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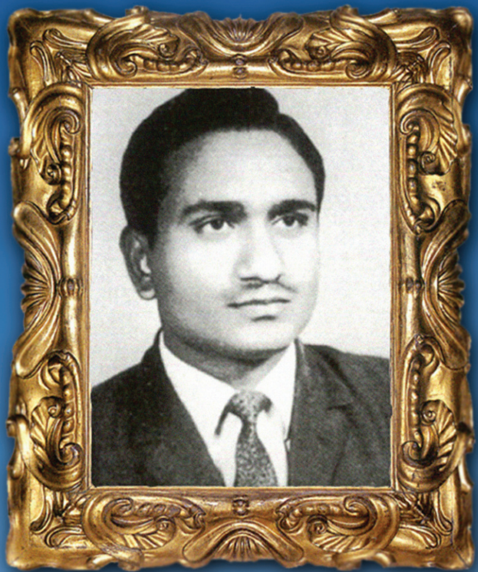
A TRUE VISIONARY

"You see things and you say **Why**? *But I dream of things that never were and say* **Why** *not?"*

- George Bernard Shaw



Shri Jagannath Gupta
(1950 - 1980)

Also a true visionary...who dared to dream!
He lives no more but his dreams live on....and on!

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And more dreams to come!

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Editor's Desk

Embracing the Entrepreneurial Outlook: Pioneering Change and Unlocking Potential

In today's dynamic and rapidly evolving world, the entrepreneurial outlook has emerged as a powerful force that drives innovation, disrupts traditional industries and fosters economic growth. It represents a mindset that encourages individuals to identify opportunities, take calculated risks and transform their ideas into reality. The entrepreneurial spirit transcends boundaries, propelling societies forward and empowering individuals to shape their destinies. In this editorial, we delve into the significance of embracing an entrepreneurial outlook and its transformative impact on individuals, communities, and the global landscape. At the heart of the entrepreneurial outlook lies the innate desire to innovate and push boundaries. Entrepreneurs are driven by the passion to challenge the status quo, identify problems and craft solutions that improve people's lives. They possess a unique ability to envision a future that is yet to be realized and relentlessly work towards bringing it to fruition. By fostering an entrepreneurial mindset, we unlock the potential for groundbreaking inventions, disruptive technologies, and novel approaches to longstanding issues. Through innovation, entrepreneurs have the power to revolutionize industries, create jobs and drive economic growth.

Embracing Failure as a Stepping Stone:
An entrepreneurial outlook is not without its challenges. The path to success is often paved with failures, setbacks and obstacles. However, what sets entrepreneurs apart is their ability to embrace failure as a learning experience and a stepping stone toward growth. They understand that failure is not the end but a necessary part of the journey. This resilience and determination allow entrepreneurs to persevere in the face of adversity, adapt their strategies and ultimately achieve success. By embracing failure, they develop invaluable skills such as problem-solving, resilience, and the ability to pivot, which further contribute to their long-term success. Beyond financial gains, entrepreneurs possess a unique capacity to drive social change and make a positive impact on society. With an entrepreneurial outlook, individuals are empowered to address pressing social issues, such as poverty, inequality and environmental sustainability. By combining business acumen with a social conscience, entrepreneurs develop innovative solutions that create social value while ensuring profitability. This symbiotic relationship between entrepreneurship and social impact is vital for fostering a more equitable and sustainable world.

Hence, the entrepreneurial outlook represents a beacon of hope in a rapidly changing world. By embracing this mindset, individuals and communities can unlock their true potential, drive innovation, create opportunities and address pressing societal challenges. It is through the entrepreneurial spirit that we cultivate a culture of resilience, adaptability and creativity. As we move forward, let us celebrate and nurture the entrepreneurial outlook, for it is a catalyst for transformative change and a key driver of progress in our interconnected global society.

(**Madhu Vij)**

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CORPORATE GOVERNANCE AND DISCLOSURE: A BIBLIOMETRIC ANALYSIS AND FUTURE RESEARCH AGENDA

Shikha Gupta* RajniTuteja**

Purpose: *There are many factors that contribute to the extent and quality of disclosures by a company. Among them, the influence of corporate governance structures has received considerable attention in recent years. To synthesize prior research on corporate governance and disclosure, the present paper attempts a bibliometric analysis of the research domain.*
Design/methodology/approach: *Bibliometric softwares VOS viewer and Biblioshiny were used along with a literature review of key studies for the analysis of data extracted from the Scopus database and filtered by application of inclusion-exclusion criteria*.
Findings: *Most productive and influential articles, authors, journals, and affiliations were recognized. USA was found to be the most productive and influential country followed by UK and Australia. Thematic mapping and trend analysis revealed past and present research subdomains which were used for the prediction of future research agenda.*
Originality/value: *The present study is one of the few bibliometric studies in the domain of corporate governance and reporting and offers strong implications for researchers, corporates, regulators, and investors to take up measures for the improvement of governance attributes.*
Keywords*: Corporate Governance, Disclosure, Bibliometric Analysis, VoS viewer, Biblioshiny, Scopus.*
JEL Classification: *M41*

The quest for sustainable development has led to a rise in the adoption of sustainable practices by corporates globally. There is an increasing recognition that since corporates are also a part of a larger ecosystem they are morally and legally bound to perform and communicate about their sustainable practices. In this sense, reporting and disclosure play an important role in disseminating information to the public about the impact which their operations have on the economic, social, and physical environment.

Extant literature suggests that there are many factors that contribute to the extent and quality of disclosures by a company. They range from general factors (for instance country-specific social, political, regulatory, and cultural) to specific corporate characteristics (for instance size, sector grouping, and profitability). Apart from these, there is a growing body of research that posits there are other complex factors that are internal and contextual to an organization that has a huge bearing on its disclosure practices (Gray *et al*., 2001).The influence of corporate governance structures on disclosure and reporting has received considerable attention (Adams, 2002).Corporate governance includes a system of rules, codes, and processes by which a company is directed to achieve its objectives. It encompasses an organization's relationship with its stakeholders and seeks to promote fairness, transparency, and accountability (Young *et al*., 2008). In this sense, it is an important determinant of a corporate's sustainability disclosure (Gibson and O'Donovan, 2007).A robust corporate governance mechanism significantly improves transparency and results in better reporting practices (Said *et al*., 2009; Shamil*et al*., 2014).However, the research on the consequences of individual corporate governance attributes (such as board size, board independence, board diversity, duality, ownership, subcommittees, etc.) on disclosure is fragmented and has yielded varied results.

To synthesize prior research on corporate governance and disclosure, the present paper attempts a bibliometric analysis of the research domain. It seeks to provide a coherent summary of the present trends in research and provide directions for future research.Specifically, the paper attempts to address the following questions:

RQ1: What is the current publication trend in the field of corporate governance and disclosure?
RQ2: What is the social and intellectual structure of the field?
RQ3: What are the potential future research directions in the field?

I. Review of Literature

Corporate Governance and Disclosure

Previous studies have used various theories to explore the influence of corporate governance on disclosure practices. According to Brammer and Pavelin (2008),agency theory which propounds a principal-agent relationship between shareholders and managers results in a conflict of interest and information asymmetry.

*** Professor, Department of Commerce, Shaheed Bhagat Singh College, University of Delhi, Delhi.**
**** Assistant Professor, Department of Commerce, D.A.V. Centenary College, Faridabad.**

A robust corporate governance structure seeks to mitigate these agency costs and improve disclosure. Chen and Jaggi (2000) in their study of companies listed in Hong Kong, found a direct relationship between the proportion of independent directors and the level of corporate disclosure. These findings are consistent with the findings of Leung and Horwitz (2004), Cheng and Courtenay (2006), Cerbioni and Parbonetti (2007), and others who pointed out that the board composition encompassing board independence, diversity, and duality impact comprehensiveness and quality of disclosures.

Another widely recognized theory that underpins the importance of corporate governance in determining the extent of disclosures is the legitimacy theory. This theory avers that there is a "social contract" between a firm and society. A firm draws resources from society and therefore is required to meet social obligations and expectations to remain relevant (Reverte, 2009). Failure to fulfill social needs may put a question mark on its legitimacy and existence (Shamil et al., 2014). In this context, firms use sustainability reporting as a tool to communicate to various stakeholders in society that the firm is operating within the boundaries of acceptable norms and is conscious of environmental and societal issues (Arena et. al, 2018). In this regard, legitimacy theory widens the scope of the principal-agent relationship by including stakeholders (such as employees, customers, environmentalists, etc) rather than just shareholders in the 'principal' group. It also resulted in more comprehensive disclosures to satisfy the diverse information needs of stakeholders (Orazalin and Mahmood, 2019).Since these corporate disclosures play an important role in strengthening the corporate-stakeholder relationship by reducing information asymmetry, the role of corporate governance on disclosures is an area of academic interest.

Bibliometric analysis

Pritchard attempted bibliometric analysis in 1969 and defined it as an "application of statistical and mathematical methods set out to describe the process of written communication and the nature and development of scientific disciplines by using recounting techniques and analysis of such communication". It entails the use of statistical tools to analyze bibliographic data (Baker et al., 2021).Bibliometric studies analyze and categorize bibliographic content by creating representative summaries of the literature that has already been published. This method has been used to analyze journals and subjects in previous studies. On the basis of their similar sources and referencing patterns, Kessler (1963) demonstrated that scientific works exhibit intellectual convergence. Small (1973), on the other hand, propounded that frequent citation of two or more references in a third text demonstrates conceptual or intellectual connections between the citing and cited documents. Researchers are becoming increasingly interested in bibliometric analysisfor a number of reasons, including spotting emerging trends in article and journal performance, patterns of collaboration, as well as examining the intellectual structure of a particular area in the existing body of literature (Donthu et al., 2021; Verma & Gustafsson, 2020). This can be accomplished with bibliometric softwares like VOS viewer, biblioshiny, citespace, etc. which allows researchers to cluster, map, and visualize the correlations in a huge corpus in a systematic manner (Byington et al., 2019). Visual information is very useful for knowledge absorption and retention for future applications (Brady et al., 2008).

The present study contributes to the extant literature in several ways. Firstly, it was found that although a lot of research has been conducted in the field of corporate governance, there are very few bibliometric studies that examine the research on the linkage between corporate governance and disclosure. Secondly, it not only identifies the historical milestones such as the most impactful authors, journals, publications, and countries but also provides insightful directions for future research which will enrich the present body of knowledge. Finally, the study offers strong implications for the companies, regulators, and investors regarding the role of various corporate governance attributes in influencing the extent and quality of disclosures.

II. Research Design and Methods

Step-1: Identification and selection of database

Bibliographic data used in this study was retrieved from the Scopus database. Scopus is the largest multi-disciplinary peer-reviewed literature in social science research and covers a wide range of papers in the field of business and management.

Step- 2: Identification of Search Terms

Keywords or search terms are the basic requirement for conducting a bibliometric analysis. They depict the author's view of the most important terms in their article. Keywords "Corporate governance" AND "Disclosure" were included in the Abstract, title, and keywords of the search field of Scopus on August 13, 2022, yielding 2623 documents published between 1991 and 2022.

Step-3: Data Filtering

Dataset obtained was refined by applying inclusion-exclusion criteria. For this, document selection was limited to those only "Articles" published in "Journal" in the subject area of "Business, Management, and Accounting" and "Economics, Econometrics, and Finance." Further, only those articles published in English were considered to have greater reader engagement. The exact string used to search in Scopus is as follows:

TITLE-ABS-KEY ((("corporate governance")) AND (("disclosure"))) AND (LIMIT-TO (SRCTYPE , "j"))

AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON")) AND (LIMIT-TO (LANGUAGE , "English")).

The above process produced 1851 documents in total. Post this, 89 documents not related to the research field were identified through content analysis and were excluded. In the end, 1762 documents were retained for bibliometric analysis.

Step-4:Selection of Bibliometric and ScientometricTools

The study used Bibliometrix package in R for bibliometric and visual analysis. Certain network mapping tasks were carried out using VoS viewer, an open-source software for constructing and visualizing bibliometric networks (Van Eck and Waltman, 2010).The search protocol is presented in Fig. 1

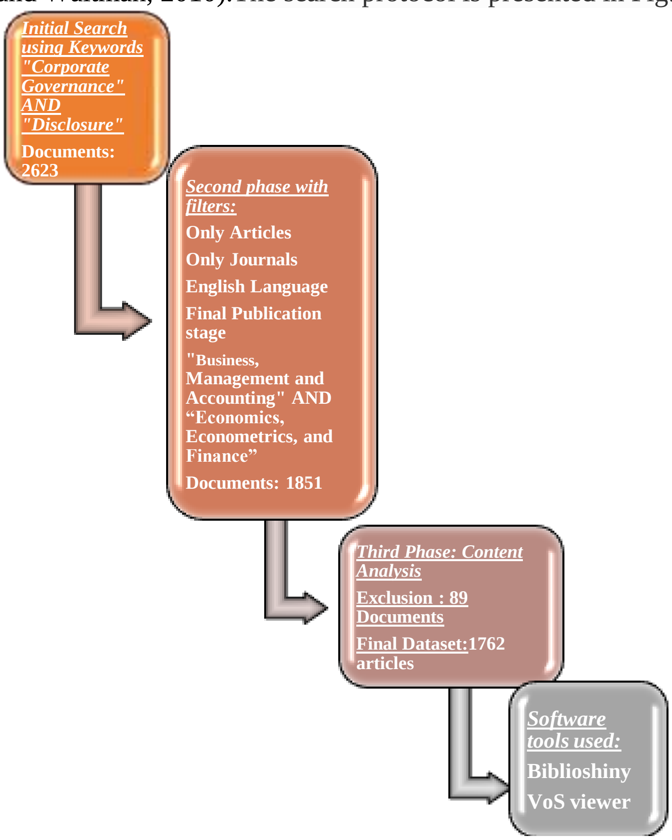

Fig. 1. Research Methodology

III. Results and Discussion

Descriptive Statistics

Table 1 provides general information of the research domain. 1762 research articles (documents) were published in 411 journals in approximately 32 years (from 1991 to 2022) receiving a total of 57970 citations. Furthermore, each article received 32.9 citations on average.

Table 1: General Information about the scholarly contribution

Description	Results
Period of analysis	1991:2022
Sources	411
Total Documents(a)	1762
Single-authored documents(b)	333
Multi-authored documents(a-b) (c)	1429
Average citations per doc	32.9
Author's Keywords (DE)	3130
Total number of Authors(d)	3430
Authors per document(d/a)	1.94
International co-authorships %	26.56
Documents per author	0.51
Authors per document	2

3430 authors are working in the area of Corporate Governance and Disclosure. Out of 1762 documents, only 333 are single-authored documents (18.9%) while 1429 (81.1%) documents are multi-authored which shows growing collaboration among authors.

Year-wise articles production

Figure 1 shows year-wise publication trends in the field of 'Corporate Governance and Disclosure'. Barring a few years in between, there is an increasing trend in articles published especially after 2001. The reason behind this rise in publications could be the infamous collapse of Enron in 2001, one of the largest American companies that drew international attention to corporate failures and the role of corporate governance in preventing such failures. The highest number of articles was published in the year 2020.

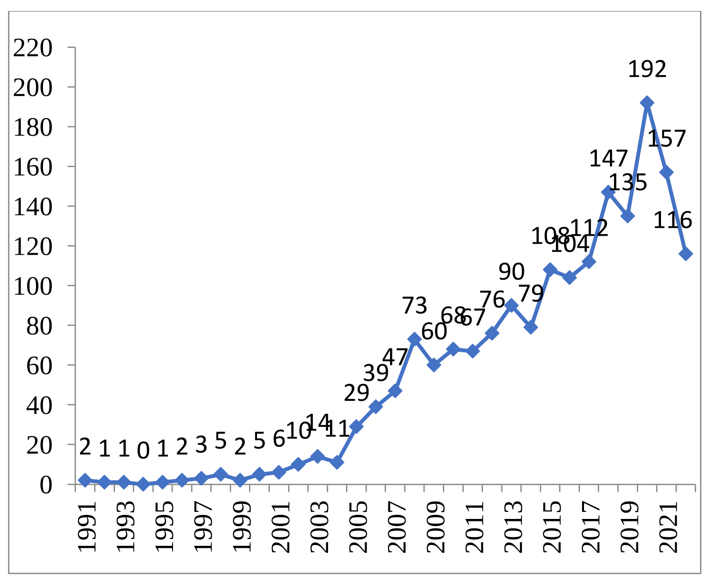

Figure 2:*Year-wise annual production of articles*

One could also observe the surge in publications in 2008, the year of the financial crisis caused by the historic failure of Lehman Brothers and the subprime mortgage problems. It rekindled researchers' interest in corporate governance.

Three-field plot

Figure 3 presents the three-field (e.g., keywords, countries, and their affiliation from left to right, respectively) analysis of the research domain. The most prominent affiliations in this literature are the USA, UK, Australia, Malaysia, and China.

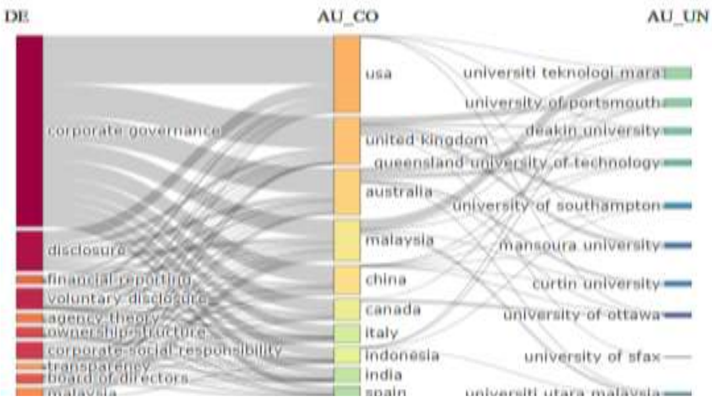

Figure 3: *Three-field pot*

The most dominating keywords are corporate governance, disclosure, voluntary disclosure, corporate social responsibility, and ownership structure. Although USA is the dominant country in publishing articles, Universiti Teknologi Mara of Malaysia was found to be the most contributing affiliation. Furthermore, English universities such as the University of Portsmouth, Queensland University of Technology, and Australian universities like Deakin University are contributing significantly to the field.

Most prolific authors

Table 2 enlists the most prolific authors in terms of article production as well as impact. Author's production is measured by the number of articles published and impact on the basis of average citations per document. Hussainey K has the greatest number of publications (34) to his credit which have garnered a total of 1357 citations. Upon examining Scopus data, it is seen that his first paper "Corporate environmental disclosure, corporate governance, and earnings management" (Hussainey K., 2010) was published in the Management Auditing Journal in 2010. In just 12 years, his scholarly contribution to the research field has been commendable.

Table 2: Most prolific authors

S.No	Authors	Articles	Total citations	Average citations per document	Publication year start
1	HUSSAINEY K	34	1357	39.9	2010
2	NTIM CG	15	807	53.8	2012
3	CORMIER D	11	399	36.2	2007
4	MAGNAN M	10	418	41.8	2007
5	TOWER G	10	238	23.8	2007
6	WANG Y	10	143	14.3	2008
7	TAYLOR G	9	197	21.8	2008
8	LI Y	8	397	49.6	2006
9	AGYEI-MENSAH BK	7	105	15	2016
10	LUO Y	7	128	18.2	2005

In terms of impact, Ntim CG is the most impactful author with 53.8 average citations per document followed by Li J with an average citation of 49.6.

Leading countries

In this section, we analyzed the most productive and prominent countries in the field of Corporate Governance and Disclosure. Table 3 shows the most productive (based on the number of documents produced) as well as most influential (based on total citations received) countries. USA tops the list on both parameters i.e., productivity and impact with 318 articles and a mean citation of 84.07, followed by the UK, Canada and Australia. They all belong to the developed nations group. However, in terms of productivity, the contribution of developing countries like Malaysia and China is also impressive.

Table 3: Leading Countries publishing in the field of Corporate Governance and Disclosure

Country	No. of articles	TC	Average Citations per article
USA	318	15384	84.07

UNITED KINGDOM	254	7145	44.94
AUSTRALIA	192	4961	43.14
MALAYSIA	137	1533	18.70
CHINA	100	1517	17.24
CANADA	86	1936	44.00
INDIA	74	382	9.10
SPAIN	59	1630	42.89
EGYPT	47	611	40.73
NEW ZEALAND	45	648	29.45

Most cited articles and their key findings

Table 4 provides a brief about the top 5 most cited articles.

Table 4:Most cited articles and their key findings

S.No	Article title	Author(s)	Year	Citations	Findings
1.	Corporate Governance and Voluntary Disclosure	Eng, L.L., Mak, Y.T.	2003	996	The findings show that while blockholder ownership is unrelated to disclosure, low managerialand large government ownership are. Also, corporate disclosure is decreased with more outside directors. Larger companies and businesses with less debt disclosed more information.
2.	Culture, Corporate Governance and Disclosure in Malaysian Corporations	Haniffa, R.M., Cooke, T.E.	2002	936	The findings show a strong association between the extent of voluntary disclosures and corporate governance variables, especially the non-executive directors, and the dominance of family members on board.
3.	The Impact of Culture and Governance on Corporate Social Reporting	Haniffa, R.M., Cooke, T.E.	2005	920	A substantial correlation was found between corporate social disclosure and boards with a majority of executive directors and foreign share ownership. With the exception of gearing, four of the control variables-size, profitability, multiple listing, and industry type were found to be substantially correlated with corporate social disclosures.
4.	A Cross-firm Analysis of the Impact of Corporate Governance on the East Asian Financial Crisis	Mitton, T.	2002	769	The study analyzed 398 firms from selected countries and found that corporate governance variables influenced financial performance results during the East Asian financial crisis of 1997-98.
5.	To Steal or not to Steal: Firm attributes, Legal Environment, and Valuation	Durnev, A., Kim, E.H.	2005	760	The study found that three firm characteristics, viz. investment opportunities, external financing, and ownership structure—are related to the quality of corporate governance and disclosure practices. Firms with better governance and transparency scores are valued more highly on stock exchanges.

Most Relevant Journals

Table 5 gives information about the 10 most relevant journals on the basis of number of articles and their impact. It was found that 1762 articles were published in 411 journals. Among them, 'Corporate Ownership and Control' has published the most articles (87) followed by 'Corporate Governance' (Bingley) (57). On the other hand, 'Corporate Governance: An International Review' has the highest h value

(28) followed by 'Management Auditing Journal'(22). The h-index measures the number of articles published in a journal that have received at least a hundred citations. On the other hand, if we consider Cite Score, a metric used by Elsevier, 'Business Strategy and Environment' emerges as the most impactful journal having a score of 11.9.

Table 5: Most relevant journals

S.No.	Sources	Articles	h-index	Cite Score
1	Corporate Ownership and Control	87	10	0.2
2	Corporate Governance (Bingley)	57	17	5.8
3	Corporate Governance: An International Review	56	28	4.7
4	International Journal of Disclosure and Governance	41	14	1.9
5	Managerial Auditing Journal	39	22	3.5
6	Journal of Business Ethics	31	20	10.8
7	Journal of Financial Reporting and Accounting	23	8	2.5
8	Journal of Applied Accounting Research	22	14	3.2
9	Business Strategy and the Environment	21	13	11.9
10	Corporate Social Responsibility and Environmental Management	21	15	11.5

Tree Map of most frequently occurred keywords

Keywords are the essence of any research work. Readers can use them to locate the manuscripts pertinent to their research area which leads to increased article viewing and ultimately more citations. Besides, they also signify the developing trends in a particular research domain.

Figure 4: *Tree Map of 20 most frequently used keywords*

Figure 4 showcases the 20 most frequently occurring author keywords in our corpus. "Corporate governance" and "disclosure" top the list with 1084 and 258 mentions. They are followed by corporate social responsibility, ownership concentration, and board of directors. The word tree map discloses terms like voluntary disclosure, audit committee, and information asymmetry as some of the important research facets of the research domain.

Co-authorship of countries

Co-authorship analysis is a measure of scientific collaboration among countries, institutions, or authors. Figure 5 exhibits the co-authorship analysis of countries where countries are represented by nodes. Bigger node size represents more publications from that country. The countries in the same colour cluster represent a closely connected group and the thickness of the connecting line signifies larger cooperation among countries. A substantial collaboration among the selected countries was observed, in the present research domain. Network map revealed different clusters with unique colours, such as UK-Egypt, Australia-Malaysia, and USA-China. Although collaboration linkages were found to be stronger within the clusters, it was noted that researchers from diverse clusters also collaborate to publish research literature in this area. One can observe the strong connection between USA and UK.

