.454
Family holidaying/ tour packages	2.02	1.06	0.646	0.418
		Eigenvalue	2.943	Σ2.943

KMO (Kaiser–Meyer–Olkin) = 0.827, Bartlett's Test of Sphericity = Approx. χ^2 = 1061.025, df = 15, Sig. = 0.000.

Table 5. Hierarchical Regression Analyses for Variables Predicting Parent–Child Conflict.

	Model 1 TV Exposure and Parent–Child Conflict β	Model 2 Internet Exposure and Parent–Child Conflict β
Step 1		
Control variables		
Age	0.029 (0.005)	0.029 (0.029)
Gender	−0.164* (−0.197*)	−0.164* (−0.164*)
R^2	0.027	0.027
Step 2		
TV exposure/internet exposure	0.210*	−0.009
R^2 change	0.042*	0.000*
Total R^2	0.069	0.027

Notes: 1. Multiple regression weights standardized on cell values without brackets represent the relationship of the predictor and dependent value holding all variables on the regression equation constant.

2. The relation appeared in the first step of analysis is captured by the cell values in brackets. Significant at 1% level of significance, *p value.

Impact of TV Exposure and Internet Exposure on Parent–Child Conflict

EFA has been employed to check the dimensionality of conflict across six product categories (as shown in Table 4). Cronbach's Alpha of total conflict scores is found to be 0.790 which is fairly acceptable (Hair et al., 2010). PCA yielded one factor that explained 49.05% of the total variance. This suggests that parent–child conflict with respect to these six product categories is uni-dimensional.

A hierarchical regression analysis was employed twice to check the TV and internet exposure impact on parent–child conflict, and results in this regard are shown in Table 5. Age and gender of young media users may have an effect on parent–child conflict (Atkin, 1975; Buijzen & Valkenburg, 2003; Isler et al., 1987). We first control these variables to gauge the residual effects of TV exposure and internet exposure on parent–child conflict. For parent–child conflict age and gender accounted for 2.7% of the variance in Model 1, $F(2, 711) = 9.857$, $p < .01$. The latter step shows a significant increase in variance explained with regard to parent–child for respondents compared to parents that can be attributed to TV exposure, adding 4.2% of variance explained ($F(3, 711) = 17.622, p < .01$). This means TV exposure contributes to a great deal of parent–child conflict.

In contrast, in Model 2, age and gender accounted for 2.7% of the variance in parent–child conflict $F(2, 711) = 9.857$, $p < .01$. Second step reveals that there is no significant increase in variance explained for parent–child conflict between them and their parents. Thus, internet indulgence does not result in substantial parent–child conflict.

Conclusion and Practical Implications

The present study showed that the majority of respondents watch TV for up to two hours daily (Soni & Singh, 2012) especially younger male viewers who view TV at night. On the other hand, older female viewers watch TV for more than two hours daily. It could be due to the point that older female viewers have less exposure to media-related leisure activities as they prefer to watch TV more in relation to their younger male counterparts. Moreover, as per the results of the present study, female viewers watch TV mainly to seek companionship (Verma & Larson, 2002) than their male counterparts. Female viewers watch entertainment programs (Livingstone & Lunt, 2002) more frequently in relation to male viewers who watch educational programs (Anderson et al., 2001) more frequently. But as far as informative programs are concerned, younger female viewers watch these programs more frequently as compared to their older male counterparts. It has been found by Thompson and Austin (2003) that information-oriented programs positively influence the achievement of school students.

Conversely, respondents surf the internet whenever they are in need of it. But as far as surfing on a daily basis is concerned, younger female respondents surf the internet up to two hours per day in comparison to older male respondents who surf the internet more than two hours daily. Older internet users surf the internet at internet café while, older male internet users surf the internet at friends' homes and in their bedrooms (Kaiser Family Foundation, 2004) in contrast to younger female internet users. With regards to online activities in which internet users indulge, female users surf the internet mostly to search for information online for learning (Hong et al., 2003) while, younger internet users surf the internet mostly for leisure activities online (Peng et al., 2006). Contrary to this, Teo and Lim (2000) found that male users surf the internet more frequently for downloading and obtaining information than their female counterparts.

Thereafter, the results of hierarchical regression analyses revealed that TV exposure (Model 1) is accountable for significant parent–child conflict (Goldberg & Gorn, 1978) after controlling the influence of age and gender. The present study argued that as all products depicted in media cannot be purchased or because marketing stimuli create differential product preferences in parent and child, it sometimes leads to a situation of parent–child conflict. But, on the other side, internet exposure (Model 2) does not lead to conflict between parent- and child significantly after controlling the influence of age and gender. Contrary to this finding, Mesch (2006) stated that adolescents face family conflict more frequently when they surf the internet for extended time. From the study, we can conclude that TV is seen to be a penetrated media, hence its influence on parent–child conflict appears as expected from the research documented in previous studies. But, on the other hand, the internet is emerging very fast as a medium, thus its influence on parent–child conflict may go either way.

Limitations and Scope for Further Research

Punjab is not a metro city of India, hence the findings might not be the same for the bigger cities. Additionally, the concerned issue is researched in Western societies. This study does not think of cultural changes that may impact this problem. Future research can also be done by drawing a diverse sample and carrying out an analysis in which other emerging media like mobile, tablets etc., are incorporating suppliers or clients into the mainstream market.

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