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◀ Research

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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

Transactional to Transformational Leadership: Essential for Development

Leaders play a very important role in steering organizational change and inspire or stimulate people for achieving excellence at work by realizing the pre-defined goals. Effective leadership provide a direction and vision to the people from top to bottom, develops supporting culture, climate and values for enabling certain expected code of conduct or behavior out of employees.

Leaders conceptualize and administer suitable strategies for driving continuous improvement in the existing processes, motivating employees for superior performance and facilitating change across various functionalities. Leaders play both transactional as well as transformational roles depending upon the organizational context, environmental factors and the long-term objectives.

No successful organization would have been where it is today, if it hadn't been for effective leadership. Effective leadership is one of the first and foremost drivers for innovation, growth and development. Leaders are the glue that binds the entire organization together, at the same time make sure that they are in complete sync with the organizational goals as well as vision & mission of the organization. Moreover, effective leaders avoid becoming the weeds that extract the individual passion and overall performance out of their team. Instead, they become the water bearers who water, nurture and coach and grow individual passion seeds into a super star team.

Leadership isn't about the titles or the accolades. Effective leadership is much more meaningful, impactful and profound. It's earned and worked for. After factoring in all of these points into the purview of effective leadership, there are two different kinds of roles portrayed by leaders which are as follows:- Transformational and Transactional Leadership.

Leaders play both transformational and transactional roles depending upon the organizational context, environmental factors and long-term objectives. Transformational and Transactional Leadership are polar opposites when it comes to underlying principles of motivation and management.

On one hand, the transactional leaders focus on working within the organization culture where as on the other hand transformational leadership emphasizes the transformation of the organizational culture.

Furthermore, the same can be explained with the help of a quote by Steve Jobs which is as follows, "Innovation distinguishes between a leader and a follower." It's easy to jump on the bandwagon and follow along with what everyone else is doing but true leaders are the ones coming up with out of the box ideas that set a new standard for business as usual. This is the kind of role being portrayed by transformational leaders rather transactional leaders.

(Anuj Verma)

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THE ROLE OF ENTREPRENEURIAL INNOVATIVE PRACTICES IN THE GROWTH OF MICRO AND SMALL-SCALE ENTERPRISES (AN EMPIRICAL STUDY OF SOME PRIVATE ENTERPRISES LOCATED IN GURUGRAM AND DELHI, INDIA)

Savita Rastogi* Priya Sharma**

Purpose: *The present study attempts to examine the impact of the entrepreneurial innovative practices on the survival and growth of enterprises and addresses the issue of inadequacy of these practices in micro and small-scale enterprises.*

Methodology: *The study is a descriptive and empirical-based research design. It has utilized a five-point Likert scale structured questionnaire to collect the primary data.*

Findings: *Literature survey has revealed that entrepreneurial behavior and innovative practices in micro and small-scale enterprises have a substantial role in the triumphant success of management and the progress of assets of management. Moreover, the organizational environment and transformational leadership behavior strengthen the quality of creative and innovative ideas. Apart from that, the study empirically conclude that the organizational environment and transformational leadership behavior have mediatorial relation and significant influence in the context of creative and innovative ideas.*

Originality/Value: *The research highlights the practical problem and provides the theoretical solution to enhance the behavior of creativity and innovation. Apart from that, the study empirically conclude that the organizational environment and transformational leadership behavior have mediatorial relation and significant influence in the context of creative and innovative ideas. Practically, the research will help SMEs in developing and promoting entrepreneurial innovative behavior in an enterprise.*

Keywords: Entrepreneurial Behavior, Entrepreneurial Innovative Practices, Innovative Practices, Micro and Small-Scale Enterprises, Organizational Environment, Transformational Leadership Behavior,

JEL Code Classification: M1, M10, M14.