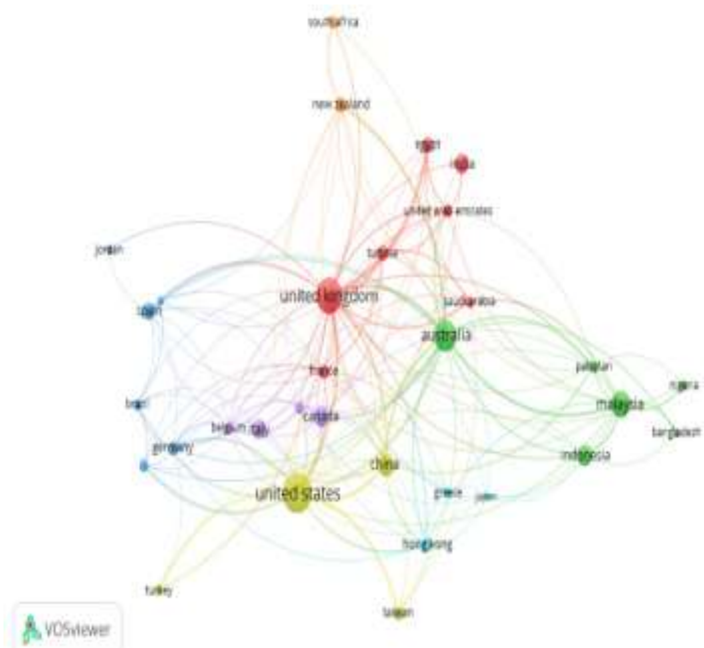

Figure 5: *Co-authorship network of countries*

Thematic Map

Thematic mapping displays multiple research streams in "Corporate Governance" AND "Disclosure". The horizontal axis of the map in Figure 6 represents centrality, while the vertical axis represents density. The importance of a chosen theme is measured by centrality, while the growth of any theme is measured by density. To create the map, authors' keywords in the articles published during 1991-2022 are used. In the "biblioshiny" software, the clustering of the items was set to a frequency of 8, and the representative label for each subject was set to 2. The map is divided into four quadrants:

Quadrant 1 (Upper right – Motor Themes): Themes that appear in this quadrant are termed motor themes. They are high on centrality and density meaning whereby they are essential and well-researched themes. Two clusters emerge here. One includes keywords such as board size, board independence, and board composition which are all'attributes of corporate governance'. Other cluster includesfinancial performance and gender diversity as keywords.Substantial research relating tothe impact of corporate governance on the financial performance of a firm has been done. Similarly,a considerable amount of extant literatureassesses the impact of gender diversity on disclosure. Because of the extensive literature available, they are apt for conducting Systematic Literature Reviews and Bibliometic studies.

Quadrant 2(Lower right –Basic Themes): Themes lying in this quadrant are high on centrality and low on density meaning they are significant themes but are comparatively less developed. Therefore, there is a lot of scope for research here. Themes in this quadrant are corporate governance, disclosure, voluntary disclosure, and financial reporting. Although results show that Corporate Governance and Disclosure belong to two different clusters. However, from the literature review, the authors could deduce that the subjects addressed by these two kinds of publications are logically related and closely connected. Therefore, we have clustered them together and labeled them as "*Corporate Governance and Disclosure".* While the implications of corporate governance on financial disclosure have received a lot of attention, there is still much to discover about its impact on sustainability disclosure (Haniffa& Cooke, 2005). Furthermore, disclosure can be mandatory or voluntary. Results on voluntary disclosure are inconsistent and inconclusive. Leung (2004) reported a negative relationship between board independence and voluntary disclosure. While Cheng and Courtenay (2006) unearthed a positive relationship between the two. The mixed results could be attributed to differences in the legal environment of the companies and in the disclosure index used. Thus, these themes can continue to develop further to address existing research gaps and provide more comprehensive insights.

Quadrant 3(Lower left –Emerging or Declining Themes):These themes are low on centrality as well as density meaning whereby that they are weakly developed and may emerge further or decline. 'Environmental disclosure' and 'China' appears in this quadrant. Cluster representing environmental disclosure is an ever-emerging theme considering the environmental threats and risks that our planet is facing. China appears due to the number of significant studies that are taking place there.

Quadrant 4(Upper left – Niche Themes):Upper left-hand quadrant represents niche themes which are peripheral and isolated topics in the research field. Themes like India and accountability are found in this quadrant.

Figure 6:*Thematic map of Authors' keywords*

Table 6: Themes, clusters, and keywords used in Thematic Map

Themes	Cluster Label	Keywords in Clusters
Motor Theme	• Attributes of Corporate Governance • Financial performance	Board size, board independence, board composition, ownership concentration, financial performance, gender diversity
Basic Theme	• Corporate Governance and Disclosure	Corporate governance, voluntary disclosure, corporate social responsibility, disclosure, board of directors, audit committee
Emerging or declining Theme	• Environmental disclosure • China	Environmental disclosure, China
Niche Theme	• India • Accountability	India, accountability

Trend topics

This section explores trends and patterns in the research domain over time using authors' keywords. Trend analysis of keywords can be used as a tool for comprehending past research interests. When used in combination with thematic mapping it helps to predict future research directions. The graphin Figure 7is set ata minimum word frequency of 20 per year.The number of words per year is set at 2, meaning a maximum of 2 keywords that appear a minimum of 20 times are considered. The bar length and node size signify the span of a research topic and the year of considerable research in the field, respectively. Studies on financial performance appeared in 2017 first and substantial work was done in the year 2020. Research on gender diversity has also gained momentum in recent years and the maximum work to date was done in 2020. On the other hand, research on corporate governance, ownership structure, and audit committees started quite early and is still continuing.

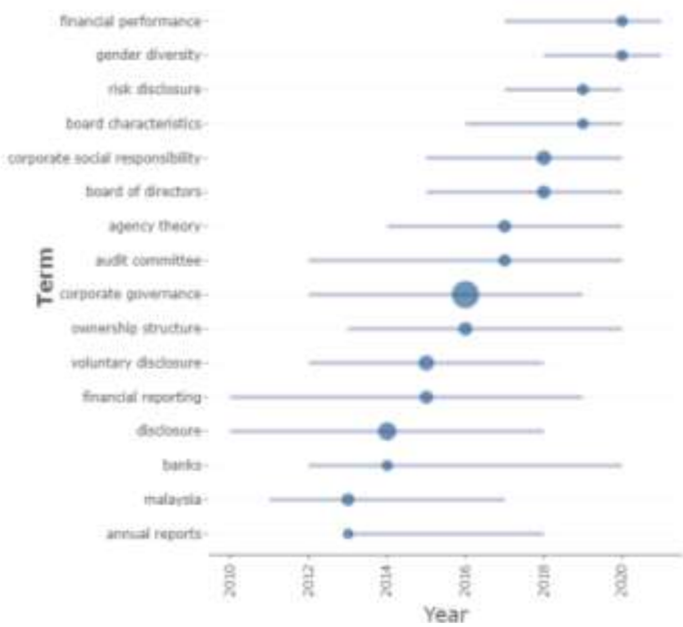

Figure 7:*Trend topics*

Future research directions

Researchers may explore further studies on 'Corporate Governance and Disclosure' in the future, as summarised below:

Firstly, plenty of work has been done on corporate governance and its attributes as one can observe from the thematic map. Many attributes of corporate governance such as board size, board independence have been part of the motor theme. However, the relationship between 'corporate governance and disclosures' is not adequately explored. Disclosures can be mandatory or voluntary in nature. While mandatory disclosures are required by law, voluntary disclosures are discretionary and depend on the willingness of the companies to disclose. Sustainability disclosures are still voluntary in nature in many countries around the world. Therefore, we need more studies that explore the relationship between corporate governance attributes with voluntary disclosures.

Secondly, the content analysis revealed that the influence of ownership structure on disclosure is at a nascent stage and is not much explored especially in developing countries. Ownership structure greatly affects the quality and quantity of corporate disclosures. This research area can be explored further.

Finally, the country collaboration map reveals that while collaboration is high between USA-UK, UK-Egypt, Australia-Malaysia, it is quite dismal between countries in the Asian region. Countries like India, Pakistan, and Bangladesh have less contribution in terms of documents but articles from these countries are quite impactful. So there appears a lot of scope in the country collaboration also.

IV. Conclusion

The depth and quality of corporate disclosures depend to a large extent on its governance structure. The present study aimed to conduct a bibliometric analysis of the research undertaken in this domain. A search query in Scopus yielded 2623 documents published between 1991 and 2022 which were reduced to 1762 documents after applying inclusion-exclusion criteria. Bibliometrix package in R and VoS viewer softwares were used for analysis.

Although extant literature suggests that corporate governance has long been a focus area of research but interest in the sub-domain of 'corporate governance and disclosure' spiked after the Enron debacle in 2001. It drew global attention to corporate failures and the role of corporate governance and disclosures in preventing them.

University Teknologi Mara of Malaysia was found to be the most relevant affiliation based on the number of documents published. It is followed by English universities such as the University of Portsmouth, Queensland University of Technology, and Australian universities like Deakin University.

Author productivity and impact analysis revealed Hussainey K to be the most productive author with 34 publications to his credit since 2010. However, in terms of impact, Ntim CG is the most impactful author with 53.8 average citations per document.

USA was found to be the most productive and influential country in the field of 'corporate governance and disclosure' followed by UK and Australia. Although a major contribution to the literature has come from developed countries, developing countries like Malaysia and China are also doing impressive work in terms of productivity.

'Corporate Governance and Voluntary Disclosure' by Eng, L.L., and Mak, Y.T. is the most cited article in the research field to date. Published in 2003, its findings include that managerial and government ownership impact corporate disclosure. Besides, company size, leverage, and presence of independent directors were also found to exert influence on accountability and transparency. Source analysis revealed that 'Corporate Ownership and Control' is the most productive journal followed by 'Corporate Governance' (Bingley). 'Business Strategy and the Environment' is the most impactful journal as per the cite score. Keyword analysis which assists in mapping prominent subdomains of a research field found 'Corporate governance', and 'disclosure' to be the most frequently used authors' keywords. Three prominent clusters emerged through co-authorship network analysis of countries which suggested strong collaboration linkages between UK-Egypt, Australia-Malaysia, and USA-China.

Thematic mapping and trend analysis revealed key research areas in the domain of corporate governance and disclosure. The themes identified were 'attributes of corporate governance' and 'financial performance' as motor themes that are central and developed; 'corporate governance and disclosure' as basic themes which are significant but need to be developed further to enrich extant literature. This is especially true in the context of the impact of corporate governance attributes on sustainability disclosures of a company which may be voluntary in certain countries. While its impact on financial disclosure has received considerable attention, research on voluntary disclosures has yielded mixed and inconsistent results. Moreover, 'environmental disclosure' and 'China' emerged as emerging or declining themes meaning whereby either they will emerge further or decline. Considering the ever-increasing and newer risks faced by our planet, research on corporate environmental disclosures seems to continue and grow. 'India' and 'accountability' emerged as niche themes.

Implications of Study

This bibliometric study with a systematic review of key literature can be of immense value to researchers, corporates, stakeholders, and regulators. For researchers and academicians, the study suggests key areas in which research can be undertaken to further enhance the extant literature. Further, as the study revealed, there is a lot of scope for collaboration between Asian countries, and researchers can collaborate here. The study can be used by corporates to improve their disclosure practices and work on establishing a robust corporate governance mechanism. It assists the stakeholders to press upon and demand improvement in particularly those corporate governance attributes that have a bearing on disclosures. Finally, the study can be a basis for regulators to frame laws to ensure strong governance mechanisms.

Limitations of Study

Like any other research work, this study also suffers from some limitations. Data was collected only from Scopus. Other databases like Web of Science, Google Scholar, etc. were not considered. Similarly, the application of inclusion-exclusion criteria in a bibliometric study leads to inherent drawbacks which is the case with the present study as well.

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BRAND CENTRIC TRANSMUTATION: A WAY TO ENHANCE CUSTOMER'S LOYALTY IN FASHION RETAIL MARKET

Shikha Bhagat* Aishwarya N Aarthy Chellasamy*****

Purpose: *Customer-centric brands always explore different ways to derive the attention of potential customers and impel them to buy different products or services. Amazon, IKEA and Zappos etc are prime examples of customer-centric organizations that have expended years building a community around the consumer to understand their needs. Therefore, it becomes imperative for organizations to attract new customers and keep existing customers loyal to them by way of creating brand loyalty and this influence relies on whether customers are brand centric or not.*

Design/methodology/approach: *A survey was conducted on 430 respondents from east and south Bangalore city. The interpretation was analysed based on the factors like brand popularity, brand image, quality perception etc. with the help of exploratory factor analysis (EFA) and linear regression method.*

Findings: *The interpretation was analysed based on the factors like brand popularity, brand image, quality perception etc. The result demonstrated that brand association was the utmost important factor that influences consumer decision making regarding the influence of brand centrism. The regression results also articulated that brand consciousness, brand loyalty and price sensitivity were the other significant factors influencing their decision in fashion retail market.*

Originality/value: *The study was conducted by formulating objectives, collection of qualitative data through a series of survey questions with the help of exploratory factor analysis (EFA) and linear regression method.*

Keywords: *Brand centric, brand consciousness, price sensitive, brand association, fashion retail market, exploratory factor analysis*

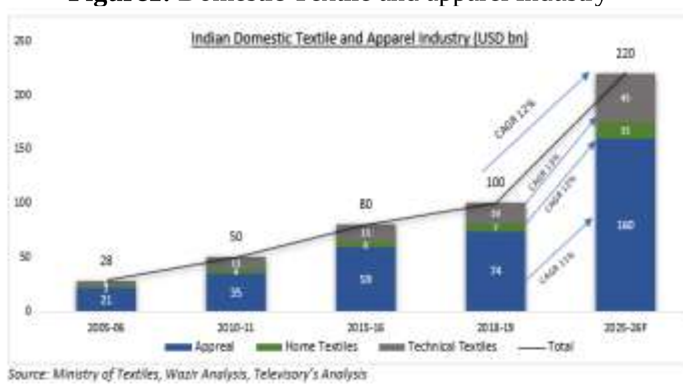
JEL Classification: *M31*

The fashion industry is a multibillionaire universal business consecrated to the business of manufacturing and marketing clothes which consists of both high fashion and mass fashion clothing (Brooks, 2022). The fashion industry was envisioned to be worth Rs 53, 06,400 (US$ 792 billion) and is projected to cross Rs 1, 50, 68,300 (US$ 2,249 billion) by 2028, rising at a compound annual growth rate (CAGR) of 11 per cent. It is also estimated that fashion retail market worth Rs 3, 61,160 crore (US$ 54 billion) will rise at a promising CAGR of 8.1 percent for next ten years to reach Rs. 7, 88,532 crore (US$ 118 billion) by 2028(India Retailing, 2022) shown in figure 1.The primary functionality of the fashion Industry includes manufacturing, designing and promoting all types of apparel from the most valuable high fashion to ordinary everyday clothing (John, 2017).

India has become a highly lucrative market due to the entry of foreign brands and change in the consumer's preferences from non-branded to branded products (India Retailing, 2019). Customers shop to mend moods and alleviate stress (Paden & Stell, 2010). They also generally go for shopping when they are with their friends with similar interests, or time to ease and relax (Azizi & Shariffar, 2011).

Once consumers love a brand and become brand loyal, a company can expect long lasting market share as customers would keep purchasing goods/services from the same brand over and over again and would constantly prefer the company's product over the competitor (Business, 2018). Nike, Nordstrom, Amazon etc. are also one of the most customer-centric retailers in today's world (Nikole, 2020). However, as witnessed by the above Marcus, (2003) many companies still struggle to become customer-centred. Brand centric nature in consumers is what many companies strive to achieve. When a country has many brand conscious consumers, the possibility of those consumers becoming brand loyal is extremely high (Mukherjee et al. 2012).

Figure1: Domestic Textile and apparel Industry



* Assistant Professor, School of Business and Management, Christ (Deemed to be University) Bangalore, Karnataka- 560076

** Assistant Professor, School of Business and Management, Christ (Deemed to be University) Bangalore, Karnataka- 560076

*** Assistant Professor, School of Business and Management, Christ (Deemed to be University)

The "one-size-fits-all" idea is old and ended. In today's world customers expect personalized solutions which is a never ending process for the companies and require constant innovation. Yet a customer-cantered brand doesn't innovate on its own – it co-innovates with its customers (Desai, 2020). At the macro level creating Brand popularity is very important. Many consumers use brands to create an identity for themselves that would set them apart from other companies (Ross, 2020). A popular brand has many benefits firstly, it provides a competitive edge as it leads to increased customer recognition and secondly, consumers generally prefer a brand they recognize over something, even if they do not have much knowledge about the brand at that particular point of time (Linda, 2019).Therefore, it's imperative to study the level of brand centrism in consumers so national and international brands can ascertain the impact of their advertisements on the citizens of a nation. Moreover, brands can adapt to the tastes and preferences of the local market and adopt marketing strategies that would influence behavior (Leon, 2019).

McKinsey has listed Nike, H&M and Zara etc. the world's leading apparel firms. These companies were known as 'super winners' with 97 percent of the retail world's economic profit. (Hanbury, 2018). In the United States, Inditex Pull and Bear is in rivalry with teen mall chains such as Hollister and Abercrombie. After struggling for so many years, these fashion retailers have come up with new strategies to influence Gen Z (Corinne, 2019).

I. Review of Literature

Kaur et al. (2018) interviewed 344 adult consumers to understand the relationship between brand transmutation and customer loyalty and the findings revealed positive relationship between the two. Marketers prefer customers to be more loyal and committed to their brand to spread word of mouth publicity (Gwinner et al., 1998). The companies will have many benefits when consumers have a high degree of brand loyalty, including greater tolerance to rivals' attacks (Delgado-Ballester and Munuera-Aleman, 2001). International retail entry opened avenues for access to more foreign brands and it was expected that Indian consumers will become more brand conscious. India was ranked third most brand-conscious country in 2007, following Greece and Hong Kong (Nielsen, 2008). Customers who prefer similar brands frequently say 'This is extremely good' and so on, 'I just don't buy other brands,' are based on familiarity, confidence, reliability and accuracy (Patwardhan and Balasubramanian, 2011). Kang (2015) revealed that 'Brand Love' is the utmost important factor for a satisfied customer. Toanalyse this, the research was being done on smartphone users to analyze the behavior pattern. As per analysis 25 percent of the respondents liked 'Apple' however none of them owned it (Batra, Ahuvia and Bagozzi, 2012). Sarkar (2014) attempted to explore the nature of brand love to understand the customer perception in the Asian market and similar findings were found. Panda & Misra (2014) stated that country of origin has a strong influence on brand perception. Customers gather product- country image through personal experience and other sources. Brands with better Country of Origin image are more preferred over other country's products. Tanksale, Neelam & Venkatachalam (2014) focused on the decision-making styles of young Indians as Youngsters are often seen affecting family purchasing decisions. De Mattos et al. (2015) followed Sproles & Kendall's (1986) framework for understanding brand-centric behaviour for choosing an international clothing brand. Sane & Chopra (2014) found that shopping is the most significant factor to reduce stress. Schmitt (2012) aimed to understand consumer psychology when it comes to branding strategies with a prime focus on brand attachment. According to this theory, Brand attachment provides stronger bond than brand attitudes and will have different behavioral implications (Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010).

Lopez, (2016) & Olive, (2010) stated when the level of product affection increases the brand loyalty also increases. Anggraeni (2015) revealed that local companies or shops need to adopt better strategies to attract more customers. Unal & Aydin (2013) stated that brand love increases the brand loyalty and in turn leads to positive word of mouth communication. It has also been noticed that higher level of product knowledge tends to increase customers satisfaction and loyalty (Homburg et al., 2006; Wijaithammarit and Taechamaneestit, 2012). Budac & Baltador (2014) aimed to study the attitudes of young people towards brands by way of qualitative research as they are great fans of brands, it is not easy for the companies to convince them to buy one brand on another but once they are loyal, they will be highly valuable. Malar et al. (2011) stated that brand must always strive to build a better product, a better environment and overall good experience for the customers, which helps them to connect how amazing the brand is performing in the market. Walker (2017) investigated that companies should also focus on qualitative research like customer interviews and focus group discussions. These techniques will provide them rich insight and in depth knowledge about the customer psychology. A more rigorous strategy helps them to combine different sources such as quantitative and qualitative market analysis, internal financial information, and competitive landscaping—in a more holistic process (Dylan et al. 2011).

II. Research Design and Methods

The approach to understand the nature of Indian customers with regard to brand centrism in fashion retail market is by way of collection of qualitative data through a series of survey questions. The questionnaire has considered many factors such as brand popularity, brand image, quality perception, brand value, Price Value, Cheaper alternatives, Brand Favoritism, Habitual Purchasing and Discount Options. The questionnaire was distributed to 450 consumers to collect the survey. The data collected was analyzed through factor analysis and structured equation modelling method in SPSS. Primary data for the survey was collected by sending questionnaire across various age groups but 430 respondents answered for all the questions. Rest 20 questionnaire were eliminated. The survey consists of 20 questions and each question consists of a range between 1 – 5, 1 symbolizing 'strongly disagree' and 5 symbolizing 'strongly agree'.

The population consisted 430 respondents between the age demographics of 18 to above 60 years old. This demographic was chosen to ascertain the difference in brand centrism across the age groups as there exists an underlying belief that older consumers are less brand centric than younger consumers. The sampling method used for the research project is convenience sampling.

III. Results and Discussion

Factor Analysis was chosen as a method of analysis as it helps ascertain the interdependence of the variables. Currently all the variables were taken for the study, have equal statuses as neither of them are dependent and independent nature; all variables are independent in nature. This methodology would help find correlation between all the variables by extracting the information and reducing the problem to a few core factors.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.729
Bartlett's Test of Sphericity	Approx. Chi-Square	2780.671
	df	190
	Sig.	.000

Before applying factor analysis, it is desirable to find out the underlying assumptions. The first assumption is sampling adequacy that is whether the sample data is adequate or not. Kaiser- Meyer- Olkin Measure or KMO value of more than 0.5 showed that the sample is adequate to apply factor analysis method. As per the KMO analysis shown in Table 1, the value derived is 0.729 which is more that the recommended value 0.50. Therefore, the data sample is sufficient to run factor analysis.

Another assumption of factor analysis is that factors have to be correlated to each other. In other words, in factor analysis multicollinearity is desirable (Hair et al., 2006). The next value indicated Barlett's Test of sphere city (Chi-square = 2780.671, df = 190) is significant (p value is .000 which is less than 0.05, level of significance) which confirms that all the variables are significantly correlated to each other which is a prerequisite for factor analysis. As p-value is less than the level of significance which showed there is a positive relationship between the variables.

Table 2: Communalities

	Initial	Extraction
The established national brands are best for me.	1.000	.731
The more costly brands are usually my choice.	1.000	.742
If the price of a product is high, the better will be the quality.	1.000	.728
Exclusive shop stores offer me the best products (Stores that focus on selling a particular product range. For example: Nike for Sportswear.	1.000	.722
I always prefer to buy popular brands.	1.000	.636
The most publicized brands are always good.	1.000	.602
A brand should not always be perfectto gratify me.	1.000	.812
Branded clothing is a matter of prestige for me.	1.000	.739
I don't buy brands that I don't aware of.	1.000	.812
I buy a brand at regular price (when there is no discount).	1.000	.557
The inexpensive clothing brand are usually my choice.	1.000	.716
I only purchase branded clothes when there is a sale or discount.	1.000	.687
I don't care about whether or not the clothing is branded, I am happy if it is cheap.	1.000	.920
I prefer unbranded clothing because I can bargain.	1.000	.924
I buy my favourite brands again and again.	1.000	.685
The brand I like the most will always have a repeat purchase.	1.000	.739
I don't like trying out different brands.	1.000	.625
I go to the same stores each time I shop.	1.000	.610
I frequently change clothing brands.	1.000	.667
I purchase different clothing brands from different outlets to get more variety products.	1.000	.649

Extraction Method: Principal Component Analysis

Communality Table 2 represented values of communalities for all the observed variables. Values that exceed 0.5 show higher communality (Hair et al., 2006), which means that they possess greater correlation with other variables. All factors in the above table showed greater community therefore all factors can be considered for further analysis.

Table 3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.986	24.931	24.931	4.986	24.931	24.931	3.267	16.333	16.333
2	2.637	13.183	38.114	2.637	13.183	38.114	2.907	14.533	30.866
3	2.267	11.335	49.449	2.267	11.335	49.449	2.404	12.018	42.884
4	1.852	9.261	58.710	1.852	9.261	58.710	2.218	11.092	53.976
5	1.380	6.899	65.609	1.380	6.899	65.609	2.078	10.390	64.365
6	1.183	5.915	71.524	1.183	5.915	71.524	1.432	7.159	71.524
7	1.050	5.250	76.774						
8	.625	3.126	79.900						
9	.589	2.945	82.845						
10	.505	2.527	85.371						
11	.459	2.293	87.664						
12	.437	2.183	89.847						
13	.399	1.994	91.841						
14	.369	1.845	93.686						
15	.326	1.631	95.317						
16	.280	1.400	96.717						
17	.265	1.326	98.043						
18	.238	1.191	99.234						
19	.145	.723	99.957						
20	.009	.043	100.000						
Extraction Method: Principal Component Analysis.									

Table 3 showed the factor solution resulting from principle component analysis which is rotated using varimax rotation and Eigen value criterion to extract the probable factors. The rotated factor solution results in six factors which together explain 71.524%% of the total variance, which is more than 60% as suggested by (Hair et al. 2006). We have pertained with Extracted Sums of Squared Loadings. The first factor accounted for 24.931% of the variance, the second factor was 38.114%, the third 49.449%, the fourth accounted for 58.710%, the fifth factor accounted for 65.609%, and the last sixth factor accounted for 71.524%. The total variation accounted for all these factors is 71.524% which is found to be acceptable, and therefore it benefits the validity of the study.

The scree plot graphs the Eigenvalue against all the variables which was significant to find out how many factors to be retained. As per the graph (Figure 2), the variance exists at greater amounts in factor 1, 2, 3 and 4. Factors 5 and 6 have somewhat lesser amount of variance. It can be observed from the figure 2 that the curve begin to drop between factors 5 and 6. After factor 6 the variance levels are diminishing lot

Figure 2: *Screen p*

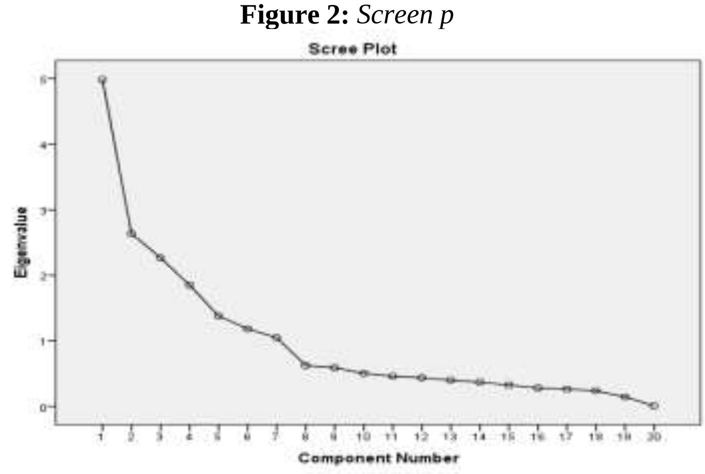


Table 4: Rotated Component Matrix

	Component					
	1	2	3	4	5	6
The established national brands are best for me.	.609					
The most publicized brands are always good.	.740					
If the price of a product is high, the better will be the quality.	.839					
I always prefer to buy popular brands.	.566					
Branded clothing is a matter of prestige for me.	.848					
The more costly brands are usually my choice.	.631					
I don't care about whether or not the clothing is branded, I am happy if it is cheap.		.958				
The inexpensive clothing brand are usually my choice.		.838				
I prefer unbranded clothing because I can bargain.		.960				
I only purchase branded clothes when there is a sale or discount.		.770				
I buy my favourite brands again and again.			.778			
The brand I like the most will always have a repeat purchase.			.848			
Exclusive shop stores offers me the best products (Stores that focus on selling a particular product range. For example: Nike for Sportswear.			.830			
I purchase different clothing brands from different outlets to get more variety products.			.757			
I go to the same stores each time I shop.				.549		
I don't like trying out different brands.				.497		
A brand should not always be perfect to gratify me.					.889	
I don't buy brands that I don't aware of.					.893	
I frequently change clothing brands.						.716
I buy a brand at regular price (when there is no discount).						.656

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 10 iterations.

The rotation matrix is a tool that makes the interpretation of the factor analysis simpler in nature. It investigates the variables which possess higher loadings. The variables which are less than 0.4 are vomited from the rotation matrix and need not be considered for further analysis. According to the above table 4, all 20 variables can be loaded onto six factor components. Based on the Rotated component index in table 4, the factors grouped were identified and named as explained in the below table 5. The grouped variables were given by a factor name based on the nature of the variables. Each factor number name and grouping variables were in detail established in table 5. Our rotated component matrix (above) showed that our first component is measured by v1, v6, v3, v5, v8, v2. These all variables relate to the same. Therefore, we interpreted component 1 as "Brand Consciousness". This is the underlying trait measured by v1, v6, v3, v5, v8, v2. We have arrived at the following descriptions after interpreting all components in a similar way which is shown in the below table 5:

Component1- "Brand Consciousness"
Component 2- "Price Sensitivity"
Component 3- "Perceived value"
Component4- "Brand Association"
Component 5- "Brand loyalty"
Component 6- "Perceived risk"

Table 5: Factor Table procured from data analysis

Factor 1	Variables	Name of the Factor
Factor 1	The established national brands are best for me.	Brand Consciousness
	The most publicized brands are always good.	
	If the price of a product is high, the better will be the quality.	
	I always prefer to buy popular brands.	
	Branded clothing is a matter of prestige for me.	
	The more costly brands are usually my choice.	
Factor 2	I don't care about whether or not the clothing is branded, I am happy if it is cheap.	Price Sensitivity
	The inexpensive clothing brand are usually my choice.	
	I prefer unbranded clothing because I can bargain.	
	I only purchase branded clothes when there is a sale or discount.	
Factor 3	I buy my favourite brands again and again.	Perceived Value
	The brand I like the most will always have a repeat purchase.	
	Exclusive shop stores offers me the best products (Stores that focus on selling a particular product range. For example: Nike for Sportswear.	
	I purchase different clothing brands from different outlets to get more variety products.	
Factor 4	I go to the same stores each time I shop.	Brand association
	I don't like trying out different brands.	
Factor 5	A brand should not always be perfect to gratify me.	Brand Loyalty
	I don't buy brands that I don't aware of.	
Factor 6	I frequently change clothing brands.	Perceived Risk
	I buy a brand at regular price (when there is no discount).	

The below descriptive analysis from Table 6 emphasized the various factors and their computed mean and standard deviations. This analysis clearly concluded that the best-rated factor is "Brand Association" was ranked best with 4.01 mean and "Perceived Value" was ranked low with 3.73 mean shown in Table 6.

Table 6: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Brand Consciousness	430	1	5	3.78	.561
Price Sensitivity	430	1	5	3.78	.539
Perceived Value	430	1	5	3.73	.520
Brand Association	430	1	5	4.01	.645
Brand Loyalty	430	1	5	3.87	.583
Perceived risk	430	1	5	3.83	.672

Regression technique was applied to evaluate the impact of six factors influencing the consumers brand centric decision.

Multiple regression analysis was utilized to read the variance in the outcomes, which was R-square. The psychometric evidence for incremental validity was tested. The first table is the Model Summary table. The principal goal was to test the impact of various factors on the consumer reach and also to identify the most impacting variable on the consumer reach in concern with the brand centric decision. The Adjusted R-square value was identified as .693. The R-square value was considered as significant as the value exceeds 0.70.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837[a]	.701	.693	.362
a. Predictors: (Constant), Perceived risk, Brand Loyalty, Price sensitivity, perceived value, Brand association, Brand Consciousness				

The F-value of 87.007, p<.005 stands significant at a value of 0.000 in the table 8 shown below. The study was identified as fit model with the marketing techniques having a strong positional impact on consumer reach.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.455	6	11.409	87.077	.000[b]
	Residual	29.218	424	.131		
	Total	97.674	430			

We can see from the "Sig." column (shown in table 9) that all experimental (independent) variables are statistically significant related, where p values are <.05 significance level.

Table 9: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.296	.236		1.251	.212
	Brand Consciousness	.027	.013	.130	2.132	.034
	Price Sensitivity	.038	.014	.115	-2.670	.008
	Perceived Value	.026	.014	.090	1.867	.043
	Brand Association	.371	.025	.732	15.077	.000
	Brand Loyalty	.080	.026	.142	3.027	.003
	Perceived risk	.061	.025	.126	2.441	.015

IV. Conclusion

Brand centrism in the fashion industry is concerned with consumer's shopping preference to choose branded clothing over unbranded clothing. The primary reason for its importance is due to the nature of the Indian market which is saturated with multiple brands both national and international. Brand association plays a major role in the brand centric nature of consumers; consumers who are brand centricare inclined towards buying more valuable and reputed brands. Consumers of this nature believes that a higher price means better quality. Consumers who are price sensitive do not prefer to buy expensive branded clothing, they'd rather buy cheaper non branded clothing and even if they do choose to purchase branded clothing they would do so at the time of sales discounts. The research paper has helped us to paint a clear picture on the various influencing factors leading to brand centrism. Companies nowadays cannot afford to spend unnecessary finances on branding strategies with heterogeneous consumers who may or may not be influenced, only by first researching and analyzing the psychology of the general public of a particular country a company can establish sound marketing and branding techniques specific to the region. Brand consciousness, Brand loyalty, Price sensitivity are also another important factors that ascertains the brand centric nature of Indian consumers as Indians gravitate towards purchasing brands that they have heard of and used for a long time. This is especially true for older consumers which was supported by Kaur et al. (2018).

Marketers must channelize their marketing efforts towards creating a good brand image, one that speaks of quality and shows off the 'pricey' feature of the brand. Moreover, most of the Indian consumers always prefer to buy well established brands that everyone knows of as this adds to the value that the brand holds. Indians tend to be brand loyal towards brands that they have heard of and used for a long time thus newer brands would have problems with establishing strong brand loyalty as compared to older brands. Price also plays a very important factor to consider while making purchase decisions for many Indian consumers both young and old. In fact, many Indians purchase brands at the time of discounts. During a good sale or discount Indians tend to be less brand loyal and would switch between different brands, one which is well known and offers clothing at good discounts. This research will also be useful for the companies to become a truly customer centric organization which helps them to have better customer experience in order to repel repeat business, which in turn increase more revenue.

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SOCIAL STOCK EXCHANGE: A FUTURISTIC MEANS OF FINANCIALLY LEVITATING SOCIAL ENTERPRISES IN INDIA

Deepti Singh* Jyoti Paul**

Purpose: *Establishment of the Social Stock Exchange (SSE) by the government of India, though at a nascent stage, can pave the way for growth with social development by channelizing funds towards the social development sector beyond the traditional means of government grants and philanthropy. This paper takes a theoretical approach to investigate the new rules for SSE in India, delineate the global precedents in SSE's and to delve upon issues and challenges in the Indian context that need to be addressed for its success.*

Design/ Methodology/ Approach: *This paper is a content analysis, based on secondary data sources published on this novel concept of SSE in India. Websites, research papers, SEBI circulars and concept notes along with newspaper articles are used to delve into concept of SSE.*

Findings: *The key findings include finding out the challenges SSE will face in India as seen from global precedence of the concept. India being a developing country has its own set of challenges in implementation of SSE like screening of enterprises on SSE, organizational and leadership challenges, tax implications, developing social audit framework in India etc.*

Originality/ Value: *The study is one of its kind theoretical comparisons of SSE globally and in India. It is significant because the entire concept of SSE is new to both the investors and social enterprises. Since the concept is in the formation stage, it is highly imperative that scholars, researchers, academicians and professionals deliberate upon concepts, regulations, scopes, benefits and caveats of the upcoming SSE.*

Keywords: *Social stock Exchange, Social Sector enterprises, Social audit, impact investing, India*
JEL Classification: *G20, G23, G28, L31*

India being a developing economy has shown tremendous growth in the last few decades. The size of the economy and regulatory framework has enabled it to sail through numerous bumps on its road to economic development. However, as the economy looks promising, there is always scope for more. Despite its size and economic development, the human development index and social development staggers behind. Neither the government nor the corporate sector can single handedly achieve the herculean task of development on social parameters.

The policy makers took the initial step of integrating corporate efforts in social and environmental causes by amending the corporate laws in 2013 and making CSR contribution mandatory for corporate entities making high revenues.

Taking the baton further, the government mulled over the proposition of providing a platform for bridging the gap between philanthropists, impact investors, investors in general and social enterprises. The idea was curated into a decision to set up a *Social Stock Exchange* (henceforth referred to as SSE).The main objectives of the paper are:

- To understand the concept and rationale of SSE for financial levitation of social enterprises.
- To delineate the global precedents in SSE
- To deliberate on recent development of SSE in India
- To discuss the issues and implications associated with SSE in India

I. Review of Literature

The current study is a perspective-based work on the latest development in financing the social development sector i.e. setting up of Social Stock Exchange (SSE) in India. The notification laying down the framework was released in July 2022 by the Securities Exchange Board of India and since the concept is in the formation stage, most of the literature in India is in the form of newspaper reports and SEBI and government notifications. However, some scholarly work has been done in other countries like Dadush (2015), while working on social finance and its regulatory challenges discussed the viability of SSE of U.K. and Canada. Wendt (2021) in her book on green and social economy finance talked about some vehicles of impact investment and social finance touching about SSE in this regard as catalyst for impact investing. Recently, Patel (2022) did a 360-degree analysis of proposed SSE in India. Research on impact investment which will be corner stone of SEE has identified decision making in impact investment, impact evaluation, behavioral issues in impact investing, and impact investing ecosystem as major areas of research in this field (Islam, 2022).

*** Associate Professor, Motilal Nehru College, University of Delhi**

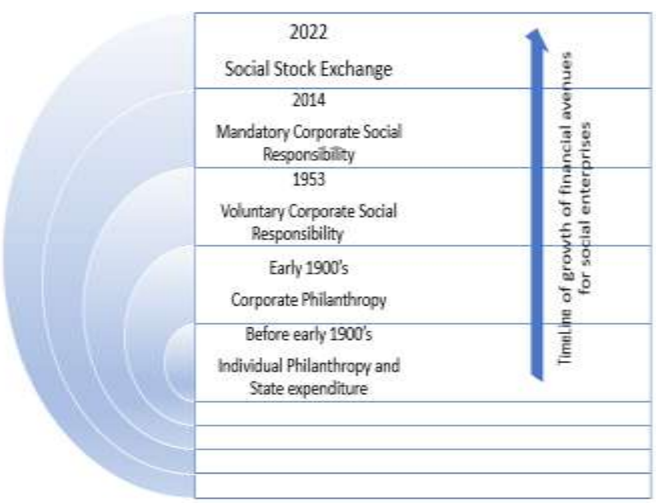
**** Associate Professor, Dyal Singh College, University of Delhi**

II. Research Design and Methods

This is a conceptual paper on a novel concept in India, the paper has used secondary data sources like websites, research papers, SEBI circulars and concept notes along with newspaper articles to know in detail about the recent reforms. Content analysis and development of a critical theoretical framework has been done. The study draws theoretical comparison of SSE globally and in India. After review of literature, the theoretical background for this paper was finalized. Authors attended discussion forums and seminars on SSE to analyze different dimensions under discussion on SSE.

Rationale behind conceptualization of SSE

Prior to industrialization in the country, the kings, philanthropists, and the Government provided a little support to some social causes in monetary terms. With industrialization, some form of corporate philanthropy emerged in the early 1900's. Corporate Social Responsibility came into picture in 1953 by the work of Howard Bowen. CSR funding paved the way for better channelizing of funds and has laid the foundation of identifying the scope of the social development sector beyond government grants or philanthropy. However, access to funds is still a major challenge for non-government projects. The timeline of avenues of funds available for social enterprises is depicted in Figure 1. For years, social development has been funded either by government or philanthropy by individuals or corporations.



Author's compilation

Figure 1: *Timeline of Sources of Financial Levitation of Social enterprises*

In a Brooking's paper "The Promise of Impact Investing in India", a survey states that 57 percent social enterprises in India face a barrier of access to debt or equity (Ravi et al., 2019). To address the issue, the Government of India mulled over the SSE's concept which is popular in few developed countries. The minister of finance and corporate affairs mooted the concept of SSE in her budget speech in 2019-20. The working group for the same was constituted, which after deliberations submitted its report that was being put open for public comments. The report after amendments resulted in SEBI notification of framework for SSE in India.

SSE can be seen as a revenue generating platform for non-profit and/or non-government organizations along with for-profit social enterprises, undertaking social projects through listing the stock exchange. It aims to create a paradigm shift in the social infrastructure by creating new capital pools, enhancing the visibility of organizations that create social impact and forging greater trust and appreciation among donors to social organizations. The trading terminals of exchange across the country will pave the way for these organizations to raise finances for varied causes in the social development sector apart from getting philanthropic contributions with a view to bring about positive changes in the society. Investors can buy shares in these social enterprises working for the cause they are committed to and the same is vetted by SSE governed by Securities Exchange Board of India(SEBI).

SSE is proposed to be a separate arm of existing stock exchanges, NSE and BSE which will help investors to have transparent access to information to decide where to invest in terms of social impact of their money as such exchanges will have social impact assessment. An SSE usually undertakes a social impact screening of the enterprise interested in prospective listing. In short, the SSE will be a win-win reform for both the investors and social organizations or even for-profit organizations who would like to have their funds utilized for some social cause.

Global Precedents in SSE

Though a new concept in India, these stock exchanges have been there in the past in many developed countries. In this section let us look into the background of SSE across the globe.

- **UK Social Stock Exchange:** This exchange came into existence in the year 2013. But it merely serves as a secondary listing platform wherein the investors can get an insight on impact- oriented organizations. It is further providing research services to connect prospective investors with social organizations.
- **Canada:** Social Venture Connexion (SVX) is the SSE which explicitly states to seek a positive change through impact investment. SVX has strategic initiatives and has goals of having system change through developing an ecosystem for social innovation. It provides a host of services to impact investors, works closely with their clients

to revisit their impact investment strategies, and eventually move the economy towards greater equity. SVX supports its clients and helps them in social financial mechanisms to invest across sectors viz. affordable housing, sustainable food systems etc. SVX has worked as a key informant and has been a helping hand in the development of India's SSE.

- **Singapore Impact Xchange:** Impact Xchange (IIX) is a foundation in Singapore which looks into impact investing, measuring impact and raising funds. This platform helps to connect to globally accredited impact investors, helps investors to invest in sustainable businesses,and is the most significant crowdsourcing platform. This was formerly known as Social Stock Exchange Asia Pte. Ltd. and Impact Investment Exchange (Asia) Pte. Ltd. IIX Foundation is the charity arm of Impact Investment Exchange Pte Ltd (IIX), which is helping investors and partners come together to raise, invest and research on social impact investing.
- **South Africa***:* South Africa Social Stock Exchange -SASIx was launched in June 2006 at Johannesburg Stock Exchange to transform the social sector and social investment into attractive social capital markets. SASIX early projects were directed towards areas like early childhood education, orphans and vulnerable children, food security, and enterprise development.
- **Kenya SSE:** The Kenya Social Investment Exchange was launched in 2011. The goal of this SSE was to bridge the gap between the social enterprises and present and prospective impact investors across the globe. However, an enterprise listed on SSE is required to undergo impact measurement along with ensuring financial viability of the enterprise over a long run for periods extending beyond the funding period.
- **Brazilian SSE:** BOVESPA, the Brazilian Stock Exchange launched its SSE in June 2003, making it the first initiative in this domain. It works in close association with BOVESPA. The exchange was able to get a number of projects to attain full finance through the SSE which was quite an achievement. However, the exchange couldn't sustain in the long run and is no longer very active in generating funds as expected (Patel & Patel, 2022).

It is evident that every SSE has different features; few of them are just for providing information like the UK SSE while others are active in making investors and social enterprises meet online like South Africa SSE. The most developed SSEs are the Canada SSE followed by Singapore SSE.They are quite similar in measurement criteria of social projects but vary in rules related to registration of social enterprises.
The domestic regulations on non-profit and social sector organizations as well tax laws pertaining to their functioning and investing in these organizations play a vital role in the success or failure of the SSE.

III. Result and Discussion

In line with SSEs of other countries, SSE in India has been flagged off by a notification by SEBI. As per the new rules announced by Government of India, the social entities can engage in any of the 16 activities including: eradicating hunger, poverty, malnutrition and inequality; promoting healthcare, supporting education, employability and livelihoods; gender equality empowerment of women and LGBTQIA+ communities; and supporting incubators of social enterprise (Aravind, 2019). Further, in principle, any social organization whose aim can overlap with corporate profits, propagation of political or religious ideology, furtherance of objectives of any professional or trade association , infrastructure and real estate developers excluding affordable housing schemes, will not fall under the purview of being considered as a social enterprise. SSE will be instrumental in raising funds for both not for profit organizations including section 8 companies and for-profit social enterprises.
The new reforms have used a few new terms which need to be understood viz. Social enterprise, social audit and impact investment along with fundraising models in this context.

Social enterprise: Social enterprise which can be listed on SSE will be primarily decided on social intent and its primary goals. Social enterprise can be a for profit business, but the primary goal must be social impact. As per SEBI's memorandum for framework for SSE, a social enterprise can be

- "An enterprise working in 15 broad eligible activities based on Schedule VII of the Companies Act,2013, Sustainable Development Goals and priority areas identified by Niti Aayog.
- SEs shall target underserved or less privileged population segments or regions recording lower performance in the development priorities of national/state governments.
- SEs shall have at least 67% of its activities qualifying as eligible activities to the target population, to be established through one or more of a.Revenue, b. Expenditure, c. Customer base" (SEBI, India, 2022).

Social audit: Measurement of social impact is a mandatory criterion, so social audit has been made mandatory as per new rules. The social auditor will be any reputed firm/institution having experience as stated. Social auditors must have qualified certification courses conducted by NISM(National Institute of Securities Market). The new directives also suggest empanelment of these social auditors in a proposed sustainability directorate under ICAI.

Impact investment:
Impact is the delta change that happens because of an intervention. Social impact is any significant positive change

that is aimed at solving some social challenge or injustice or for benefit of the underprivileged through a consciously deliberated stream of activities. Therefore, impact investments can be identified as “investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return. Impact investments can be made in both emerging and developed markets and target a range of returns from below market to market rate, depending on investors' strategic goals” (The Global Impact Investing Network- GIIN).

Just as all future development is expected to be sustainable, so shall all investment. The growing impact investment market provides capital to address the world’s most pressing challenges in sectors such as sustainable agriculture, renewable energy, conservation, microfinance, and affordable and accessible basic services including housing, healthcare, and education (GIIN). The UN estimates that in order to achieve the SDGs by 2030, an investment gap of US$2.5 trillion needs to be filled by both public and private sectors jointly in the targeted areas of SDG’s (China Development Research Foundation & China Social Entrepreneur Foundation, 2016). Social impact investments can be instrumental in bringing this gap by shifting focus from pure financial returns to incorporation of social and environmental goals while generating financial returns.

In Indian context, the number of functioning impact investors is only about 75 and around two million social enterprises have been identified (Kejriwal, 2019). When it comes to league of impact investors in India, they can be categorized as- “fund managers (such as Aavishkaar, Acumen and Elevar); development finance institutions (such as National Bank for Agriculture and Rural Development and FMO Entrepreneurial Development Bank); and foundations, high-net-worth individuals and family offices (such as Omidyar Network, Michael and Susan Dell Foundation)” (D’Souza, 2020b, p.17). All these are catering to different areas of social investments. Different startups in impact investing are catering to different areas of social needs for investment. Impact investing has the potential to contribute to achieving SDG’s by keeping up the social agenda imperative. Although Impact investments in India are relatively nascent. “The aggregate assets in impact investments between 2010 and 2016 in India were US$5.2 billion, of which US$1.1 billion was invested in 2016 alone” (D'Souza, 2020a, p.1). The Government has initiated reforms by introducing the concept of SSE, and defining social enterprises which will change the scenario for impact investment in India. The Government needs to harmonize the laws related to social enterprises and impact investment to reap the benefits (D’Souza, 2020b).

Fund raising

Non-Profit Organizations (NPO) desirous of raising funds on the SSE will be required to be registered with the exchange, these may as well include companies, societies, trusts covered under section 8 of the Companies Act. They can thereafter raise funds through zero-coupon zero principal bonds, social venture funds, bonds with a development impact and mutual funds. The For-Profit organizations (FPO) can raise capital by issue of equity shares and debt instruments, once they are distinctly identified as For Profit Social Enterprise by the SSE. An array of potential sources of funding for social enterprises both NPO’s and FPO’s is summarized in Figure 2 below.

Adapted from SSE note of SEBI

Figure 2 *Sources of finance proposed to be used for social enterprises.*

Zero coupon zero principal bonds have been permitted as an instrument to raise funds only by NPO’s via a notification by the Ministry of Finance on 15th July 2022. These bonds are seen as a way for channelizing donations, whereby there is no interest payment nor any principal repayment upon completion of projects. There are no financial returns expected by the donor, only motive is impact creation and risk involved is non-creation of the expected impact. Social impact funds will be raising funds in the form of units that can finance social projects with no financial returns sought by the investors. The existing social venture funds have been converted into social impact funds through an amendment in the Alternative Investment Funds Regulation in July 2022. For Section 8 companies, it is planned that the exchange will provide a trading platform similar to already existing with other stock exchanges. Whether access to CSR funds and foreign impact investments will be provided through SSE is yet to be clarified by the ministry.

Issues and Challenges for SSE:

Being a new and non-conventional arena, the SSE is bound to face a number of challenges and address some issues that may arise in its smooth operations. The major challenge is not merely to have such an investment but also to bring about consistency in measurement and disclosure requirements too. The areas of concern may be as follows.

- **Social audit:** The Government has proposed a social audit by certified auditors of social enterprises for their impact assessment. The challenge of assessing whether the funds of investors are being utilized for the purpose they are generated for will be taken care of by regular audits. The investors will feel confident that their money is being put to the necessary social cause they have contributed to. Social auditors'appointment, engagement, audit procedures, registration, empanelment of social auditors have been proposed by the Government. All these are in nascent stages, formation of relevant Social Audit standards, forming a body to empanel social auditors viz. SRO i.e.,Self-Regulatory Organizations whose creation and ambit of work is yet to be finalized. Proper orientation and skill upgradation of social auditors also needs to be done to enable them to carry on rigorous social audits.
- **Screening of enterprises:** The most challenging task for SSE will be to be watchful of listing social enterprises on SSE and continuously laying down and revising criterions for exclusions for better utilization of its platform. Again, social impact assessment becomes imperative to list social enterprises.
- **Lesson from Global precedents in SSE***:* As mentioned in the section of global precedents in SSE,a lot needs to be understood about the market, investors and how the social enterprises will be listed and their working before the initiation of SSE. The SSE as seen in global cases has just been a matchmaker between investors and enterprises. Only two SSEs- Canada and Singapore are genuinely doing the work for which they were established. Steps shall be taken to give enough power and independence to the thinktank of SSE to take steps to make the exchange attain its objective rather than being a mere directory like the UK SSE.
- **Localized approach:** The social enterprise ecosystem in India is still in its infancy. There are many hurdles that a developing country like India faces. The impact investment segment in India is in a niche stage as private investors are new to the concept of impact investing. Such investors need to be educated and thus convinced to channel their funds in such sectors. A merely copied approach from the developed countries will not yield any benefits. India needs a more localized, incremental approach from both investors and regulation point of view to get the best out of creation of SSE.
- **Organizational and leadership challenges:** The complex and novice nature of social enterprises to be listed on SSE will have unique features which will have its own leadership challenges. There must be a clear distinction and definition as to for profit organizations working with a social motive. The leaders must be trained and have an appetite for social causes to make the organization run for a long period. The leaders should have a clear vision as to what the enterprise wants to achieve in terms of social impact, and this may also need some organizational structure changes and change in the mindset of all which the leaders must preach and oversee. The social intent on which the social enterprise will be createdmust be perpetual and should not be lost to earn a high rate of return for sustenance.
- **Tax norms simplification for social enterprises:** There are tax benefits available to organizations incorporated as NPO's in India. The FPO's which will work for social causes as defined in the definition of social enterprise, shall also be enhanced with tax exemptions. With the changing business and social scenario, social enterprises try to experiment with their business models as well as opt not to follow the conventional revenue models, at the same time the market for their goods and services is usually inadequate. This makes them less profitable and less lucrative for investors to invest in financially risky early-stage operations (Ghosh, 2012). At this stage grants, subsidies and tax benefits can help them sustain while developing a profitable strategy.
- **Listing norms for organizations:** NPOs to be listed on SSE must provide elaborate details about their track record and the impact created in the program target segment. They are also further required to disclose such information on websites. The major purpose of listing such NPOs on SSE is to give them greater visibility and help them raise funds. However, many such organizations will be unable to reap these benefits if they are required to abide by such stringent norms as are applicable to listed companies. It will be a major impediment in the success of SSEs and softer norms for NPOs have to be framed to make the proposal inclusive. Necessary amendments have been made in ICDR (Issue of Capital and Disclosure Requirements) rules to facilitate registration of NPO's and public issue of NPO's and FPO's on SSE, the regulator has amended rules governing alternative investment funds and renamed social venture funds to social impact funds, LODR (Listing Obligations and Disclosure Requirements) norms have also been revisited.
- **Being a separate arm of existing stock exchanges***:* The global precedent in this regard is that SSEs have close association with stock exchanges with independent decision making. For example, while the Jamaica Social Stock Exchange (JSSE) was created as a CSR program of the Jamaica Stock Exchange, it has an independent board and team. Canada's Social Venture Connexion (SVX) functions as an independent nonprofit corporation in itself, with a self-governing board of six members, while reporting to the Ontario Securities Commission (Walia et al.). So, similarly in India, as proposed it has to be part of BSE/NSE, but to

reap the benefits, its leadership and governance should be independent and have people from all walks of life viz financial, regulatory, civil society etc.

- **Difference in scale of organizations:** Various NPOs desirous of listing themselves, must comply with listing requirements. Many such organizations will not be able to get listed due to scale and strict disclosure requirements. Further, the ones who get listed as proposed will enjoy certain tax benefits and regulatory benefits which will push the gap further between these and those NPOs which cannot be listed. The regulatory authorities should understand the differences, and given the Indian ecosystem, rules shall be framed in order to include them rather than exclude such small-scale organizations.
- **Awareness programs for investors and donors***:* A major impediment to SSE seen globally has been lack of engagement which ultimately leads to lack of volume of transactions and prime reason for failure of SSEs globally. A new concept, new nature of exchange, novel approach requires training and awareness programs for its success. Impact investors must be educated and trained to build the base. The state shall as well invest in sessions to raise awareness, make both the demand and supply sides meet to ensure the success of SSEs in India.
- **Grants by Government***:* Again, as observed globally, SSEs were not able to fund their own operating costs and required philanthropic funding to kickstart the operations. The government and high net worth individuals must come forward and join hands to make the SSEs a success.
- **Creating a minimum standard for impact and financial reporting***:* There is need to design reporting standards for the social organizations listed on SSE in consultation with ICAI so that the reporting norms for listed organizations are neither a blueprint of profit generating corporate standards yet have a simplified common ground to be adopted by all organizations over a period to imbibe impact reporting as a part of reporting policies across board.

IV. Conclusion

The social sector of the country has largely been dependent on government funds or philanthropy. Small entities or new age enterprises in the social sector are generally restricted by paucity of funds. Total reliance on government or philanthropy or even CSR funds may make the country lag in achieving SDGs by 2030. The marginal rise in India's score in SDG index from 57 in 2018 to 60 in 2019, makes it evident that there is a long way to go in this direction.

Setting up an SSE may pave the way to channelize investments in human development and other identified areas of social investment. Moreover, checks and balances put in by the SSE will encourage performance-based investments in various areas identified to achieve a balanced regional development as well. It will generate an ecosystem conducive to targeting SDGs by various enterprises who may or may not aim at profits. This may also provide some relief to the government on its welfare spending and better channelizing of government funds to areas that lag in receiving investments though SSE. However, being in initial stages, the SSE may face a number of teething troubles like setting of criterion for being listed on the SSE, developing a framework for social audit and measuring impact assessment, laying down and adherence to compliance norms, gaining investor confidence, mulling over tax incentives in consonance with curbing the tendency for tax avoidance, the economic feasibility of the listed enterprises along with the exchange itself, functioning mechanism of the exchange, simultaneous work on capacity building, exploring the access to foreign funds in the SSE along with CSR funds. But these challenges do not wither away the prospective benefits of having a SSE in India. The country shall build the foundation of essential pillars of this ecosystem in terms of a framework for understanding impact assessment, social audit, capacity generation, disclosure norms, penal actions for flaunting the norms before secondary market operations in the SSE. instead of implementation in haste, India's approach shall be incremental. An 'all-at-once' approach would make social impact subservient to commerce. If implemented with all the caveats, SSE may lay the foundation for a thriving social development sector in the country.

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REVISITING THE LEAD-LAG RELATIONSHIP BETWEEN FUTURES AND SPOT MARKET OF GOLD: EVIDENCE FROM THE ARDL MODEL AND TODA AND YAMAMOTO TEST

Sonia* Karam Pal Narwal**

Purpose: *This study empirically analyzes the lead-lag relationship between spot and futures markets of gold traded on MCX during period from January 2009 till December 2019.*

Methodology: *The long run relationship between spot and futures markets is analyzed through the use of ARDL Bounds test. Error correction model (ECM) is conducted to determine the long run causality between markets. Wald test is administered to check short term causality in spot and futures gold prices. Further, Toda and Yamamoto approach of Granger causality is used to check the robustness of ARDL model by studying the causal relationship between variables in the long-run.*

Findings: *The outcomes of the study show that there exists bidirectional causality between the two markets of gold in both the long and short run. Outcomes of Toda and Yamamoto test confirm the findings of ARDL model.*

Practical Implications: *It determines the leader market which helps investors to decide their investment and arbitrage strategy.*

Originality: *There is hardly any study which is conducted using ARDL model with Toda and Yamamoto approach to study the lead-lag relationship between futures and spot markets with reference to Indian commodity market.*

Keywords: *Gold, Augmented Dickey Fuller Test, Phillip-Perron test, Bound Test, Toda and Yamamoto Test, Lead-lag Relationship, ARDL Model*

JEL Classification: *G13, G14, C51, Q13*

As per efficient market hypothesis, new information is immediately reflected in market prices without establishing any lead or lag relationship between one and the other. But, due to market frictions for example transaction cost advantage, fewer restrictions and greater liquidity a lead-lag relation between the two markets is observed to exist. “Lead-lag relationships refer to the tendency of prices to be determined in one market, and with the information then passed on during a lag period to a corresponding market” (Joarder and Mukherjee, 2019). Lead-lag relation analysis between markets helps us in determining the dominating market between futures and spot markets. The dominating market plays a preeminent role in the price discovery because of its ability to rapidly absorption of information.

Gold is a monetary asset and partly a commodity. Gold is the oldest international currency and a major component of monetary reserves in the world. Gold has low or negative long-period correlation with other asset classes. Hence, gold is an effective diversifier even during periods of financial instability. The gold market is affected by many global macroeconomic factors such as the exchange rate, inflation, industrial output growth, Equity index and many domestic factors such as central bank sales, official gold loans, seasonality and crop harvesting. Apart from investment purposes, in India, gold has attached cultural and sentimental values. That’s why most of the Indian household buys gold as a symbol of prosperity. India is one of the largest consumers of gold in the world. India has more demand of gold than domestic production. As a result, India largely depends on imports to meet the demand of gold. India is the world's second largest gold importer. Despite being the largest gold consumer, India is a price taker as the prices are fixed by the London Bullion Market Association (LBMA) and Comex in US. Gold futures trading in India started from 2003 on MCX. Based on contract sizes, the MCX presently offers four deliverable gold futures contracts: Gold, Gold Mini, Gold Petal and Gold Guinea. Some contract specifications of gold are given in table I.

The economic importance of gold to Indian economy motivates us to analyze the lead-lag relationship between spot and futures markets of gold.

The remaining portions of the essay are organized as follows: Second section presents the previous literature on this phenomenon. The third and fourth sections discuss the objectives and hypothesis of the study. The fifth section of this paper deals with the methodology and the sources from which the data has been collected. Sixth section explains the results and discussion. The seventh section concludes our analysis and results. The Eighth section describes the policy implications and futures research direction.

*** Research Scholar, Haryana School of Business, Guru Jambheshwar University of Science & Technology, Hisar, Haryana**

**** Professor, Haryana School of Business,Guru Jambheshwar University of Science & Technology, Hisar, Haryana**

Table: I Contract Specifications

Symbol	GOLD
Contract Available	February, April, June, August, October, December
Last Trading Day	The 5th day of the contract expiration month will be the last trading day. If the 5th day falls on a holiday, then the preceding working day is used instead.
Trading Period	Mondays through Fridays
Trading Session	9 a.m. to 11.30 p.m. or 11.55 p.m.
Quotation/Base Value	10 grams
Trading Unit	1 kg
Tick Size	Rs.1/10 grams
Maximum Order Size	10 kg
Initial Margin	Minimum of 4 per cent or on the basis of SPAN, whichever is greater.
Extreme Loss Margin	Minimum 1per cent
Delivery Unit	1 kg
Delivery Centers	Ahmedabad
Quality Specifications	995 Purity
Delivery Logic	Compulsory

Source: *Contraction Specifications, MCX, India*

I. Review of Literature

In the previous literature, the exploration of commodity futures-spot price relationship has received considerable attention. Majority of the study on commodity derivative market in India have been conducted on price discovery aspect of commodity market (Bahera, 2016; Nath et al., 2019; Pani et al., 2022; and others). Similarly, many studies have been conducted on price discovery in gold market in all over the world by applying various statistical tools and techniques Such as Pavabutr and Chaihetphon (2010), Kumar and Arora (2011), Sridhar and Sathish (2011), Srinivasan and Ibrahim (2012) and Nath et al. (2019).

Pavabutr and Chaihetphon (2010) empirically investigated the price discovery in Indian gold futures traded on MCX covering a time period from 2003 to 2007 through the use of vector error correction model and revealed that gold futures prices lead to spot prices. Thus, in accordance with VECM, price discovery happens in futures market. Kumar and Arora (2011) investigated that whether the futures markets of gold play a dominant role in price discovery procedure by utilizing Johansen cointegration test and Granger causality test. Analyzing the time period from 2005 to 2009, the authors showed that futures market of gold plays an important role in price discovery. Sridhar and Sathish (2011) utilized vector error correction model to examine the price discovery in Indian gold market considering the data period from January 2007 to March 2009. The authors stated that spot prices act as a price discovery tool for gold futures prices. Srinivasan and Ibrahim (2012) assessed the mechanism of price discovery and volatility spillovers for gold traded at MCX India by employing Johansen cointegration test, VECM and EGARCH model. From the analysis, spot market is found to dominate price discovery process. Ahmad and Fun (2016) examined mechanism of price discovery in context of the Malaysian gold market covering the duration from 2014 to 2015 by employing Restricted Least Square and Toda and Yamamoto approach. The researchers revealed that gold futures market is inefficient and unable to discover the new information related to price. The researchers also found that gold spot prices granger cause to gold futures prices. Raghavendra and Mahadevaswamy (2018) analyzed the efficiency of gold market traded on MCX by employing Johansen cointegration test and Granger causality test. Analyzing the data from 2013 to 2017, the researchers found that there exists bidirectional causality between the two markets of gold. Nath et al. (2019) studied the efficiency and price discovery process of Indian gold market covering a sample period from 2008 to 2018 by applying the VECM, Granger causality wald test, optimal hedge ratio, impulse response function and forecast error variance decomposition. The authors found that price discovery occurs in futures market only. The authors also found that futures market of gold is not an efficient hedging instrument.

Palaniappan Shanmugam and Raghu (2015) explored the lead-lag relationship in spot and futures markets with reference to five metal commodities traded on MCX India and showed that a lead-lag relationship exist between spot and futures market of metal commodities. Joarder and Mukherjee (2019) applied regression analysis in the context of actively traded oil and oilseed contracts from NCDEX to examine the lead-lag relationship between futures and spot prices. The results found that futures market volatilities significantly help to assess the spot market volatilities. Ameur et al. (2021) delivered the new insight into lead and lag relationship between two markets considering different types of commodities. Utilizing newly developed NARDL model, authors found that a bi-directional relationship exist between futures and spot markets over the short and long-run. However, in the futures market, leadership is more pronounced. Very recently, Pradhan et al. (2021) tested the lead and lag relationship between Indian commodity futures and spot markets and indicated that long run causality exist for copper and silver only and in case of other commodities, there exist no long run causality between markets. However, there exists bidirectional causality for copper, aluminum, silver and unidirectional causality for the gold and three indices in the short run.

Although many studies have discussed the spot-futures price relationship, but they are inconclusive. Further, it is noticed from the review of existing literature most of the studies on this phenomenon have conducted using VECM model and Granger causality test. There is hardly any study which is conducted using ARDL model with Toda and Yamamoto approach to analyze the lead and lag relationship between futures and spot market with reference to Indian commodity market. Therefore, the present study aims to revisit the lead-lag relationship between futures and spot market utilizing ARDL model. Besides this, the current study is devoted to this issue for fairly large period in India.

Objective of the study

The main purpose of this study is to re-examine the lead-lag relationship between spot and futures markets of gold with the application of ARDL model and Toda-Yamamoto approach.

Hypotheses

H_{01}: There is no long-run cointegration between spot and futures markets of gold.

H_{02}: There is no causal relationship between spot and futures markets of gold.

II. Research Design and Methods

To accomplish the objective of the study, the daily futures and spot prices of near month contracts of gold containing the period of January 2009 to December 2019 have been extracted from the MCX (www.mcx.com) website. The logarithmic series of the variables have been utilized for further analysis. To analyze the lead- lag relationship between futures and spot markets, ARDL model has been utilized. The ARDL model can be utilized regardless of whether the price series are integrated at I (0), I (1) or mixed order (Jiang et al. 2012). An ARDL is a least squares regression with lags for both dependent variables and explanatory variables. ARDL model follows a two-step procedure in estimating the long-run relationship between dependent and independent variable. The first step is to determine whether or not there exists a long-term relationship. After the confirmation of long-run relationship, second step estimates the long-run and short-run parameters. The ARDL bound test is used to analyze the cointegration relation between the underlying variables. Error correction model (ECM) is used to investigate short run dynamics and the long run causality between variables.

For testing the cointegration between variables, it is necessary to test the stationarity of the data series. Stationarity and order of integration of the data series has been checked through standard unit root test Augmented-Dickey Fuller test (ADF) and Phillip-Perron test (PP). If the data series are non-stationary at levels, then the series are transformed into stationary using first differencing.

The selection of the lag length is as per the Akaike info criterion (AIC). The explanatory variables used in the ARDL model are futures prices as well as spot prices. It can be empirically expressed as:

$FP = \int(SP)$ (1)

$SP = \int(FP)$ (2)

Where,

FP= futures price, SP= spot price

Following the ARDL model specifications of Pesaran et al. (2001), the relationship between futures and spot prices as well as spot and futures prices can be estimated in equation 3 and 4:

$$\Delta FP = Ꝏ_1 + \sum_{i=1}^{n} \alpha_{1i}\, \Delta FP_{t-i} + \sum_{i=0}^{n} \beta_{1i}\, \Delta SP_{t-i} + a_1\, FP_{t-1} + b_1\, SP_{t-1} + \varepsilon_{1t} \quad (3)$$

(Where futures prices are dependent and spot price independent)

$$\Delta SP = Ꝏ_2 + \sum_{i=1}^{n} \alpha_{2i}\, \Delta SP_{t-i} + \sum_{i=0}^{n} \beta_{2i}\, \Delta FP_{t-i} + a_2\, SP_{t-1} + b_2\, FP_{t-1} + \varepsilon_{2t} \quad (4)$$

(Where Spot price dependent and futures price independent)

The null hypothesis of no cointegration relationship is evaluated against the alternative hypothesis of cointegration relationship in the ARDL bound test:

$$H_0: a = b = 0$$

$$H_1: a \neq b \neq 0$$

Once the cointegration between variables is determined by bound test, the long run coefficients are calculated in equation 5 and 6 as follows:

$$FP = Ꝏ_1 + a_1\, FP_{t-1} + b_1\, SP_{t-1} + \varepsilon_{1t} \quad (5)$$

(Where futures prices are dependent and spot price independent)

$$SP = Ꝏ_2 + a_2\, SP_{t-1} + b_2\, FP_{t-1} + \varepsilon_{2t} \quad (6)$$

(Where Spot price dependent and futures price independent)

The short-run dynamics and long-run causal relationship is calculated by computing error correction term in equation 7 and 8 as follows:

$$\Delta FP = Ꝏ_1 + \sum_{i=1}^{n} \alpha_{1i}\, \Delta FP_{t-i} + \sum_{i=0}^{n} \beta_{1i}\, \Delta SP_{t-i} + \gamma\, ECT_{t-1} + \varepsilon_{1t} \quad (7)$$

$$\Delta SP = Ꝏ_2 + \sum_{i=1}^{n} \alpha_{2i}\, \Delta SP_{t-i} + \sum_{i=0}^{n} \beta_{2i}\, \Delta FP_{t-i} + \gamma\, ECT_{t-1} + \varepsilon_{2t} \quad (8)$$

Where,

SP= spot prices, FP= futures price, Ꝏ = the constant term, α and β = short-run elasticities, a and b = long-run elasticities, e_t = white noise, Δ= first difference operator, ECT_{t-1} = the error correction term lagged for one period, γ = speed of adjustment, *n*= lag length

The joint impact in the short run is calculated through Wald test. To check the robustness of ARDL model, Toda and Yamamoto approach of Granger causality is utilized to study the long run causal relationship between futures and spot market of gold. This approach was introduced by H. Y. Toda and T. Yamamoto in 1995.

The Toda and Yamamoto approach linking two variables in a Bivariate system is implemented in the following equations:

$$F_t = \alpha_0 + \sum_{i=1}^{k} \alpha_{1i} F_{t-i} + \sum_{i=k+1}^{k+dmax} \alpha_{2i} F_{t-i} + \sum_{i=1}^{k} \beta_{1i} S_{t-i} + \sum_{i=k+1}^{k+dmax} \beta_{2i} S_{t-i} + \varepsilon_{1t} \quad (9)$$

$$S_t = \delta_0 + \sum_{i=1}^{k} \delta_{1i} S_{t-i} + \sum_{i=k+1}^{k+dmax} \delta_{2i} S_{t-i} + \sum_{i=1}^{k} \gamma_{1i} F_{t-i} + \sum_{i=k+1}^{k+dmax} \gamma_{2i} F_{t-i} + \varepsilon_{2t} \quad (10)$$

The α, β, γ and δ are the parameters of the model. The ε_{1t} and ε_{2t} are the white noise error terms and d_{max} is the maximum order of cointegration.

The null hypothesis that S_t do not Granger cause F_t is tested against to the alternative hypothesis that S_t Granger causes F_t when futures prices are taken as dependent variable.

H_0: $\gamma_{11} = \gamma_{12} = \gamma_{13} = \ldots\ldots = \gamma_{1k} = 0$

Alternative hypothesis

H_1: $\gamma_{11} \neq \gamma_{12} \neq \gamma_{13} \neq \ldots\ldots \neq \gamma_{1k} \neq 0$

The null hypothesis that F_t do not Granger cause S_t is tested against to the alternative hypothesis that F_t Granger causes S_t When spot prices are taken as dependent variable.

H_0: $\beta_{11} = \beta_{12} = \beta_{13} = \ldots.. = \beta_{1k} = 0$

Alternative hypothesis

H_1: $\beta_{11} \neq \beta_{12} \neq \beta_{13} \neq \ldots.. \neq \beta_{1k} \neq 0$

F = log futures prices, S= log spot prices

We must first determine the optimal lag length (k) and maximum order of integration (d_{max}) to apply the TY Granger causality test and therefore, we apply the AIC information criteria to identify the optimal lag order (k) of VAR models. Data is analyzed with the help of Microsoft Excel 2007 and E-views 2010 econometric software package.

III. Results and Discussion

Descriptive Statistic

The results of descriptive statistic are presented in the table 2. Both spot and futures prices have very similar descriptive statistics. Mean is almost same in both series. The standard deviation of futures prices is more than the standard deviation of spot prices which measures the volatility shows that futures prices are more volatile than the spot prices. Both the price series are positively skewed. Jarque-Bera test is used to check the normality of data. The results of Jarque-Bera test show that these data series are not normally distributed.

Table 2 Descriptive statistic

	Futures price	**Spot price**
Mean	10.161	10.159
Median	10.255	10.257
Maximum	10.593	10.588
Minimum	9.48	9.484
Standard deviation	0.245	0.244
Skewness	1.052	1.068
Kurtosis	2.993	3.01
Jarque-Bera	543.826	560.177
Probability	0.000	0.000

Source: *Author's computations*

Unit root test:

The results of unit root tests have been shown in table 3. The outcomes of ADF and PP tests show that the futures and spot price series are non-stationary at their level form. Hence, the series are transformed. After first differencing, the series become stationary at 5 per cent significant level. Therefore, the series are integrated at order *I* (1).

Table 3 ADF and PP test results

	at level	**at first difference**	**order of integration**
ADF			
FP	-1.988 (0.2921)	-55.576**(0.0001)	I(1)
SP	-2.034 (0.2773)	-55.259**(0.0001)	I(1)
PP			
FP	-1.988 (0.2921)	-55.561**(0.0001)	I(1)
SP	-2.022 (0.2773)	-55.476**(0.0001)	I(1)

Source: *Author's compilations. ** indicates significance at 5% level. SP and FP represent spot price and futures price, respectively*

Cointegration test

The table 4 presents the lag length selected by employing VAR lag length criteria. The selection of the lag length is as per the Akaike info criterion (AIC). According to VAR lag-length criteria, 6 lags have been selected. Table 5 presents the results of bound test. The results of bound test indicate that the null hypothesis of no cointegration can be rejected against the alternative hypothesis at 5 per cent level of significance. The values of F-Statistics are 21.357 and 20.7777 which are greater than the value of upper critical bound and indicate the presence of long term cointegration between the futures and spot prices as well as between the spot and futures prices of gold.

Table 4 Lag Length Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	713.027	NA	5.71E-14	-13.46719	-13.31553	-13.40573
1	1373.66	1233.173	3.89E-19	-25.36487	-24.30329*	-24.9347
2	1434.42	106.4898	2.44e-19*	-25.83666	-23.86514	-25.03776*
3	1458.84	40.00065	3.10E-19	-25.61607	-22.73462	-24.44845
4	1496.07	56.71901	3.12E-19	-25.63934	-21.84797	-24.103
5	1537.7	58.68466	2.96E-19	-25.74666	-21.04536	-23.8416
6	1587.39	64.35459*	2.47E-19	-26.00734*	-20.39611	-23.73356

Source: *Author's Calculations*

Table 5 Bound Test Results

Dependent Variables	F-Statistic Value	Significance Level	I(0)	I(1)
SP	25.927**	5%	2.62	3.79
FP	25.555**	5%	2.62	3.79

Source: Author's estimations. ** indicates significance at 5% level. SP and FP represent spot price and futures price, respectively.

Long run Estimates

After examine the presence of cointegration relationship between variables, coefficients of long run relationship are estimated. The table 6 indicates the results of long run relationship between futures price and spot price as well as spot price and futures price of gold. The results suggest that spot price is positively and significantly impact to the futures price of gold at 5 per cent significance level. Similarly, futures price is positively and significantly impact to the spot price of gold at 5 per cent significance level. Both the variables move together in the long run.

Table 6 Long run Estimates

Variables	Coefficients	Std. Error	T-Statistic	Probability
D.V.-futures price				
SP	1.001**	0.0001	993.763	0.0000
Constant	-0.005	0.01	-0.473	0.6362
D.V.-spot price				
FP	0.996**	0.001	993.763	0.0000
Constant	0.035**	0.0101	3.439	0.0006

Source: Author's estimations. ** indicates significant at 5% significance level. FP and SP stands for futures prices and spot prices.

The Error Correction Model and Short run Dynamics

The results of error correction model are presented in the table 7 and 8. The values of error correction term are -0.076 and -0.057 which are statistically significant with negative sign. The error correction term is the speed of adjustment towards the long term equilibrium which states that the whole system returns to long term equilibrium at the speed of 7.6 per cent in case where futures price are dependent (Ahlia et al., 2017). The speed of adjustment is 5.7 per cent in case of where spot prices are dependent variable. The results confirm that both the prices make adjustment towards the long run equilibrium. Thus, in the long run, there exists bi-directional causality between spot and futures. This finding is consistent with the cointegration test's inference, that there must be a long term causal relationship in at least one direction. But the error correction term is greater in case where futures price are dependent than the case where spot prices are dependent variable. Thus, the futures prices make more adjustment than the spot prices. As a result, spot price leads to futures prices in the long run. The short run causality is indicated by the short run coefficients. The short run coefficients of spot and futures prices with lag 5 impact the futures prices and spot prices. Table 9 shows the outcomes of Wald test. Wald test results show the joint impact of all the short run coefficients. The values of F-statistics and Obs*R-squared are significant in case of both futures and spot prices which reveal the existence of bidirectional causality between spot and futures prices in the short run.

Table 7 Short term estimates (futures prices as dependent variable)

Variables	Coefficients	Std. Error	T-Statistic	Probability
ΔFPt-1	-0.44**	0.023	-18.883	0.0000
ΔFPt-2	-0.232**	0.025	-9.31	0.0000
ΔFPt-3	-0.084**	0.025	-3.358	0.0010
ΔFPt-4	-0.074**	0.024	-3.007	0.0030
ΔFPt-5	-0.082**	0.022	-3.777	0.0000

ΔSP	0.752**	0.02	37.484	0.0000
ΔSPt-1	0.371**	0.027	13.776	0.0000
ΔSPt-2	0.183**	0.028	6.551	0.0000
ΔSPt-3	0.127**	0.028	4.561	0.0000
ΔSPt-4	0.08**	0.026	3.045	0.0020
ΔSPt-5	0.08**	0.02	3.924	0.0000
ECTt-1	-0.076**	0.012	-6.537	0.0000

Source: Author's computations. ** indicates significance at 5% level. SP and FP represent spot price and futures price, respectively.

Table 8 Short term estimates (spot prices as dependent variable)

Variables	Coefficients	Std. Error	T-Statistic	Probability
ΔSPt-1	-0.442**	0.019	-22.847	0.0000
ΔSPt-2	-0.225**	0.021	-10.804	0.0000
ΔSPt-3	-0.101**	0.021	-4.797	0.0000
ΔSPt-4	-0.056**	0.02	-2.779	0.0060
ΔSPt-5	-0.035**	0.015	-2.235	0.0260
ΔFP	0.43**	0.011	37.485	0.0000
ΔFPt-1	0.564**	0.015	36.401	0.0000
ΔFPt-2	0.269**	0.018	14.525	0.0000
ΔFPt-3	0.101**	0.019	5.352	0.0000
ΔFPt-4	0.073**	0.018	3.959	0.0000
ΔFPt-5	0.073**	0.016	4.442	0.0000
ECTt-1	-0.057**	0.009	-6.447	0.0000

Source: Author's computations. ** indicates significance at 5% level. SP and FP represent spot price and futures price, respectively.

Table 9 Wald test results

	ΔFP	ΔSP
F-statistic	242.6151**(0.0000)	533.1296**(0.0000)
Obs*R-squared	1455.691**(0.0000)	3198.777**(0.0000)
Degree of Freedom (d.f.)	6	6

Source: Author's computations. ** indicates significant at 5% significance level.

Diagnostic Tests: The ARDL model have passed a series of diagnostic tests such as Breusch-Godfrey LM test for serial correlation of residuals and CUSUM test for stability of the model. The results of LM test shows that there is no evidence of serial correlation in the residuals of both cases. The table 10 shows the results of Breusch-Godfrey LM test.

Table 10 Breusch-Godfrey LM test results

	ΔFP	ΔSP
F-statistic	1.676(0.123)	1.753(0.105)
Obs*R-squared	10.091(0.121)	10.549(0.103)

Source: Author's computations.

The research estimates the stability of the model by applying cumulative sum (CUSUM) plots shown in Figures 1 and 2. The plot of the CUSUM test stays within the critical bounds of the 5 per cent, indicating that coefficients are stable during the sample period. Thus the model fulfills all the econometric requirements.

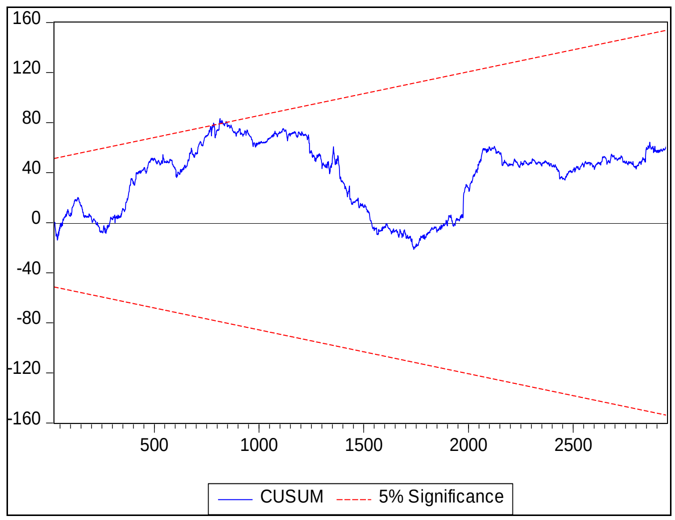

Figure: 1 *Plot of CUSUM test of residuals of futures prices*

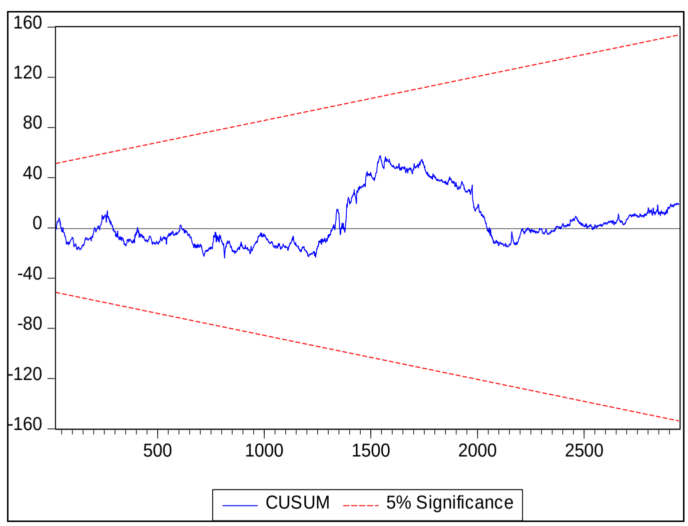

Figure: 2 *Plot of CUSUM tests of residuals of Spot prices*

Toda and Yamamoto Approach: The Toda-Yamamoto approach is conducted applying VAR at level with k and d_{max}. From the outcomes of unit root test d_{max} is 1. The optimal lag length (k) by applying AIC is 6. The following table 11 depicts the results of Toda and Yamamoto test. The results show that both the null hypotheses of "no granger causality from spot price to futures price" and "no granger causality from futures price to spot price" can be rejected at 5 per cent level of significance. This implies that there exist bidirectional causality between gold's futures and spot prices as well as spot and futures prices in the long run. The outcomes of Toda and Yamamoto test are in line with the results of ARDL Model.

Table 11. Toda and Yamamoto test results

Hypothesis	Chi-Square Statistic (d.f)	Prob.	Decision
FP does not Granger-cause SP	1210.043**(6)	0.0000	Reject
SP does not Granger-cause FP	29.762**(6)	0.0000	Reject

Source: Author's calculations. ** indicates significant at 5% significance level. SP and FP represent spot price and futures price, respectively.

IV. Conclusion

This study analyzed the lead-lag relationship between spot and futures markets of gold traded on MCX by utilizing ARDL model during period from January 2009 till December 2019. Toda and Yamamoto procedure of Granger causality is utilized to check the robustness of ARDL model. ARDL model indicates long run relationship between futures and spot prices. Thus, both the markets move together in the long run. Thus, the existence of relationship between spot and futures markets as well as between futures and spot markets of gold rejects the null hypothesis (H_{01}).The error correction model is applied to examine the long run causality and short run dynamics. The results of error correction model provide the confirmation of bidirectional causality between spot and futures markets which leads to the rejection of null hypothesis (H_{02}). However, spot prices with high magnitude lead to the futures prices. These are consistent with the findings of Srinivasan and Ibrahim (2012).The outcomes of Toda and Yamamoto test show the existence of bidirectional causality between futures and spot prices as well as spot and futures prices and reconfirm the results of error correction model.

The study is relevant to investors, researchers and the academia. This study contributes to the market efficiency and lead-lag related literature for commodity markets as it analyzes the lead-lag relationship between futures market and spot market of gold by employing ARDL approach that allows to deal with some technical problems in data. It determines the leader market which helps investors to decide their investment and arbitrage strategy. This type of study can be done in future with regard to different commodities and taking more study period. The further research can be conducted by applying other empirical methods such as NARDL and quantile regression.

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LARGE VENDOR'S CAPABILITY AND RELATIONSHIP MANAGEMENT: AN IDEA OF WINNING CONTRACT MECHANISM IN B2B

Sumit Saha* Kunal Joshi**

Purpose: *Organizations, big or small, spend money to keep up with their business operations. This requires them to deal with many other business units called vendors/suppliers to help them with necessary input resources for their business operations. In Business-to-Business transactions, organizations deal with each other to purchase goods and services. These associations work on long-term business relationships. Vendor organizations hire sales teams and relationship managers to work with the client organization in order to maintain healthy business relationships. Purpose is to compare these two factors – sales person's relationship and Vendor's capability to check which of the two factors influences the awarding of contracts from the clients.*

Design/ Methodology/ Approach: *The study has been conducted by observing B2B commercial transactions and how organizations engage with each other in B2B purchases. The study focuses on interviewing buyers from different companies, varying in employee size from 200 employees to over 10000 employees, randomly selected and recording their responses. The data was then tabulated and processed to check normality and outliers and the correlations of the parameters studied, which helps validate our hypothesis drawn for the comparative study between Salesperson relationship and vendor capability.*

Findings: *There is a relationship that exists between the vendors and big organizations purchase decisions. It is the vendor organization as a whole that has built its capability and experience over the years has been successful in maintaining business relationships with the client.*

Originality/ Value: *Researchers found the link and compared Sales person relationship and vendor capability, and check the correlation between the two factors also, the influence of each of these factors in winning sales contracts.*

Keywords: *B2B sales, large purchase, B2B purchase, Vendors capability, Salesperson's relationships, Mahalanobis Distance Test, Sales contract*

JEL Classification Code: *M10*

Business to Business (B2B) selling is a process in which one business entity commercially transacts with another to exchange goods and services. This process is also called as Business Buying or Organizational Buying. In this process, one organization buys goods and services from another organization. It is formally defined as a problem-solving and decision-making process where one organization creates a buying situation when it perceives a business problem and understands that the problem could be solved by creating a buying decision. Organizational buying includes all the activities where organizational members define the buying situation and then executed the buying decision by critically evaluating goods and services out of selected brands and suppliers.

B2B sales process differs from B2C (Business to consumer) business transactions. Unlike B2C, large-scale B2B transactions are done with a more rational approach to decision-making with limited (or no) scope for emotional decisions.

The Process of B2B selling is profound and well-evolved over time. Many detailed studies and research have been conducted in the field of Sales relationships and their influence in winning B2B businesses. The process has seen significant improvement in the last few decades. In this research we attempt to understand the evolution of the process over time.

Vendor capability is very important for B2B sales process. As the complexity of Businesses increases qualification processes for vendor engagement also becomes more complex.

This study focuses on a comparing Sales person relationship with Vendor capability. The study tries to make a neutral comparison between the two factors and tries to arrive at evidences as to which of the factors (Sales person relationship or Vendor capability) hold greater influence in winning sales contracts.

Sales person relationship: Every Business unit assigns personnel who become Account manager / Relationship manager for the client. The study tries to study the dynamics of such relationships and tries to hypothesize if there are any correlation for relationship of Account management / Relationship and client's decision to award contract on relationship grounds.

* **Registrar & Associate Professor, Dayananda Sagar Business School (DSBS), Bangalore, Karnataka, India**

** **Research Scholar, Dept. of Management, Mysore University, Karnataka, India**

It has been observed that when sales people change jobs they try to poach the client to the new company they work with. But in reality, the success of such and effort is always not favorable. The personnel generally fail to poach the business to the client completely. This implies that there are certain parameters that bind the vendor to a client. This study dives into some of these aspects to derive understanding on this subject.

Vendor Capability: In B2B sales the matrices for selection of vendor are usually well defined and are exhaustive in nature. Selection of Vendor is a very important function of Purchase teams. Organizations are evolving their purchase teams as a strategic function as Vendor management is getting more sophisticated over time. Vendor selection is driven through a series of qualification criteria. It is through these methods that Vendor client relationship gets established are strived for sustenance for long time. Our study discusses with personnel from Purchase functions of different organizations to understand their processes for selection of vendors. Our study has interestingly come up with some responses that Vendor selection have almost become an automated process with ERP solutions managing most of the Vendor selection criteria.

Many researchers over time have proposed several models for understanding B2B sales engagement process. These models try to evaluate purchase function as a strategic function which would be strongly aligned to capabilities offered by the vendor as the model depends on the fact that the B2B engagements are long term and strategic in nature.

B2B contracts are generally long term in nature and as the contracts occur long-term, the clients expect the vendors to commit to the contract. Therefore, while selecting the vendors the clients are more interested in understanding and evaluating vendors on the grounds of their years of business operations, technical capabilities, and financial capabilities. This process is followed to ensure that Vendors can commit to long-term contracts.

I. Review of Literature

According to the authors (Valtakoski. A, 2015), the journey of buyer – supplier relationship has been a very long and challenging one over the years. This journey was characterized by lots of challenges over time. However the challenge is bigger when there is intangibility included in the relationship and buyer is not able to justify the ROI of his purchase to his management. The author also brings a case study of a finish software company which provided simple helpdesk tools to consulting services. It was difficult for the buyers to justify the tangibility aspect of consuming products / services from such vendors. The author notes that it becomes difficult for seller to establish trust with the buyer. In such cases, it is best for seller to establish trust. The buyer also needs to understand the benefits of consuming services / products from the seller and potential benefits it brings to the buyer. As per Saha, S., and Kar, S. (2021a) salesperson's productivity is also dependent upon different factors.

In the case of large institutional purchases, Request for proposals (RFP) is often sought by the major institutions for their purchase requirements. The authors (Saito, et al, 2012)tries to contribute the process of RFP by focusing on how to make the Non-functional Requirements (NFR) of RFPs. The author conducts his study on Japanese market by picking RFPs of 29 institutions. The author follows a methodology wherein he picks the relevant NFR metrics, categorizes them, defines the grading of the matrix, and defines scoring systems. With this, they build a model for NFRs in RFPs. This model has helps in identifying poorly defined/written NFRs in RFP, which recommends that institutions to refine their RFPs to improve their NFRs before seeking proposals from vendors. Saha, S. and Kar, S. (2021b) mentioned in their research that a salesperson's performance depends upon several internal and external factors.

On the other hand, another author (Krishnan .M. S, 2018) refers to concept of requirement prioritization. In this paper also software industry reference is taken. According to him the RFP process requires client to prioritize their requirement carefully otherwise the vendor's developers get confused on the releases of the software development. After studying different methods like Value prioritization, Analytical, hierarchical process, cumulative voting etc. the author has proposed a simple model for prioritizing the requirements of any RFP that can help the supplier to effectively manage their delivery processes.

There is an interesting study by authors (Bernardos, et al, 2020) which studies the supplier selection process in a new light using principles of Game theory. According to the researchers here they considered a construction firm which requires dealing with lots of suppliers for the supply of materials for their projects. They first applied the traditional quote submission – selection process and found that best price could be reached at 0.9x material price. While researching they found that the best price could be attained up to 0.82x of the material price. They further applied principles of game theory and auctioning and found that the pricing benefits could reach up to 0.75x of the material price. Initially the management of the firm was reluctant to implement the game theory experiment, however, they were convinced with the results when best contract could be signed with the suppliers.

Nyadzayo et. al (2018) bring out the concept of Value based selling in B2B Sales. The authors prepare the paper by defining the constructs like Willingness to pay premium (client is ready to pay premium to a particular supplier for availing his service, consideration set size (the set of vendor brands that the client is ready to work with). The study reveals that the client is ready to pray premium for engaging with suppliers that they could be comfortable with, and Client and vendor engage in business to avail mutual benefits. However, these exchanges come with additional opportunity costs.

Authors (Keranen, et al, 2018) bring out the concept of Value Driven exchange between business units. Value driven exchanges are used by organizations which are driven by organization goals for business benefits. The concept of Value driven exchange is studied under the light of – Sales, Purchase and dyadic. Sales functions have to apply the principle of Value exchange by focusing on revenue generation for company and reducing costs for the clients. From purchase perspective, the buyer takes help of vendors to maintain their purchase processes. As per the dyadic principles, both buyers and sellers exchange value by co-creating products and services.

Some of management experts like Liu, et al, 2018, believe that trust and healthy relationships between buyers and sellers are important.

The Author (Dion, et al, 1995) emphasizes that TRUST is very important to ensure long term sustained Buyer – Seller relationships. One of the key inferences that the author states that Sales person's Personality alone is not decisive in sales performance.

Sales Skilling and knowledge updating is a very important to sales personnel. Katsikeas, et al, (2018) write in his paper about the some of the types of skilling which includes exploratory learning where in Sales personnel grooms themselves in disciplined and self-regulated manner for their organic knowledge updates.

Marketing plays a crucial role in ensuring that a healthy relationship is maintained between buyers and sellers. Barac, et. al (2017), states that Relationship marketing between the buyers and sellers can be achieved by maintaining commitments done to buyer by the seller. The author goes on to state that depending on how the commitments are honored, the relationship quality is decided. Bilateral communication is very crucial to maintain healthy business relationships.

Some of the research focus on Reciprocal Feedback and its importance in B2B relationships. According to the authors (Murphy, et al, 2017) Reciprocal feedback measures the frequency of responses to previous messages rather than frequency of initiating communications. With increase in the frequency of contact, the bond between buyers and suppliers strengthen thereby their relationships improve Reciprocal feedback is critical in maintaining positive relationships between buyers and sellers with Satisfaction. Bidirectional communication helps in enhancing reciprocal feedback between buyers and sellers. Number of parties involved in bi directional communication would decide on the mode of communication that would be used.

Robert Cialdini (2007) in his book "Influence – Psychology of persuasion" brings out some of the key social exchange concepts. He tries to explain the power of reciprocation whereby the buyer would be obliged to favor the seller in case if he has sought any help from the sellers earlier. He also brings out the concept of social proof where in it is explained that perception of what others think becomes key to evaluation of the purchases. He also says that sometimes scarcity is used as a tool by the sellers which will bring sense of urgency to buyers in their buying process.

Spiro, et. al (1979), is one of the pioneers who brought in the concept of influence in selling. The premise for the study was based on industrial markets where sales people deal with different stake holders for their business requirements. For influencing, a sales person has to develop missionary like zeal to close sales. He has to have faith in his product / services and have confidence in its value proposition. The persuasive aspect of the sales should be developed by sales people in Influence based selling. The sales training associated with such methods also needs to be intense with lot of case studies, storytelling, and podcasts to be used for training sales people for this kind of selling.

Researchers have worked towards understanding the importance of being a key supplier. (Uluga, et al, 2006) suggests that Key customers are involved with the clients from the very initial product development stage. This gives the leverage of being the key supplier as their knowledge and experience on the client process is higher than others. The authors focused on key supplier relationships as units of analysis. It is observed that although cost factors take a prime position for ensuring the key supplier status, however cost alone may not be adequate for ensuring Key supplier status, other value drivers like support, personal interaction etc. are key to ensuring favorable position with buyers.

Reck, et al, 1988, explains the evolutionary process of purchase function. He goes on to explain how, purchase function moved on from being just a standalone support function to becoming an integral part of corporate strategy and working towards greater strategies of organization in ensuring profitability. However to reach such a level, purchase functions should strive to develop its own capabilities and competencies in order to be a part of the strategic function of organization. Along with the teams associated with purchasing even the management needs to work strongly to ensure that the purchase function qualifies to become part of company's core strategy.

Research Gaps:

Researchers did not find studies that try to link and compare Sales person relationship and vendor capability and check the correlation between the two factors. Researchers, therefore are trying to foray into this area with our research and try to study the influence of each of these factors in winning sales contracts.

The objective of the study:

- To compare the two parameters Salesperson relationship and Vendor's capability.

- The study tries to use correlational methods to check on any correlation that could exist between the two parameters and check which of the parameters are dominant in winning sales contract.
- The study performs correlational analysis between Relationship variables and Vendor capability variables. The study tries to understand the influence exerted by Sales relationship and Vendor capability in winning sales contracts.

Hypotheses:
As the study focuses on Relationship and capability, we have formulated Hypotheses on the Relationship and Vendor capability parameters. We are also checking one hypothesis on the Purchase process aspect and one hypothesis on the salesperson relationship and the influence it exerts on decision-making for sales contracts.
H1:, H2:, H3:, H4:

Statements
- Client will place order with existing vendor based on his business relationship.
- Client will place order with any vendor based on the technical capabilities.
- Client will place order with existing vendor based on the relationship with relationship manager.
- Multiple vendor evaluation disrupts the existing vendor renewal

II. Research Design and Methods

Variables identified were mostly classified under Relationship, Capability and Purchase process variables. Questionnaire has been designed on 1-5 Likert like scale.

Table 1: Variables and definitions

Relationship Variables	
Q1_Vendor_help_in_ requirementdiscovery	Existing vendor help in need identification.
Q2_Knowledgeshare_vendor	Existing vendor shares regular knowledge updates.
Q9_Satisfiedwith_ existingvendorsupport	Client happy with existing vendor support.
Q10_Renewwithexistingvendor	Client is ready to renew contract with existing vendor.
Q12_Strongvendorrelationship	Client enjoys level business relationship with vendor.
Q13_AM_Jobswitch	If existing relationship switches job to competition will client churn business to new company?
Vendor Capability Variables	
Q6_Existingvendor_ givebestproposal	Existing vendor gives best service
Q7_PriceWinsdeal	Capable vendor gives best price – New / Existing
Q8_Rightsolutionwindeal	Capable vendor gives best solution – New / Existing
Q11_Contractto_Newvendor	Client is willing to offer contract to new vendor based on his capability.
Purchase Process Variables	
Q3_NDA_with_Vendor	Client signs up NDA with vendor during RFP process.
Q4_Multiple_Vendor_check	Client evaluates multiple vendors before awarding contract.
Q5_Checkfinance_vendor	Client seeks financial data of participating vendors to engage for long term contracts.

Sampling Method:
The population under consideration is a set of organizations varying in employee size from 200 employees to over 10000 employees. The central criterion for selection of respondents was that the company should have a purchase panel/purchase department with at least one influencer and decision-maker. The IT officers were mainly influencers who were evaluating vendors and were recommending the selection. The Decision makers would commercially negotiate with vendors and take decision on final vendor to whom the contracts were awarded. In many cases IT department was only the final decision makers. Over 70% of the respondents were from IT department.

Sample Size Calculation:
The population size is unknown in the given case. Therefore, the sample size identification was a challenge. In such cases sampling by proportion is one of the methods used for sample size determination.
With this logic, if we consider a 95% confidence interval and standard error of 5%, with random sampling method of equal probability of selection (p = q = 0.5) then, we can compute the sample size by the following method.
Standard error = Z * square root (p*q / n); Standard error = 0.05.

Z = 1.96 (for 95% confidence interval)
This would imply:
Sample size (n) = ((1.96*1.96)*(0.5*0.5))/ (0.05*0.05)
Sample Size (n) = (0.9604/0.0025) = 384.16
Therefore, the Sample size can be anywhere close to 384.
In our study the Samples size was closed at 381 after data cleaning.

Relationship-oriented Sales process adaption:
The B2B sales process have slowly moved from Transactional process to a more strategic relationship orientation over time. This has evolved to a more Value-based strategic collaboration and relationship management between the buyers and sellers. Over a period the sellers strategically align their sales processes to the buying processes of the strategic customers (Viio, et al, 2016).

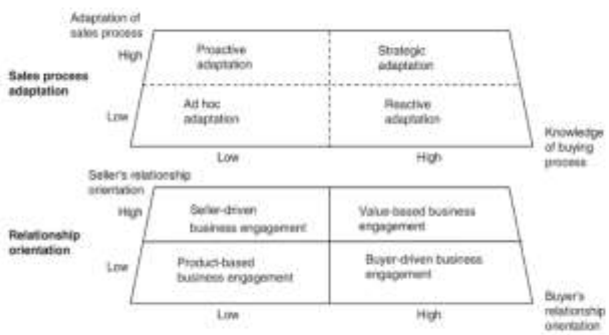

Figure 1: *Framework for relationship-oriented sales process adaption*

Dixon et al, 2011) in their book Challenger Sales proposed a sales methodology. They suggested that the Solution sales approach and methods by which sales people can take control of Sales process by engaging the client in commercial teaching and consulting. The authors suggest the method of commercial teaching whereby, the client is taught the advantages of adapting the solution which the client would not be aware of. The client is challenged of his knowledge and the advantages of the solution is demonstrated which prompts the client to try the solution.

III. Result and Discussion

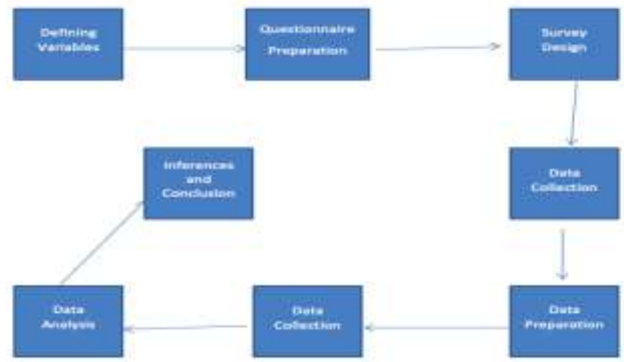

Fig 2: Data Analysis Framework

Missing Data Analysis:
We studied the data on Missing at a random method to check on missing data, we could not find any pattern for the occurrence of missing data. After omitting the missing data, the sample has been reduced to 381. Around 36 records were canceled for the study due to missing data.

Normality Check:
We did a Skewness analysis of the data and found the data to follow a normal distribution. The following is the skewness analysis of the data.

Table 2: Normality data

Question	Skewness	Std Error	Confidence interval
Q1_Vendor_help_in_requirementdiscovery	-0.255	0.249	95%
Q2_Knowledgeshare_vendor	-0.606	0.249	95%
Q3_NDA_with_Vendor	-2.169	0.249	95%
Q4_Multiple_Vendor_check	0.63	0.249	95%
Q5_Checkfinance_vendor	-1.085	0.249	95%
Q6_Existingvendor_givebestproposal	0.096	0.249	95%
Q7_PriceWinsdeal	0.803	0.249	95%
Q8_Rightsolutionwindeal	0.005	0.249	95%
Q9_Satisfiedwith_existingvendorsupport	-0.478	0.249	95%
Q10_Renewwithexistingvendor	-0.187	0.249	95%
Q11_Contractto_Newvendor	-0.251	0.249	95%
Q12_Strongvendorrelationship	0.016	0.249	95%
Q13_AM_Jobswitch	1.29	0.249	95%

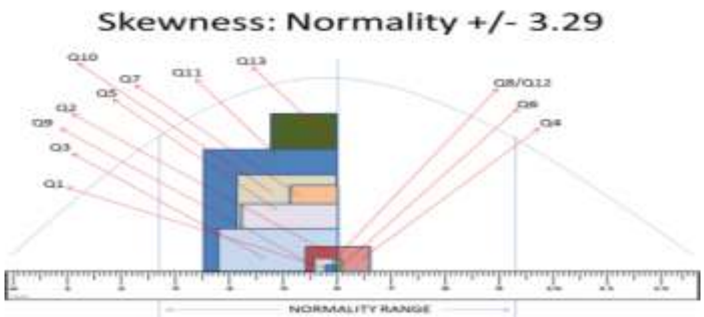

Fig 3: *Normality*

Kim (2013) quotes, that the Kolmogorov–Smirnov and Shapiro–Wilk checks would be "unreliable" with larger samples, i.e. >300. Essentially, the data would be "sensitive". Mayers (2013, p. 53) thinks that the skewness values should have a cut-off of ±1.96 for samples smaller than 50, cut-offs of ±2.58 for samples ranging from 51 to 100 and a cut-offs of ±3.29 for samples greater than 100. From the data processed, SPSS Descriptive analysis for the skewness values are all < ±3.29. So we conclude that the data are normal (Saha, et al, 2021, and Saha S, 2023).

Multivariate Outlier Analysis (Mahalanobis distance test):
The data points were processed for Multivariate Outlier Analysis and the test was extended to Mahalanobis distance test. After the test is conducted, The p-values obtained are greater than 0.001. This implies that as per Mahalanobis distance test there are no outliers. The data is good for processing.

Also, the Z test results indicate that the independent variables have Z value less than 3.96, which again implies that there are no outliers.

Correlation analysis:
We conducted the correlation analysis for the data. The table below displays the result of the correlation coefficients of all variables. The data shows no multi collinearity between the variables. We do not see any correlation greater than .9 between any two variables. This implies that there is no correlation between the variables.

Table 3: Correlation table

		Q1_Vendor_help_in_requirementdiscovery	Q2_Knowledgeshare_vendor	Q3_NDA_with_Vendor	Q4_Multiple_Vendor_check	Q5_Checkfinance_vendor	Q6_Existingvendor_givebestproposal	Q7_PriceWinsdeal	Q8_Rightsolutionwindeal	Q9_Satisfiedwith_existingvendorsupport	Q10_Renewwithexistingvendor	Q11_Contractto_Newvendor	Q12_Strongvendorrelationship	Q13_AM_Jobswitch
Q1_Vendor_help_in_requirementdiscovery	Pearson Correlation	1	.391**	-.088*	-.287**	-.244**	-.081	-.280**	-.173**	-.141**	.151**	.086*	.227**	.079
	Sig. (1-tailed)		.000	.042	.000	.000	.057	.000	.000	.003	.002	.046	.000	.062
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q2_Knowledgeshare_vendor	Pearson Correlation	.391**	1	.061	-.170**	-.139**	.172**	-.079	.079	-.013	.253**	.160**	.188**	-.033
	Sig. (1-tailed)	.000		.119	.000	.003	.000	.062	.063	.401	.000	.001	.000	.262
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q3_NDA_with_Vendor	Pearson Correlation	-.088*	.061	1	.200**	.254**	.193**	.044	.033	-.087*	-.144**	.109*	.022	-.139**
	Sig. (1-tailed)	.042	.119		.000	.000	.000	.198	.261	.046	.002	.017	.331	.003
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q4_Multiple_Vendor_check	Pearson Correlation	-.287**	-.170**	.200**	1	.318**	.000	.276**	.165**	.216**	-.253**	-.039	-.068	-.017
	Sig. (1-tailed)	.000	.000	.000		.000	.500	.000	.001	.000	.000	.227	.092	.371
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q5_Checkfinance_vendor	Pearson Correlation	-.244**	-.139**	.254**	.318**	1	-.165**	-.054	.162**	.230**	-.389**	-.104*	-.221**	-.010
	Sig. (1-tailed)	.000	.003	.000	.000		.001	.147	.001	.000	.000	.022	.000	.425
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q6_Existingvendor_givebestproposal	Pearson Correlation	-.081	.172**	.193**	.000	-.165**	1	.046	.054	-.076	.391**	.081	.121**	.110*
	Sig. (1-tailed)	.057	.000	.000	.500	.001		.185	.148	.070	.000	.057	.009	.016
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q7_PriceWinsdeal	Pearson Correlation	-.280**	-.079	.044	.276**	-.054	.046	1	.190**	.047	-.290**	-.036	.022	-.111*
	Sig. (1-tailed)	.000	.062	.198	.000	.147	.185		.000	.181	.000	.240	.333	.015
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q8_Rightsolutionwindeal	Pearson Correlation	-.173**	.079	.033	.165**	.162**	.054	.190**	1	.167**	.024	-.052	.080	-.053
	Sig. (1-tailed)	.000	.063	.261	.001	.001	.148	.000		.001	.318	.156	.059	.151
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q9_Satisfiedwith_existingvendorsupport	Pearson Correlation	-.141**	-.013	-.087*	.216**	.230**	-.076	.047	.167**	1	.107*	-.324**	.169**	.012
	Sig. (1-tailed)	.003	.401	.046	.000	.000	.070	.181	.001		.018	.000	.000	.406
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q10_Renewwithexistingvendor	Pearson Correlation	.151**	.253**	-.144**	-.253**	-.389**	.391**	-.290**	.024	.107*	1	-.041	.172**	-.036
	Sig. (1-tailed)	.002	.000	.002	.000	.000	.000	.000	.318	.018		.214	.000	.243
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q11_Contractto_Newvendor	Pearson Correlation	.086*	.160**	.109*	-.039	-.104*	.081	-.036	-.052	-.324**	-.041	1	-.070	.138**
	Sig. (1-tailed)	.046	.001	.017	.227	.022	.057	.240	.156	.000	.214		.086	.004
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q12_Strongvendorrelationship	Pearson Correlation	.227**	.188**	.022	-.068	-.221**	.121**	.022	.080	.169**	.172**	-.070	1	.121**
	Sig. (1-tailed)	.000	.000	.331	.092	.000	.009	.333	.059	.000	.000	.086		.009
	N	381	381	381	381	381	381	381	381	381	381	381	381	381
Q13_AM_Jobswitch	Pearson Correlation	.079	-.033	-.139**	-.017	-.010	.110*	-.111*	-.053	.012	-.036	.138**	.121**	1
	Sig. (1-tailed)	.062	.262	.003	.371	.425	.016	.015	.151	.406	.243	.004	.009	
	N	381	381	381	381	381	381	381	381	381	381	381	381	381

ANOVA Analysis
For Relationship variables the Significance value is 0.003 which is less than 0.05. This shows some significance in data as it is less than 0.05. We therefore conducted Post Hoc analysis of the same and find that all lower and upper bound values of the data are non-zero and are hence heterogeneous and reliable.
For Capability variables the Significance value was observed to be 0.225 and hence there is no significance observed as the value was more than 0.05. However Post Hoc analysis for the data also signifies that the data is Heterogeneous in nature.

Hypothesis evaluation and inference:
H1 (Existing vendor relationship gets the business contracts): for this hypothesis from the correlation matrix derived from the data analysis, we check the Sig-value (P Value) of Variables Q9_Satisfiedwith_existingvendorsupport and Q10_Renewwithexistingvendor. This implies that if the client is satisfied with the support provided by the existing vendor, then they are most likely going to renew contracts with the same existing vendor.
H2 (Vendor capability gets the business contract): for this hypothesis from the correlation matrix derived from the data analysis, we check the Sig Value (P Value) of Variables Q8_Rightsolutionwindeal and Q11_Contractto_Newvendor. This implies that if the client is satisfied with right solution, he would also be willing to roll the contract to new vendor.
H3 (Personal relationship helps in obtaining business contract): for this hypothesis from the correlation matrix derived from the data analysis, we check the Sig Value (P Value) of Variables Q12_Strongvendorrelationship and Q13_AM_Jobswitch. This implies that even if the client is having good relationship with the vendor and his Account Manager, would he be ready to roll the contract if the same account manager switches job and represents a new vendor to the same client.
H4 (Multiple vendor evaluation disrupts the existing vendor renewal): for this hypothesis from the correlation matrix derived from the data analysis, we check the Sig Value (P Value) of Variables Q4_Multiple_Vendor_check and Q10_Renewwithexistingvendor. This implies that if the client is evaluating multiple vendors, then there is a chance that existing vendor's chances of winning the deal is disrupted or less.

Table 4: The Significant Value (P-values) of the Hypothesis test

Hypothesis	Statement	Sig Level	Decision Clause	Decision
H1	Existing relationship gets the business contract	0.018	< 0.05	Null Hypothesis Rejected
H2	Vendor capability gets the business contract	0.157	> 0.05	Null Hypothesis Accepted
H3	Personal relationship helps in obtaining business contract	0.009	< 0.05	Null Hypothesis Rejected
H4	Multiple vendor evaluation disrupts the existing vendor renewal	0.000	< 0.05	Null Hypothesis Rejected

Hypotheses Result & Business Inferences:
H1 (Existing vendor relationship gets the business contracts): from the P value obtained we can infer that the Hypothesis can be rejected. This would imply that Existing relationship between vendor and client may not be decisive for awarding contracts to existing vendors.
H2 (Vendor capability gets the business contract): from the P value obtained, we can infer that the Hypothesis cannot be rejected. This would imply that as long as all the purchase evaluation parameters of the client are satisfied, the client would be open to rolling the contract to the new vendor as well.
H3 (Personal relationship helps in obtaining business contract): from the P value obtained we can infer that the Hypothesis can be rejected. This implies that all the personal relationships with the Account Manager of the existing vendor may not be applicable for awarding contracts to him. This would also imply that the buyer purchase process is decisive in awarding contracts and not personal relationships.
H4 (Multiple vendor evaluation disrupts the existing vendor renewal): from the P value obtained, we can infer that the Hypothesis can be rejected. This would imply that if multiple vendors participate in the purchase process, the chances that the existing vendor can again win the contract may not be true. This would also imply that the buyer-purchase process is decisive in awarding contracts and not vendor relationships.

Findings and Inferences
- Data description: The tests performed on the data reveal the following findings: The normality test and Distance test infer that the data is normally in distributed. Also there are no practical outliers observed in the study.

- Multi-collinearity and correlation studies reveal that there are no significant relationships observed among the Variables.
- ANOVA results revealed that data is heterogeneous in nature.

The above data analysis infers that in the absence of a significant correlation between the variables it becomes difficult to conclude on the comparative study with which we started the research.

We started with the problem statement, where we tried to compare whether Vendor capability is more important or Relationship is more important in winning B2B Purchase decisions.

The Hypothesis results on relationship analysis clearly suggest that B2B purchase does not depend on Vendor relationships or Sales person relationships. The analysis implies that the data obtained is not sufficient to conclude that purchase decisions in B2B purchase scenarios are influenced by the Relationship between the Vendor and Client or Sales person's relationship with the client.

This implies that Purchase is more process driven it evaluates the vendors strongly on its capability to deliver on the purchase terms. The Data analysis and the Hypothesis testing results obtained indicate that evaluating vendors by their capabilities for awarding contracts is a more pragmatic way of supplier selection.

Managerial Implications:

This research has been done with the intention of finding the influence of relationships and vendor capability on client contracts. Today every employee is driven by key performance indicators (KPI). These metrics are key drivers for purchase decisions. Some of the primary drivers include:

- Cost of goods/services
- Quality of goods/services
- Supply / implantation timelines.
- Post sale support and customer experience.

The procurement teams are measured on performance on the above factors continuously. To keep up on this they are constantly working on onboarding vendors that can help them achieve their KPIs. Over years the procurement function has evolved and has become more process oriented. With the implementation of sophisticated ERP/ MIS systems the process of procurement is becoming more defined and system oriented.

In these conditions it becomes more imperative to study the dynamics of purchasing function. Not all problems of businesses are getting solved by automation. This study has tried to rake up both the pragmatic and emotional side of purchasing. However, over the years it is observed that purchasing is becoming more process-oriented and just as purchasing personnel are measured on KPI help in organizational profits, vendors are also measured on KPI.

The Corporate buying teams prepare KPI for Vendors and this calls for lots of competence and consistency from vendors to perform well to get sustained business from the clients. Our study focuses on understanding the level of influence exerted by capability and salesperson relationship and vendor capability in winning contracts.

Our study understands that the relationship aspect becomes less useful when the process orientation is high. Relationship managers become only the liaison personnel in such cases and the relationship is maintained at the organizational level. That is why almost every respondent in the study replied that they would not switch vendors when a relationship manager changes job. The relationship factor works only to manage relevant information and details supporting RFP stage. Once RFP is rolled out, it is the process and competence that take precedence.

During the RFP evaluation phase it is the vendor competence that will mostly help the Vendor to qualify in the selection process. The Vendor engagement rules of client and vendor's capability helps in qualifying the vendor. The capability and competence is measured by the vendor's ability to technically satisfy client's requirements and he ability to meet the pricing expectations of the client. Vendor is also evaluated on his turnover, organization size and processes/compliances that his company follows. Finally client support and post-sale servicing help vendors in maintaining their relationships with the client.

We have studied the implications of these two factors and their influence in winning client contracts. The study can be further developed into a model as a future scope which can help in analyzing the buyer's pattern of behavior and understand where the relationship can be leveraged and where capability can help in qualification.

Limitations:

This study has been done on the following limitations.

- This research was scoped keeping in mind the enterprises that would have at least 300 – 10000 employee size with a definite purchase panel consisting of at least one decision maker and one influencer in the panel.
- The focus was kept on IT, ITES, manufacturing, and Pharmaceutical sectors. Other sectors like education, consumer goods etc. we're not taken into consideration for the study.

Scope for Future research:

- This project can be further developed to study the subject in light of other influencing factors like management support, macro-economic factors, sector wise etc.
- The project can also be extended to study the phenomenon with startup ecosystems and large corporations.

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PROFITABILITY AND ASSETS QUALITY OF BANKS IN INDIA: A COMPARISON ACROSS OWNERSHIP

Rajesh Kumar*

Purpose: *This study aims to analyze and compare the profitability position and assets quality of various bank groups in India.*
Design/Methodology/Approach: *The paper uses the descriptive research design as it is based on quantitative data collected primarily from RBI's reports on "trend and progress of banking in India" for a period from 2010-11 to 2020-21. ANOVA has been applied to examine the significant difference among various bank groups.*
Major Findings: *The study found that coefficient of variation of 'return on assets' of foreign banks is the minimum followed by private sector banks. Return on equity of foreign sector banks indicated the highest CAGR among the bank groups during the study period. In general, the percentage of net NPAs to net advances of foreign banks remained the lowest followed by private sector banks.*
Originality/value: *The study is based on a topic of high relevance for entire banking sector in India. Hence, the study is expected to be beneficial for both research scholars as well as regulators in banking sector.*

Key Words: *Profitability of Banks, Quality of Assets, Non-performing assets, Capital adequacy, Banking sector*
JEL Classification: *GE21, G29, G20*

The banking system of a country plays a pivotal role in managing and promoting smooth flow of money between the savers of surplus funds and the investors. After liberalization, the banking industry underwent a shift. For the long term, all facets of the Indian banking business have been significantly impacted by the reform efforts. The RBI has permitted private players to join the fight in accordance with the Narshimham committee's recommendations. The dominance of public sector banks was challenged with the introduction of private sector banks and new generation banks, which were outfitted with cutting edge technology and professional management. Banks have become a key component of every economy as the most significant player in the money and capital markets in the financial system. Any nation's banking system is essential to its economic growth because it acts as a powerful financial intermediary. Banks mobilize deposits by expanding their branch networks in addition to providing a wide variety of deposit options with attractive interest rates that are tailored to the unique demands of depositors. Banks have become a key component of every economy as the most significant player in the money and capital markets in the financial system. The Industrial Development Bank of India (IDBI) is the principal financial institution in India that provides long-term loans to industrial sectors in a variety of ways, including term loans, stock purchases and underwriting, debentures, and bonds etc. Following are reasons why emerging nations like India need a strong financial sector: i) Eliminating the deficiency of capital formation: Enough capital formation must take place for an economy to achieve economic growth. Capital shortages in developing nations like India can only be resolved by banks. When a sound banking system is in place, the community's small deposits can be mobilised and made available for investment in lucrative industries. ii) Contributes to the creation of job opportunities: Banks assist businesses and industries by facilitating the financial resources. Entrepreneurship will manifest itself in a variety of settings and scales once the capital sho rtage problem is resolved. This would significantly boost employment and help in reducing the unemployment problem. iii) financial support to Industries: Commercial banks provides funding in variety of ways to small and medium-sized businesses (SMEs). They offer loans to companies in the manufacturing and service industries on a short-term, medium-term, and long-term basis. iv) Improves standard of living: People in developing countries are underprivileged, earn poor salaries and do not have enough money to purchase durable consumer goods. Commercial banks offer loans to consumers so they may buy things like furniture, refrigerators, and other household appliances. Loans for consumption-related activities assist to enhance the standard of living of the population in emerging countries. v) Supports the implementation of Monetary Policy: Commercial banks are necessary for the Reserve Bank of India (RBI) to implement a variety of economic policies and programme for the country's economic development. By directing funds from the surplus to the underdeveloped areas of the economy, commercial banks contribute in the growth of a nation's economy. The Reserve Bank of India (RBI) is able to efficiently control both inflation and the money supply through the banking sector. After the banking sector underwent reform, the bank became a strong economic pillar. The effectiveness of the government's economic policy is strongly influenced by the state of the financial sector. Commercial banks play a vital role in the growth of developing economies by lending to trade, industry, and agriculture as well as supporting capital formation and upholding national monetary policy.

*** Associate Professor, Dept. of Commerce, DAV College Pundri**

vi) Financial Support for Domestic and International Trade: Commercial banks provide financial support for both domestic and international trade. They also assist in transporting objects from one location to another. Additionally, they support the imports and exports of developing countries by providing foreign exchange facilities to both importers and exporters of manufactured goods. The Export-Import Bank of India, nationalised banks, large private sector banks, and foreign banks operating in India, all contribute to the process of global trade, allowing the country to compete on the global arena while also generating a large amount of foreign exchange for the country.vii) Loans in foreign currencies: Loans in foreign currencies are intended to be used to build new industrial projects that require the acquisition of capital goods and certain raw materials. We need access to the most recent technology and expertise in order to enhance our products and services and maintain our competitiveness in the global market. Banks offer support with the provision of loans in foreign currencies for the growth, diversification, modernization, and renovation of existing businesses. viii) Promotion of New Entrepreneurs: Development banks in India have also succeeded in creating a new class of entrepreneurs as well as spreading industrial culture in the country. Special capital and seed capital programs have been put in place to provide equity assistance to technically qualified new entrepreneurs who lack the financial resources to start their own business. Entrepreneurs in developing countries are reluctant to invest in new businesses and undertake innovations, mainly due to a lack of funds and a high probability of failure. Financial assistance from banks helps entrepreneurs realize their visions and write their own success stories by providing access to capital. ix) Balanced Growth: Modern financial institutions have expanded their operations across the globe. There are a number of large banks, such as State Bank of India, Punjab National Bank, Bank of Baroda and Canara Bank, which have consolidated their positions by merging with smaller banks in order to become global class institutions with a large capital base. It contributes to the expansion of banking activities in rural and semi-urban areas across the country. The expansion of banking operations throughout the country contributes to achieving balanced regional development by encouraging the development of rural areas.

The commercial banks can be broadly classified in to Scheduled Commercial Banks and Non-Scheduled Commercial Banks. **1) Scheduled Commercial Banks:** Scheduled Banks refer to those banks which have been included in the Second Schedule of Reserve Bank of India Act, 1934. In India, scheduled commercial banks are of three types: (i) Public Sector Banks: These banks are owned and controlled by the government. The main objective of these banks is to provide service to the society, not to make profits. State Bank of India, Bank of India, Punjab National Bank, Canara Bank and Central Bank are some examples of public sector banks. Public sector banks are of two types: (a) SBI and its subsidiaries; (b) Other nationalized banks. (ii) Private Sector Banks: These banks are owned and controlled by private businessmen. Their main objective is to earn profits. ICICI Bank, HDFC Bank, Kotak Mahindra Bank, Axis Bank, IDBI Bank are some examples of private sector banks. (iii) Foreign Banks: These banks are owned and controlled by foreign promoters. Their number has grown rapidly since 1991, when the process of economic liberalization had started in India. DBS Bank, American Express Bank, Standard Chartered Bank are examples of foreign banks. **2) Non-Scheduled banks**: Non-Scheduled banks refer to those banks which are not included in the Second Schedule of Reserve Bank of India Act, 1934.

I. Review of Literature

Bodla and Verma (2006) in their study made an effort to pinpoint the important factors that influence the profitability of public sector banks in India. Based on temporal data from 1991–1992 to 2003–2004, a step-wise multivariate regression model was utilized in the analysis. The study found that several variables have a noticeably high explanatory power. These variables include Spread, OE, P&C, and NII. Some factors, such as CD ratio, NPAs, and BPE, are discovered to have limited explanatory power. Therefore, there is a considerable correlation between the variables non-interest income, operating expenses, provision and contingencies, and spread and net profit. They come to the conclusion that the management of public sector banks should be particularly concerned with the control of non-performing assets, operating costs, provisions, and contingencies. Singh and Tandon (2012) analysed the financial performance of SBI (public sector bank) and ICICI bank (private sector bank) for the timeline from 2007 – 2012. The study found that SBI is performing well and financially sounder than ICICI bank but in context of deposits and expenditure ICICI bank has better managing efficiency than SBI. They concluded that banking customers have more trust on the public sector banks as compared to private sector banks.

Pandya (2015) investigated the influence of priority sector advances on the profitability of scheduled commercial banks in India using regression models. The study revealed that PSATA has a statistically significant association with ROI, ROA, OPTA, and INTTA. As a result of the findings, priority sector advances appear to have an impact on bank's profitability. Kaur, et al. (2015) used the CAMEL Model to assess and analyse the financial performance of India's top five public sector banks on a total assets and consolidated basis during a five-year period from 2009 to 2014. Various ratios were calculated measuring the aspects of CAMEL which includes capital adequacy, asset quality, management efficiency, earning quality and liquidity. This study discovered that Bank of Baroda leads in all elements of CAMEL, followed by Punjab National Bank in terms of Capital Adequacy, Management Efficiency, and Earning Capacity, and Bank of India in terms of Asset Quality. Balaji & Kumar (2016) found that although both public and private sector banks have improved their profitability over the years, private sector banks grew at a faster rate. While, in terms of some of the financial aspects, public sector banks lag behind than private sector banks, their social contributions are also on the larger side, which has an impact on the parameters. Public sector banks must redefine their strategies in light of their strengths and weaknesses, as well as the type of market they serve, whereas private sector banks must consider priority sector lending in its entirety, as well as meeting societal needs, in order to achieve balanced growth for the industry and the country.

Bodla, Sumit et al. (2020) found that Yes Bank's loan book grew unusually during the 2011-2020 period, i.e., the loans grew from Rs 1,32,000 crore in FY 2017 to Rs 2,41,000 crore in FY 2019, an increase of 80% in just in two years, when most banks were finding it difficult to lend. In just two years, Yes Bank nearly doubled the loan book it had built over the previous 17 years of its existence. According to authors understanding based on available reports of the experts, Yes Bank's unusually large loan disbursals were made to already stressed corporate groups. Kanhaiya Singh et. al (2020) indicate that level of non- performing assets (credit risk), net interest margin, (interest rate risk) and credit–deposit ratio plays significant role while determining the capital adequacy level of commercial banks in India. Further, capital determinant variables have more impact on capital adequacy level in case of public sector banks as compared to private banks. Amita and Bodla (2022) evaluated the Financial and Profitability Performance of State Bank of India (SBI) before and after the entry of Covid-19 Pandemic. The reference period of the study ranges from the Financial Year 2018 to Financial Year 2022, thus it included COVID-19 Pandemic period and two years before it. Findings of the study brought out that the net interest income (NII) raised to Rs 1207 bn. in 2022 from Rs 749 bn. in year 2018, registering a CAGR of 13 per cent. However, the non-interest income of SBI was seen in reverse gear as it indicated a negative 2 per cent CAGR during this period. The impact of covid-19 pandemic was clearly visible as the growth of advances came down to 6 percent in 2020 and 5 per cent in 2021 from 13 percent in 2019. Kumar, Rajesh (2022) conducted study titled "Financial Performance Analysis of Punjab National Bank: A Study based on Profitability and Asset Quality Ratios" by taking the secondary data from 2011-12 to 2020-21. According to the analysis, PNB has not performed satisfactorily over the past eight years in terms of profit margin. Between the years of 2012 and 2018, there was a sharp increasing trend in the percentage of Gross NPA and Net NPA. The percentage of Gross NPA and Net NPA has, however, showed a downward tendency over the last three years, which is an encouraging indication.

Objectives and Hypothesis of the Study

The study aims to achieve the following objectives:

1) To assess and compare the profitability of public sector banks, private sector banks and foreign banks during the period 2010-11 to 2020-21; and

2) To analyse and compare the assets quality of the bank groups.

In sync to above objectives, an attempt was made to examine validity of the null hypothesis: there is no significance variance in the performance of various sectors of the Indian Banking Sector.

II. Research Design and Methods

The present study has applied the secondary data to achieve the objectives of the study. The data was collected from various reports on "Trend and Progress of Banking in India" which are available at www.rbi.org.in. The reference period of this paper ranges from 2010-11 to 2020-21. To measure profitability three ratios viz. Return on Assets (ROA), Return on Equity (ROE) and Net Interest Margin (NIM) were examined. Similarly, to assess the quality of the assets gross NPAs and net NPAs parameters were taken into consideration. Both simple as well as advanced statistical tools were applied to analyze data. The simple statistical tools include mean, standard deviation and coefficient of variation. Coefficient of variation was used to examine and compare banking group-wise performance. The compound annual growth rate (CAGR) was arrived at for all the ratios to evaluate the annual growth in profitability and assets quality of Public Sector Banks, Private Sector Banks and Foreign Banks. CAGR represents one of the most accurate ways to calculate and determine returns for individual assets, investment portfolios, and anything that can rise or fall in value over time. Moreover, ANOVA (F test) was applied to test the null hypothesis that there is no significance variation in the profitability and asset quality of various bank groups. The abbreviations used included: PSB (public sector banks), Pvt SB (private sector banks), FB (foreign banks), and SCBs scheduled commercial banks respectively.

III. Result and Discussion

Profitability Performance

As mentioned in mythology part, three ratios viz. Return on Assets (ROA), Return on Equity (ROE) and Net Interest Margin (NIM) were taken as parameters of profitability, so at the outset, 'return on assets' was analysed to evaluate profitability performance of banking industry (Table 1). ROA of public sector banks reveals a declining trend since beginning to 2017-18, however, since the year 2018-19 it had started upward trend and it stood at .28% in 2020-21. The private sector banks have indicated above 1% return on assets during study period except only two years. Whereas foreign Banks has always been enjoying the return on assets above 1.30% during the corresponding period. The mean value of ROA shows that foreign banks return on assets remains highest with 1.63 percent whereas public sector banks remained at the bottom with mean value of .18 percent. The value of coefficient of variation of foreign banks is found the minimum among various bank groups. The CAGR of the ROA of foreign banks worked out -.01which is the highest among various bank groups.

ANOVA (F test) was applied to examine the significance of variance in the return on assets of various bank groups. The results of the test indicate F value (33.582), which is significant at .00 level meaning thereby ROA varies significantly across various bank groups.

Table 1: Return on Assets of commercial banks from 2010-11 to 2020-21 (in %)

Year	PSB	Pvt SB	FB	All SCBs
2010-11	0.96	1.43	1.75	1.10
2011-12	0.88	1.53	1.76	1.08
2012-13	0.80	1.63	1.92	1.04
2013-14	0.50	1.65	1.54	0.81
2014-15	0.46	1.68	1.84	0.81
2015-16	-0.07	1.50	1.45	0.40
2016-17	-0.10	1.30	1.61	0.36
2017-18	-0.84	1.14	1.34	-0.15
2018-19	-0.65	0.63	1.56	-0.09
2019-20	-0.23	0.51	1.55	0.15
2020-21	.28	1.17	1.56	0.66
Mean	.18	1.29	1.63	.56
SD	.61	.40	.17	.46
CV	41.7	29.8	12.0	44.5
CAGR	-0.12	-0.02	-0.01	-0.05

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.564	2	6.282	33.582	.000
Within Groups	5.612	30	.187		
Total	18.176	32			

Next, the ROE was calculated and presented in table 2 in order to depict the profitability position of the scheduled commercial banks for shareholders. The return on equity of the public sector banks remained negative during the 5 years of study period out of the 11 years. While the return on equity of Private sector banks and foreign banks has always been positive. The ROE of private sector banks has decreased from 16.46% in the year 2012-13 to 3.30% in the year 2019-20. The ROE of foreign banks remained hovering between 7% to 12% during the period under consideration. The return on equity of all the scheduled commercial banks remained positive except in the two years of 2017-18 and 2018-19.

Table 2: Return on Equity of commercial banks from 2010-11 to 2020-21 (in %)

Year	PSB	Pvt SB	FB	All SCBs
2010-11	16.90	13.70	10.28	14.96
2011-12	15.33	15.25	10.79	14.60
2012-13	13.24	16.46	11.53	13.84
2013-14	8.48	16.22	9.03	10.69
2014-15	7.76	15.74	10.24	10.42
2015-16	-3.47	13.81	8.00	3.58
2016-17	-2.05	11.87	9.12	4.16
2017-18	-14.62	10.12	7.16	-2.81
2018-19	-11.44	5.45	8.77	-1.85
2019-20	-4.16	3.30	8.76	0.78
2020-21	4.47	10.33	9.20	7.73
Mean	2.77	12.02	9.35	6.92
SD	10.69	4.40	1.26	6.53
CV	44.8	34.6	14.1	52.1
CAGR	-0.12	-0.03	-0.01	-0.06

A comparison across bank groups indicates that in terms of ROE, private sector banks remained at the top with mean value of 12.02 whereas public sector banks have lowest mean of ROE. The foreign sector banks are having the highest CAGR of return on equity among the bank groups. To examine significance of variance, F test was applied and its value was found 5.542 which is significant at 1% level.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	499.255	2	249.628	5.542	.009
Within Groups	1351.264	30	45.042		
Total	1850.519	32			

Table 3: Net Interest Margin of commercial banks from 2010-11 to 2020-21 (in %)

Year	PSB	Pvt SB	FB	All SCBs
2010-11	2.77	3.10	3.86	2.91
2011-12	2.76	3.09	3.89	2.90
2012-13	2.57	3.22	3.83	2.79
2013-14	2.45	3.31	3.54	2.70
2014-15	2.35	3.37	3.54	2.64
2015-16	2.23	3.41	3.59	2.58
2016-17	2.12	3.38	3.38	2.51
2017-18	2.08	3.32	3.43	2.50
2018-19	2.33	3.26	3.23	2.70
2019-20	2.37	3.43	3.26	2.81
2020-21	2.45	3.58	3.30	2.91
Mean	2.41	3.32	3.53	2.72
SD	.23	.14	.24	.15
CV	9.7	4.4	6.8	5.8
CAGR	-0.01	0.01	-0.02	0

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.833	2	3.916	89.890	.000
Within Groups	1.307	30	.044		
Total	9.140	32			

Net interest margin is one of the major indicators of the profitability and growth of the bank. It reveals the amount of money that a bank is earning as interest on loans compared to the amount it is paying as interest on deposits. Higher NIM would increase the profitability of banks and vice versa. The performance in terms of third variable- Net Interest Margin, is embodied in table 3. Net Interest Margin of public sector banks remained between 2% to 3% during all the years of the study period. Whereas the same remained between 3 % to 4% in case of private sector banks and foreign banks. The aggregate net interest margin of all commercial banks remained between 2.50% to 3% during the period 2010-11 to 2020-21. The mean values of net interest margin reveal that public sector banks have the minimum net interest margin of 2.41% among the bank groups. In contrast foreign banks have the maximum mean value out of the bank groups under study. Further lowest value of Standard deviation (.14) and coefficient of variation (4.4) of the private sector banks shows the minimum spread from the mean as compared to other bank groups. The application of F test indicates that there is a significant difference at 1% among the bank groups as far as net interest margin is concerned.

Asset Quality

The study has examined the quality of assets of various bank groups with the help of non-performing assets data which is presented in table 4. It is evident that NPAs of public sector banks have shown increasing trend in absolute values as well as their percentage to gross advances till the year 2017-18. After 2017-18 the NPAs of public sector banks have decreased from Rs. 8,95,601 crores to Rs. 6,16,616 in the year 2020-21 along with the decreasing percentage to gross advances. The absolute values of NPAs of private sector banks shows increasing trend during the study period except a slight decline in the year 2020-21 only. The percentage of NPAs of these banks varies from 1.8 to 5.45 during the reference period.

The aggregate non-performing assets have increased from Rs. 97,973 crores in the year 2010-11 to Rs. 10,36,187 cores in the year 2017-18. The data shown in the table further supports that the NPAs of all scheduled commercial banks declined during the last three years of the study period. The coefficient of variation of the foreign banks is found 30.3 percent which is the minimum among the other bank groups. It indicates that the variation from the mean in gross NPAs of these banks' is minimum. Whereas the private sector banks show the maximum value of its coefficient of variation. The compound annual growth of gross NPAs of private sector banks is also the highest among the bank groups during the period under consideration. The value of the F test is found 20.855, which is significant at 1 percent.

Table 4: Gross NPAs of commercial banks from 2010-11 to 2020-21 (In Rs. Crore)

Year	PSB	Pvt SB	FB	All SCBs
2010-11	74,664 (2.4)	18,241 (2.5)	5,069 (2.6)	97,973 (2.5)
2011-12	1,17839 (3.3)	18,768 (2.2)	6,297 (2.8)	1,42,903 (3.1)
2012-13	1,65,006 (3.6)	21,071 (1.8)	7,977 (3.1)	1,94,053 (3.2)
2013-14	2,28,274 (4.4)	24,542 (1.8)	11,565 (3.9)	2,64,381 (3.8)
2014-15	2,78,468 (5.0)	34,106 (2.1)	10,761 (3.2)	3,23,335 (4.3)
2015-16	5,39,956 (9.3)	56,186 (2.8)	15,805 (4.2)	6,11,947 (7.5)
2016-17	6,84,732 (11.7)	93,209 (4.1)	13,629 (4.0)	7,91,791 (9.3)
2017-18	8,95,601 (14.58)	1,25,863 (4.62)	13,830 (3.81)	10,36,187 (11.18)
2018-19	7,39,541 (11.59)	1,80,872 (5.25)	12,183 (2.99)	9,33,609 (9.08)
2019-20	6,78,317 (10.25)	2,05,848 (5.45)	10,208 (2.34)	8,96,083 (8.21)
2020-21	6,16,616 (9.11)	2,02,266 (4.94)	10,199 (2.42)	8,35,051 (7.33)
Mean	4,56,274	89,179.27	10,683.91	5,57,028.45
SD	2.89147E5	76,875.23	3,261.71	3.57215E5
CV	56.0	150.0	30.3	59.1
CAGR	0.24	0.27	0.09	0.24

Figures in brackets are Gross NPAs to Gross Advances Ratio (%)

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.245E12	2	6.224E11	20.855	.000
Within Groups	8.953E11	30	2.984E10		
Total	2.140E12	32			

Table 5: Net NPAs of commercial banks from 2010-11 to 2020-21 (In Rs. Crore)

Year	PSB	Pvt SB	FB	All SCBs
2010-	36,055	4,432	1,312	41,799

11	(1.1)	(0.6)	(0.7)	(1.0)
2011-12	59,391 (1.5)	4,401 (0.5)	1,412 (0.6)	65,205 (1.3)
2012-13	90,037 (2.0)	5,994 (0.5)	2,663 (1.0)	98,693 (1.7)
2013-14	1,30,635 (2.6)	8,862 (0.7)	3,160 (1.1)	1,42,656 (2.1)
2014-15	1,59,951 (2.9)	14,128 (0.9)	1,762 (0.5)	1,75,841 (2.4)
2015-16	3,20,376 (5.7)	26,677 (1.4)	2,762 (0.8)	3,49,814 (4.4)
2016-17	3,83,089 (6.9)	47,780 (2.2)	2,137 (0.6)	4,33,121 (5.3)
2017-18	4,54,473 (8.0)	64,380 (2.4)	1,548 (0.4)	5,20,838 (6.0)
2018-19	2,85,122 (4.8)	67,309 (2.0)	2,051 (0.5)	3,55,068 (3.7)
2019-20	2,30,918 (3.7)	55,746 (1.5)	2,084 (0.5)	2,89,531 (2.8)
2020-21	1,96,451 (3.1)	55,809 (1.4)	2,987 (0.7)	2,58,228 (2.4)
Mean	2,13,318	32,319.82	2170.73	2,48,254
SD	1.35716E5	25,990.26	642.48	1.57130E5
CV	69.7	99.9	31.1	61.0
CAGR	0.18	0.29	0.09	0.20

Figures in brackets are Net NPAs to Net Advances Ratio (%)

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.869E11	2	1.435E11	22.540	.000
Within Groups	1.909E11	30	6.365E9		
Total	4.779E11	32			

Table 5 offers the position of net non-performing assets, their percentage to net advances and along with statistical values. The net non-performing assets of the public sector banks and all scheduled commercial banks have shown the similar trend as in the case of gross non-performing assets. The percentage of net NPAs to net advances of public sector banks and all scheduled commercial banks ranges between 1% to 8% and 1% to 6% respectively. As data shown in the table the net NPAs of private sector banks have increasing trend till the year 2018-19. During the last two years of study the net NPAs of private sector banks decreased in absolute values as well as their percentage to net advances. The percentage of net NPAs to net advances of foreign banks remained between 0.4 percent to 1.0 percent during the study period. The value of coefficient of variation of foreign banks found 31.1 percent which is lowest among the bank groups. It further supports that foreign sector banks have the lowest deviation from the mean. CAGR of private sector banks is 0.29 percent followed by public sector banks with a value of 0.18 percent. The result of the F test reflects the significant difference at .00 level of significance among the bank groups.

IV. Conclusion

The forgoing analysis reveals that public sector banks are far behind to their counterparts' the private sector as well as foreign banks. ROA of public sector banks has greater level of dispersion around the mean. The return on equity of all the scheduled commercial banks remained positive during the study period except in years 2017-18 and 2018-19. Private sector banks remained at the top with mean value of 12.02% whereas public sector banks have lowest mean of ROE. The foreign sector banks are having the highest CAGR, of return on equity, among the bank groups. There is a significant variance among various bank groups in so far as return on equity is concerned. Regarding, net interest margin, it was observed that the private sector banks show the minimum spread from the mean as compared to other bank groups. This has also been proved by the application of F test. In case of gross NPAs, the coefficient of variation of the foreign banks is the minimum among the other bank groups, whereas the private sector banks show the maximum value of its coefficient of variation. The compound annual growth of gross NPAs of private sector banks is also the highest among the bank groups during the period under consideration. CAGR of private sector banks NPAs is 0.29 percent and 0.18 per cent in public sector banks. The percentage of net NPAs to net advances of foreign banks remained between 0.4 percent to 1.0 percent during the study period. It was further observed that foreign sector banks have the lowest dispersion in NPAs in the group.

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THE EFFECT OF ENTREPRENEURIAL ORIENTATION AND HUMAN CAPITAL ON THE INNOVATIVE PERFORMANCE OF INDIAN IT COMPANIES

Inakshi Kapur*Pallavi Tyagi**

Purpose: *In a turbulent and dynamic environment, organisations increasingly rely on "being entrepreneurial" to seek new opportunities to sustain and create new competitive advantages. The study aimed to develop and test a theoretical model exploring the effect of Entrepreneurial Orientation (EO) on the innovative performance of the organisation and assessing whether human capital moderates this relationship.*

Design/Methodology/Approach:*Data were collected from 198 respondents working in various IT companies in Delhi NCR, and Partial Least Square based Sequential Equation Modelling (PLS-SEM) was applied for hypothesis testing.*

Findings:*The research findings suggest that EO and human capital have a positive, significant relationship with innovative performance. However, no statistically significant relationship was found for the moderating role of human capital in the relationship between EO and the innovative performance of the organisations. As the study is exploratory, the findings are not conclusive.*

Originality/Value: *The specific effect of human capital on the innovative performance of an organisation and its impact as a moderator between the relationship of EO and innovative performance is currently understudied. The study will help organisations understand the impact of human capital on various aspects of organisational performance.*

Keywords:*EO, Entrepreneurial Orientation, Human Capital, Innovative Performance, IT sector, India*

JEL Codes: *M13, J24*

Entrepreneurial Orientation (EO) has become a significant area of research that has sparked considerable interest among researchers and practitioners in management and entrepreneurship. EO is vital to organisations' growth and survival in the increasingly competitive environment(Hitt et al., 2001). Defined as an organisation's strategic orientation, EO captures specific aspects of decision-making, practices, and methods. Lumpkin &Dess (1996) have summarised various conceptualisations of EO as a reflection of how an organisation operates rather than what it does. Previous research has agreed that EO combines three dimensions: innovativeness, proactiveness and risk-taking(Covin&Slevin, 1986; Miller, 1983). Therefore, EO is the organisation's inclination to reinvent market offerings through innovation, be more proactive than competitors towards new market offerings and develop a risk-taking propensity to explore new offerings and processes in terms of products, services, business models and administration (Covin&Slevin, 1989; Zahra &Covin, 1995). According to resource-based theory, EO facilitates organisations in identifying innovative opportunities, targeting new possible markets, and creating competitive advantages, ultimately influencing the organisation's innovation performance(Barney, 1991). Innovation performance (IP) is an essential contributor to an organisation's competitive advantage(Oke et al., 2012), and therefore, previous studies have explored organisational factors that foster innovative performance, like strategy and resources. Recent studies have begun investigating how an organisation's EO can influence its innovative performance(Iqbal et al., 2021; Tang et al., 2015). Drawing from resource-based theory again, an organisation's competitive advantages stem from its resources which are unique, rare, valuable, and difficult to imitate. One such resource is human capital (HC), which is the total of the knowledge, skills, and abilities of the organisation's human resources. Human capital forms the necessary knowledge basis for an organisation's innovative efforts(Alpkan et al., 2010a).

Reviewing previous related literature, the separate effect of EO on IP and HC on IP have been studied. Authors have observed that studies on the interaction of EO and human capital, individually and combined, with innovation performance are rare. Therefore, the current study is based on the primary research question: "Is HC a moderator in the EO-IP relationship?"

The structure of the paper is as follows: First, we review the literature on EO and IP, followed by EO and HC and develop a conceptual model and hypothesis for the study. Furthermore, we discuss the moderating role of HC on the relationship between EO and IP.

*** Research Scholar, Amity College of Commerce and Finance, Amity University Uttar Pradesh**

**** Associate Professor, Amity College of Commerce and Finance, Amity University Uttar Pradesh**

This is followed by describing the research design and reporting the data analysis findings. Third, we discuss the results and implications of the study. Fourth, we conclude with the study's limitations and further research direction.

I. Review of Literature

The effect of entrepreneurial orientation on organisational innovation performance

Developing creative ideas and behaviours leads to an organisation's innovation performance. The dimensions of innovation can be explained through the various innovation activities. These innovation activities can be divided in terms of their breadth and depth. Strategies, processes, products and services are part of the breath. At the same time, depth is the significance and impact of innovative activities on the organisation's profitability (LIU, 2005). Entrepreneurial organisations tend to depart from traditional business practices and encourage mindsets and business operations that support creativity and experimentation to develop new ideas(Lumpkin &Dess, 1996). Defined as the innovative dimension of EO, technological/process/product innovation is a way for organisations to create competitive advantages. The next dimension of EO, proactiveness, is anticipating the marketplace's future needs and staying ahead of the competition by creating first-mover advantages(Dess et al., 1999). The third dimension is the organisation's risk-taking behaviour which is the readiness to put resources into risky projects with unknown outcomes and high costs of failure(Rauch et al., 2009). Therefore, EO is a vital strategy enabling organisations to create valuable commercial offerings and thus contribute to their enhanced innovation performance. Several previous studies have posited a positive relationship between EO and IP(Iqbal et al., 2021; Tang et al., 2015). Therefore, we hypothesise,

H1: EO is significantly and positively related to the IP.

The effect of human capital on organisational innovative performance

Human capital is the employee's knowledge, skills, and abilities that enhance the organisation's economic value(Bohlander Snell Scott., 2007). When combined with other intangible resources like tacit knowledge, HC can create a better competitive advantage than tangible resources, becoming the performance differentiating factor among organisations (Hitt et al., 2001). According to (Dakhli& de Clercq, 2004), people's knowledge and expertise can be enhanced by education and work experience. Therefore, better education and work experience drive people to invest more energy and time in improving their skills. Improvement in human capital leads to better innovation performance, and this relationship has been tested by previous studies(Alpkan et al., 2010; Wang &Zatzick, 2015; Zapata-Cantu, 2021). (Lund Vinding, 2006) a study in Denmark highlights the importance of employees updating their skills, especially in high-tech sectors and concludes that human capital increases an organisation's innovation performance.

Therefore, we hypothesise,

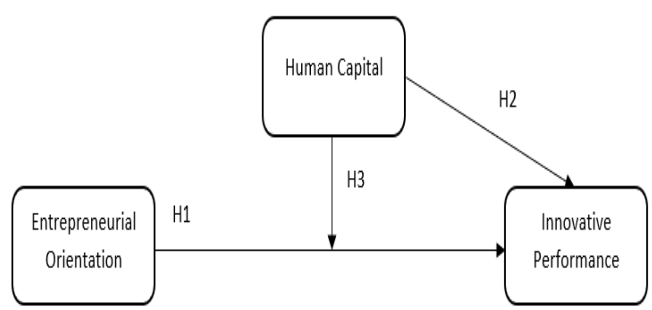
H2: HC is significantly and positively related to IP.

Moderation by human capital

Innovation is critical in increasing an organisation's long-term growth and profitability and is one of the fundamental pillars of its competitiveness(Mariz-Perez et al., 2012). In order to increase the innovation capacity, investment in human capital is as significant as investing in research and development(Tseng & James Goo, 2005). In terms of the employees' knowledge, skills, and abilities, they can enhance the organisation's competencies and add to business performance by managing the risks and increasing the returns of investments in innovation(Hayton& Kelley, 2006). In addition to its direct effects on innovation performance, HC may also play the role of a facilitator in the organisation's entrepreneurial orientation strategy and innovation performance. Previous studies like (Alpkan et al., 2010b) have found that human capital is an essential driver for innovation performance, especially with limited organisational support. Human capital factors like skills, motivation of the collaborator and learning opportunities increase the relationship between the knowledge support system and innovative capability(Zapata-Cantu, 2021). Previous literature on human capital leads us to posit that human capital might have a similar moderating role in the relationship between EO and IP. This means that if organisations with superior quality of human capital direct their human capital with an entrepreneurial orientation strategy, their innovative performance will increase. Therefore, we hypothesise that,

H3: Human capital moderates the relationship between EO and IP.

Figure 1: Theoretical framework



Source: Authors

II. Research Design and Methods

Sample

The study was conducted in Delhi and National Capital Region. The population selection criteria were; organisations belonging to the Information Technology (IT) sector with at least 50 employees. An online questionnaire was sent to the managerial level employees of 32 organisations. Out of the 400 questionnaires distributed, 198 responses were valid for analysis. The descriptive statistics showed that most respondents were male (68%). Respondents in the age group of 20-30 years formed the majority (67%), followed by 31-40 years (17%) and 41-50 years (16%). 80% of the respondents belonged to the operational and middle management level, and the rest belonged to the top management (20%).

Variable and Measurement

Entrepreneurial orientation, the independent variable, was assessed by adapting the nine items scale proposed by Covin and Slevin (1986).

For the construct of Innovative performance, the dependent variable, a scale used in the study (Alpkan et al., 2010a), was adapted.

The moderating variable in the study is Human Capital (HC). The construct's measurement was based on Subramaniamand Youndt (2005) study.

Items were measured on a five-point Likert scale: "1= strongly disagree" and "5= Strongly Agree".

III. Result and Discussion

Smart PLS(3.3.9) software was used for data analysis, applying partial least square equation modelling(PLS-SEM) in the present study(Silva et al., 2014). Correlation and regression analysis was conducted using SPSS 26. As moderation analysis was involved, this method was found most suitable.

Correlation Analysis

The correlation among constructs, the mean and standard deviation are shown in Table 1.

Table 1: Correlation Analysis

Construct	Mean	SD	EO	IP	HC
EO	3.750	.721	1	.756**	.757**
IP	3.751	.938	.756**	1	.814**
HC	3.637	.823	.757**	.814**	1

Correlation is significant at the 0.01 level, two-taile. SD- Standard Deviation, EO-Entrepreneurial Orientation, IP- Innovative Performance, HC- Human Capital

Source: Authors calculation.

Regression Analysis

Regression analysis was conducted between dimensions of EO and Innovation Performance. Results are shown in Table 2

Table 2: Regression Analysis

Predictor	R	R Square	Significance
Innovativeness	.729	.532	000**
Proactiveness	.688	.473	000**
Risk Taking	.604	.365	000**

Dependent Variable: Innovation performance. Significant at 0.05 level**

Source: Authors calculation.

Measurement Model

The measurement model was assessed using convergent and discriminant validity. Cronbach Alpha (CA) and CR were used to assess the reliability. The results of the reliability analysis are presented in Table 2. According to (Hair et al., 2011), the values of CA and CR should be above 0.70, and in the present study, the values were in the acceptable range. The discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio test. In recent studies, the HTMT method is preferred over the other methods of assessing discriminant validity. The values obtained in the present study are all below the threshold value of 0.90. The HTMT ratio test results are presented in Table 3. Additionally, the convergent validity was examined using the AVE values, and the results showed that all construct values were above the threshold value of 0.50(Hair et al., 2009). The AVE values are presented in Table 3.

Table 3: Measurement Model Results

Construct	Code	Factor Loading	CA	CR	AVE
EO	INN1	.828	.917	.933	.636
	INN2	.723			
	INN3	.894			
	PRO2	.838			
	PRO3	.709			
	RT1	.741			
	RT2	.791			
	RT3	.835			
IP	IP1	.899	.938	.953	.804
	IP2	.835			
	IP3	.876			
	IP4	.916			
	IP5	.956			
HC	HC1	.847	.897	.921	.660
	HC2	.809			
	HC3	.813			
	HC4	.815			
	HC5	.722			
	HC6	.863			

EO- Entrepreneurial Orientation, IP- Innovative Performance, HC- Human Capital, CA- Cronbach Alpha, CR- Composite Reliability, and AVE- Average Variance Explained.
Source: Authors calculation.

Table 4: Discriminant Validity (HTMT) Ratio Results

	EO	HC	IP	Moderating effect 1
EO				
HC	.840			
IP	.834	.884		
Moderating effect 1	.333	.363	.324	

EO- Entrepreneurial Orientation, IP- Innovative Performance, HC- Human Capital
Source: Authors calculation.

Structural Model

First, the model's predictive power was checked in assessing the structural model. The coefficient of determination (R^2), the value should be more than 0.1(Chin and Marcoulides, 1998). The only dependent variable is IP of the organisation. The R^2 of IP was 0.744. The path coefficients results show that 38.7 per cent of innovative performance variance can be explained by entrepreneurial orientation and 50.8 per cent by human capital.

Additionally, the model's predictive value (Q^2) should be higher than zero(Hair et al., 2014). The value of Q^2 reported for this study was .585. The values of the effect size F^2 fell within the range suggested by (Cohen, 2013). The present study's R^2, Q^2, and F^2 results are shown in Table 5.

Table 5: Predictive Power of the Study's Model.

	EO	HC	IP	Moderating effect 1
EO				
HC	.840			
IP	.834	.884		
Moderating effect 1	.333	.363	.324	

R^2- Coefficient of Determination, Q^2- Cross validated redundancy measure. F^2- Effect Size
Source: Author's calculation.

Hypothesis Testing

Standard bootstrapping using 2000 samples was used with 198 sample observations to examine the significance of the path coefficients in the present study. The results presented in Table 6 suggest that H1 and H2 are supported. These findings suggest that EO and HC have a positive and significant relationship with IP. The moderating effect of HC on the relationship between EO and IP was non-significant.

Table 6: Hypothesis Testing Results

Hypothesis	Relationship	Path Coeff (β)	Mean	SDV	T-Value	P-Value	Decision
H1	EO□IP	0.387	0.405	0.111	3.498**	0.000	Accepted
H2	HC□IP	0.508	0.478	0.102	4.958**	0.000	Accepted
H3	EO*HC□IP	-0.044	-0.070	0.078	0.558	0.577	Rejected

EO- Entrepreneurial Orientation, IP- Innovative Performance, HC- Human Capital, SDV- Standard Deviation. **P <0.05
Source: Authors calculation.

Discussion

The present studies' findings reveal a significant positive relationship between EO and IP. The innovative dimension of EO showed the largest influence on IP, followed by proactiveness and risk-taking. Each dimension of EO also has a significant and positive relationship with IP. This means that when organisations make EO a part of their strategy, employees are encouraged to engage in behaviours associated with EO and develop an entrepreneurial mindset to sustain these behaviours. EO strategy drives creativity and encourages employees to develop new ideas and solutions. This drive is also influenced by the goal of staying ahead of competitors.

This study was based on the IT sector, characterised by frequent changes and disruptions. When top management officially engages in and encourages entrepreneurial mindsets, the organisational culture becomes conducive to developing and experimenting with new ideas. Under such circumstances, domain knowledge and skills need frequent updating to maintain competence. HC's positive and significant relationship with IP shows that the organisation's human capital influences its innovative performance. The collective skills, knowledge and capabilities of the human resource are the driver of innovative performance and hence a source of competitive advantage.

The third part of the current study was to assess the moderating role of human capital in the relationship between HC and IP. The results showed that there is no significant moderating role of HC. This shows that HC as an independent factor does not strengthen or weaken the effect of EO on IP. It can be argued that HC and other dimensions of intellectual capital, namely social and organisational capital, may increase or decrease the organisation's innovation performance. However, HC has shown positive and significant direct effects on IP. This reiterates previous studies' findings that human capital forms the basis for IP.

To some extent, the present study's findings are supported by findings of other research models tested in previous studies. (Iqbal et al., 2021; Lund Vinding, 2006; Mariz-Perez et al., 2012; Tang et al., 2015; Wang &Zatzick, 2015) have found significant relationships between EO and IP and HC and IP, in different economic contexts. According to the author, the present study was exploratory, and the moderating influence of HC between EO and IP has not been tested before.

Managerial Implications

As a managerial implication of the study, it can be suggested that when an organisation propagates entrepreneurial behaviour and makes it part of its strategy, it does improve its innovation performance. Upper management needs to provide requisite internal support and encouragement to employees to develop entrepreneurial mindsets. A one-off instance of behaving entrepreneurially does not fulfil the objectives of EO. Human capital must be developed accordingly to keep up with changing external environmental demands for long-term sustained efforts. Human capital is one of the rare and valuable resources that differentiate one organisation from another, therefore needs to be developed through extensive training and knowledge dissemination. Top management could create an environment wherein innovative performance is driven by employees' discretionary efforts, and these efforts should be given due recognition. Another implication could be identifying which dimensions of EO employees are imbibed and how these behaviours can be honed further. Risk-taking is one dimension of EO, which needs unwavering support from upper management to encourage employees to undertake risky projects without fear of failure.

Human capital development would enhance the innovative performance of organisations and have employee-level outcomes as well. It could open venues for career progression, job satisfaction, and retention and employee engagement. Therefore, EO and HC are important drivers of innovative performance.

Limitations of the study and future research direction

The study was based on self-reported data, and there can be chances of respondent bias creeping in. This limitation can be overcome by conducting a qualitative study to understand the context of the respondents. The study focused on the IT sector; future research can explore other sectors. Future studies can consider intellectual capital's moderating effect on innovative performance to develop a more comprehensive model.

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BOOK REVIEW: "BUSINESS INNOVATION: A CASE STUDY APPROACH"

Author: Vijay Pandiarajan
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Price: $171.15

Ashok Sharma*

"Business Innovation: A Case Study Approach" by Vijay Pandiarajan is an insightful and practical book that provides a comprehensive overview of innovation in the business world. Published by Routledge, this book offers a rich collection of real-life case studies that showcase successful business innovation strategies employed by various companies across different industries.

The book is well organised in 8 parts and is having 13 chapters followed by 16 case studies. One of the standout features of this book is the author's meticulous approach to presenting case studies. Each case study is thoroughly analyzed, providing in-depth insights into the innovation process, challenges faced, and strategies employed by companies to achieve success. The author goes beyond just highlighting success stories, but also delves into the failures and lessons learned, making the book a realistic and balanced exploration of business innovation.

The author presents a framework for easy understanding of innovation and offers practical strategies that businesses can adopt to foster innovation within their organizations. The book covers "What" is the innovation in the first part. The second part addresses "Why" do we need to innovate followed by sources of innovation " Where" and then the answer the question of "How" to develop framework for innovation. The author discusses the theoretical foundations of business innovation, drawing upon relevant research and literature which is succeeded by innovations in industry verticals like manufacturing, Service industry and even in government. In today's world when everything is governed by economic factors so is innovation, the author addresses it along with the special topic of design thinking lean enterprises and sustainability.

Another notable aspect of the book is its readability. Despite dealing with complex concepts, the author presents them in a clear and accessible manner, making them suitable for academic readers. The use of real-life examples and case studies helps to illustrate the concepts and makes the book engaging and relatable.

One potential drawback of the book is that it primarily focuses on case studies from established companies, which may limit its applicability to small and medium-sized enterprises (SMEs) or startups. Including more examples from smaller businesses could make the book more inclusive and relevant to a wider range of readers.

Overall, "Business Innovation: A Case Study Approach" is a valuable resource for anyone interested in understanding the intricacies of business innovation. The author's comprehensive approach, rich collection of case studies, and practical insights make this book a worthwhile read for business professionals, entrepreneurs, and researchers alike. Whether you are looking to drive innovation within your organization or are simply interested in the topic of business innovation, this book is a valuable addition to your reading list.

*** Dean (Academics) Professor (Marketing & Strategy) Institute of Management Technology Centre for Distance Learning, Ghaziabad, Uttar Pradesh**

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MERGER OF HDFC LTD & HDFC BANK: INTEGRATION FOR ACHIEVING GROWTH

Deepak Tandon* Dharminder Kumar Batra**

On 5th March 2022 Deepak Parekh made a statement that Gruh Finance (NBFC) was like his own daughter and that he intended to merge the same with Bandhan bank which would be like a proverbial bridegroom. This would provide synergies with the Housing sector, which was on a growth path, while NBFC 'Gruh Finance' was not into Housing domain. This would require that HDFC Bank's promoter holding would be diluted. He envisaged that with the merger of India's most valuable lender and the nation's largest mortgage financier will be able to create what could be the world's fifth-most valuable bank. Since the steps have been taken, the merger process is almost complete, albeit one key step remains about the listing in bourses that investors would be watching closely. The likely announcement awaited the nod on or before July 2023. Parekh knew that with just one step away, his own creation was on the anvil of becoming a bank worth US $ 168 billion serving millions of investors and customers across the word !!

Stellar performance and potential of Banking and Financial Services (BFSI) sector in India:

Parekh with his vast experience knew that BFSI sector is poised to become the most stellar sector in Indian economy. Essentially, it addressed a significant of the growing Indian economy involving all Banking, Protection and Non- Banking Financial Institutions. The latter is known as the NBFCs. Likewise, the BFSI business generally alludes to monetary service firms like Broking, and Asset management. India, as a business opportunity, encourages every one of the upsides for the BFSI area to thrive at an obvious speed. Between subordinate elements of government strategy, dynamic public/confidential association, hearty administrative measures and mechanical development have prodded the BFSI area to enroll solid numbers as of late. Banking is one of the pillar components of the BFSI business.

About Housing Development Finance Corporation:

Founded in 1977, Housing Development Finance Corporation is an Indian private development finance institution headquartered in Mumbai. It was established with the support of the Indian business community as the first specialized mortgage Loan Company in India. Hasmukh Bhai Parekh played a key role in establishing this company.

The main goal of the company was to solve the housing shortage in India, which began to increase steadily thereafter. The company pioneered nearly every mortgage product available today, from the introduction of variable-rate loans to repayments tailored to customer-specific needs.

HDFC as an NBFC has been very successful in mobilizing retail deposits outside the Indian banking system. It is the only company in the country that has received AAA ratings for the highest security of its deposit products for two and a half decades in a row from two renowned rating agencies.

This has spurred the growth of HDFC into a conglomerate having deep interests into banking, life insurance, general insurance, wealth management, real estate investment finance and education loans. In the year 2000, HDFC Asset Management Company launched its investment scheme. In the sameyear, IRDA registered HDFC Standard Life Insurance as India's first private sectorinsurance company.

About the other partner of Merger -HDFC BANK:

Although HDFC as an NBFC could muster retail deposits, it was not allowed to open bank accounts and retail banking in the 1990s was poised for a big leap. Because of the vision to establish HDFC as a solution to financial services HDFC Bank was established in 1994 as a subsidiary of Housing Development Finance Corporation, headquartered in Mumbai, Maharashtra, India. After a long and arduous IPO process, HDFC Bank was listed on the Bombay Stock Exchange in May 1995 at ₹ 39.95. Subsequently Times Bank merged with HDFC Bank - the first legal merger inthe banking sector and the first through a share swap which could then open the doors for HDFC to a larger consumer base.

Following the same growth path HDFC Bank diversified into the allied business of going international by launching an International Debit Card in November 1999. It was the first international debit card in India launched in partnership with Visa International. As of September 2022, HDFC Bank had approximately 1.70 crore active credit cards, making it the largest card issuer in the country. According to RBI data, HDFC Bank had a market share of 28.4% in credit card spending in July 2022. As on June 30, 2022, the bank had a nationwide distribution network of 6,499 branches and 18868 ATMs in 3226 cities.

*** Professor, International Management Institute New Delhi, India**

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Rationale for Merger:

The merger between HDFC Ltd and HDFC Bank has been envisioned to create opportunities despite challenges. The challenges that HDFC faced was to achieve the integration in terms of manpower, achieving economies of scale and scope and having a vast repertoire of products costs possibly resulting in excellent client relationships. The resultant entity will benefit from the positive synergies and economies of scale through wider outreach, a larger balance sheet, a broader range of products and access to a common pool of resources.

Access to lower cost of funds:

Traditionally the cost of funding in a housing finance structure had been higher compared to the finances available in the banking structure. Merging the entities to have synergies for the common client base would enable HDFC garner a cost competitive edge in housing loan portfolio that has growing the fastest in terms of CAGR growth in Banking.

Financial Strength:

Financial might is always required for banking institutions and NBFCs to enable them to acquire large clients. The merger would enable the merged entity to have the financial strength of a large balance sheet of INR 25.61 lakh crore. This would help HDFC compete with its largest and nearest competitor State Bank of India in terms of size of operations thus, the merged entity will significantly benefit from the stronger balance sheet, making it easier to raise capital and underwrite larger ticket loans, including infrastructure loans.

Business Domain Diversification:

The merger would entitle business entities in strategically leverage each other's resources and capabilities. This would help HDFC Bank being able to leverage HDFC's expertise in the housing finance domain to provide mortgage products. Similarly, HDFC will have access to HDFC Bank's enormous client base of over 6.8 crore individuals.

HDFC Bank had over 6500 branches but had not been leveraging the housing loans or mortgages business from any of its branches. There had been a regulatory requirement that banks can generate loans business only for their own localities and catchment areas in proximity to their branches. This merger would enable HDFC bank to use its resources adroitly to manage their relationships with these clients.

Reduction in cost-income ratio:

Currently, the HDFC Group has the lowest operating cost structure among retail financial institutions, i.e., 8.1%. Thus, the merger will bring down the combined cost-income ratio.

Higher cross-selling opportunities:

Approximately 70% of the customers of HDFC (NBFC) do not bank with HDFC bank. But following the merger, the HDFC bank would have access to a very large number of existing clients of HDFC thereby switching from their existing bank to HDFC bank.

Tightening of NBFC Regulations:

In the past, NBFCs enjoyed regulatory arbitrage advantage vis-à-vis banks. However, RBI became very vigilant on regulation and stricter compliance of norms after the fraud detection in NBFC named Infrastructure Leasing & Financial Services (IL&FS) in 2018 and so this was followed by subsequent failures of leading NBFCs like Reliance Capital, Dewan Housing Finance Corp, etc. prompting RBI to ensure stricter compliance. This would make the cost of compliance for NBFCs noncompetitive vis-a-viz banks. Therefore, without the merger, HDFC would have the disadvantages of being an NBFC and no advantage of being a bank.

Resilient Housing Market:

Following the merger the enlarged bank will be able to expand its housing finance services across a wider geographic area thanks to its extensive branch network. Home loans are sticky product offerings and the borrowers of these maintain deposits that are 5-7 times higher than those of retail consumers. Further, there is significant potential given that 70% of HDFC customers do not bank with HDFC.

Share Exchange Ratio

Following the merger, existing HDFC Ltd shareholders will own 41% of HDFC Bank, which would be owned entirely by the public. In exchange for 25 shares of HDFC Ltd at Rs 2 apiece, or a ratio of 1:1.68, shareholders of HDFC Ltd will receive 42 shares of HDFC Bank with a face value of Re 1.Post closing 100 % of the HDFC will be owned by public shareholders .

(See Exhibit 1, Exhibit 2 }

Unlikely Merger to Benefit Stakeholders:

The merger will benefit employees and investors, resulting in a larger company with expanded product lines, a stronger balance sheet, and more effective use of resources. Better economies of scale, improved business practices, and lower expenses will all benefit shareholders, increasing earnings per share.

Investors would be delighted as their access to a large portfolio of combined activities would enable them to sell more effectively thereby impacting the rise in EPS. The increase in investments brought on by more assets and underwriting capacity would result in higher credit ratings. In the local corporate bond market, HDFC is one of the main issuers, and HDFC Bank mostly issued tier-II bonds. This merged entity would raise regulatory concerns but would be beneficial to all stakeholders.

Growth opportunities for HDFC Bank and HDFC Ltd

The combination of HDFC Ltd. and HDFC Bank Ltd would enhance HDFC Ltd.'s already-dominant position in the housing financing sector by improving cross-selling, distribution and product scalability, especially in the housing finance sector.

It had been challenging to run a HDFC which was a non-banking financial institution (NBFI) with a net sale turnover of about 50 crores. A post-merger HDFC Bank would get help growing its housing loan portfolio. This gives HDFC Bank a strong basis in the real estate sector,which offers a secure and low-risk asset class, in addition to the other advantages. Overall, this merger will be beneficial for both businesses since it will increase their size, widen their product offerings, strengthen their balance sheets, and allow for the formation of synergies between their revenue prospects, operational efficiencies, and underwriting effectiveness.

Effect on Shareholders:

The premium that the bank earns from the holding company will be distributed to the owners of HDFC Limited. The huge credit base of this transaction will naturally act as a barrier to asset quality. A decline in asset quality is prevented by the diversification of loan books.

Lower funding costs will make the mortgage industry more accessible, HDFC Bank will now have access to HDFC's loan servicing operations, and higher share prices will directly benefit the current owners of both firms. The merged organization would also offer more scalability. After the merger, the current shareholders of HDFC Ltd. would be able to own around 41% of HDFC Bank Ltd., and HDFC Ltd. shareholdings in HDFC Bank Ltd. would be abolished. For every 25 HDFC Ltd. shares held by present shareholders, 42 HDFC Bank shares would be issued.

Effect on Depositors:

There are two types of fixed deposits (FDs) offered by HDFC Ltd.: Automatic Renewal and Non- Automatic Renewal. On the day of maturity, the Fixed Deposit will automatically renew for the same term at the relevant rate of interest. With a non-automatic renewal, the fixed deposit's matured amount is transferred to the FD holder's bank account.

Changes: Individuals whose HDFC Ltd. fixed deposits automatically renew may withdraw their funds or renew their FDs with HDFC Bank at the bank's interest rate. HDFC Bank offers lower interest rates than HDFC Limited.

Announcement Pointers:

According to the statements, HDFC Limited and HDFC Bank would combine. HDFC Ltd will be liquidated as one entity. After this news, the stock values of HDFC Bank Ltd and Housing Development Finance Corporation Limited increased by 1656 and 2680 rupees, respectively. As per HDFC Bank, this merger must finish all transactions and permissions required by the relevant laws from statutory authorities, numerous rules, shareholders and creditors. As a result of the agreement's intricacy, all entities of HDFC Ltd would have to merge into the HDFC bank, which would require several regulatory approvals. The merger will start taking 15 to 18 months; this deal would probably be done by the end of 2023.

Deal size – The combined financial statement would be almost Rs. 17.87 lakh crores because of the transaction. The merged entity's net value has been anticipated to be Rs. 3.3 lakh crores following the merger, giving HDFC Bank almost double the size of ICICI Bank. The merger would indeed allow the amalgamated business to do underwriting on a much greaterscale.

Mortgage scale – Mortgage loans at HDFC Bank grew at a CAGR of 24.5%, reaching Rs.

702.2 billion in 2021. With the merger, mortgages would represent for over 33% of the bank'sloan book, even though the segment is constantly rising.

Pointers for Investors:

The merger would be subject to approval by shareholders, authorities such as the RBI, IRDAI, SEBI, CCI, and creditors.

According to the proposed merger, HDFC Ltd's share ownership in HDFC Bank wouldextinguish and HDFC Bank would be completely owned by the public.

All HDFC's affiliates, notably HDFC Life Insurance and HDFC Asset Management Company, would become subsidiaries of HDFC Bank.

Conclusions

Synergizing combination - The merger of HDFC and HDFC Bank has been referred to asa meeting of equals. HDFC Ltd. and HDFC Bank would continue to function independently till the merger process was finished. The synergy between these two organizations would be advantageous to the new business entity.

Pending approval - Following the merger, current HDFC shareholders would receive 42 HDFC Bank shares for every 25 HDFC shares & HDFC Bank would be wholly owned by the public.- The merger would be subject to clearance from shareholders, creditors, and authorities like the RBI, IRDAI, SEBI, and CCI.

Leadership in home finance – Integration to achieve leadership in home finance apart from banking had been the key to this merger initiative. This would entail a new management structure and shared perks, etc.

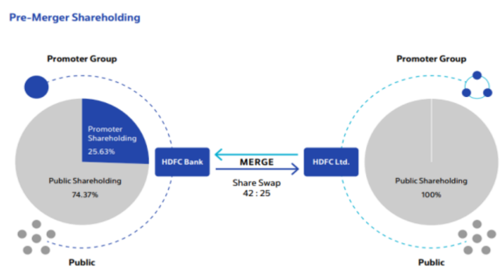
Beneficial merger - Considering our conclusion that a merged firm would be able to provide depositors and borrowers with a higher level of security. A merger's success is determined by factorslike the company's market expansion, shareholder interest, and corporate expansion. This merger would be beneficial to stakeholders, industry and economy at large.

Thus this Mega Merger has been in two stages : Wholly owned subsidiaries merging in HDFC Limited (HDFC Investments Pvt ltd) and HDFC Holdings Pvt Ltd and secondly HDFC merger with HDFC bank . Thus by market capitalization HDFC Bank becomes the second largest bank, and the resultant entity will benefit from positive synergies and economies of scale. Broder Net worth will attract more customers, wide network, larger balance sheet and more products.**(See Exhibit 3)**

Thus to conclude after total clearance of Merger and listing thereafter at bourses HDFC Bank will keep the home loans at the Centre of the objective of the case i.e. Growth strategy with third of business be housing credit in portfolio .

The dream of Deepak Parekh is coming true and clearly visible by July 2023.

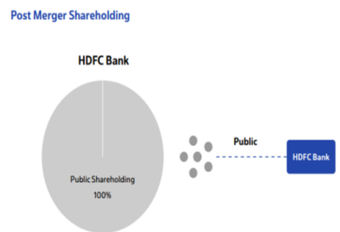
EXHIBIT 1 : Pre merger Share holding : HDFC BANK : HDFC LTD



Source : Author's compilation

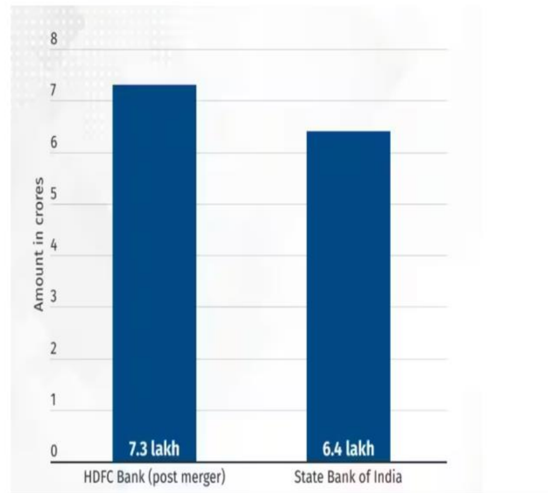
EXHIBIT 2 : Post Merger Shareholding

Sour



Source : Author's compilation

EXHIBIT 3 : POST MERGER HOME LOAN PRTFOLIO :



Source : Author's compilation

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For further information contact:

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