In the 21st century, Micro and Small-scale enterprises (MSEs) act as a dynamic and vibrant sector of every economy and prove to be an engine of growth for all the nations of the world, be it a developed or developing nation or an underdeveloped nation trying to roll on the path of development (Baierle et al., 2020). MSEs play a leading role in generating employment and thus in the progress and prosperity of the nation. In the present era of industrialization and urbanization, there is a significant contribution of micro and small-scale industries in the overall growth of GDP (Raghuvanshi et al., 2017). Presently Registered micro-enterprises stood at 28 lakh (93%), followed by small enterprises at 1.78 lakh (6%) in the Indian economy¹. The Indian MSMEs sector contributes about 29% of the GDP through its national and international trade (MSME Industry in India, 2021)². As per the statement of the Directorate General of Commercial Intelligence and Statistics, 49.5% of the overall export of a country is controlled by Micro, Small, and Medium Enterprises and employs more than 8 crore personnel in the nation³. Table 1 shows the categorization of enterprises in micro and small enterprises in terms of investment and turnover by the Ministry of MSME, India.

Innovation and Creativity

In a business environment, entrepreneurial innovative practices are the core factor in the survival of the enterprise, continuity of its operations, and a nation's prosperity (Faherty et al., 2015; Adam et al., 2021; Raghuvanshi et al., 2017). Creativity is the creation and generation of the original idea while innovation is the application of that creative and already immersed idea in a novel way (Baldacching, 2009). Despite the importance of creativity and innovation being discussed by many researchers, as above, there is a lack of entrepreneurial innovative practices in micro and small-scale enterprises (Mamun et al., 2019; Meressa, 2020; Aliyev, 2020). Lack of financial stability, inadequate ICT infrastructure, inadequate information technology structure, entrepreneurial practices, lack of emergence of creative and innovative ideas, limited managerial efficiency, limited

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implementation of technological innovation, and resistance to risk-taking behavior are the significant barriers of micro and small-scale enterprises (Faherty et al., 2015).

Table 1: Msme Revised Classification Applicable W.E.F 1st July 2020

Composite Criteria: Investment in plant and Machinery/equipment and Annual Turnover		
Classification	Micro	Small
Manufacturing & Services	Investment in Plant and Machinery/Equipment: Not more than Rs.1 crores	Investment in Plant and Machinery/Equipment: Not more than Rs.10 crores
	Annual Turnover: Not more than Rs. 5 crores	Annual Turnover: Not more than Rs. 50 crores

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I. Review of Literature

Organizational Environment

The business environment of an organization offers immense opportunities and challenges which prove tremendously effective for the performance and profitability of an enterprise (Galuk et al., 2016; Raghuvanshi et al., 2018). Both micro and macro factors are included in the business environment. Micro factors consist of the supplier, customer, competitor, business intermediary, the general public, and stakeholders. Macro factors consist of economic, socio-cultural, legal-political, and technological factors (Faherty et al., 2015).

Importance of Organizational Environment in creativity and innovation

According to the theory of Porter, 1990, industries gain a competitive edge through the acts of innovative practices in their broader sense, including the advent of technologies and adopt new strategies for doing business. OECD conference (2004) focused on more dynamic SMEs. which develop new ideas, processes, and technologies in innovative ways to prosper and grow if the business environment in which they operate permits this to happen. Organizational environment and transformational leadership behavior lead the management of an enterprise to develop high-altitude noble creative and innovative ideas (Faherty et al., 2015; Mochamad et al., 2019).

Robson et al., 2009 reported seven types of exclusive innovative activities in order to develop an integrated innovative and entrepreneurial framework: Entrepreneurship,

size of the firm, age of the firm, training facilities to develop capabilities, ownership of the family with reference to innovation, export involvement, environment of an innovative firm. However, the study found that the resource advantage of larger firms outweighs the flexibility of smaller firms. Faherty et al., 2015, found that firms in Ireland are still behind in implementing innovative theories.

Throwing the light on the above findings, the study of Raghuvanshi et al., 2017 recommended 11 enablers of innovation namely: Organizational culture, Idea management, Involvement of customer and supplier, strategy formulation, network, the leadership structure of enterprises, financial support and risk-taking ability.

The study of Raghuvanshi et al., 2018 has highlighted some additional enablers like knowledge management, risk-taking, actor participation, creativity and idea management, information and technology management, organizational climate, and collaboration which play a significant role in developing the entrepreneurship competitive edge.

Dessie et al., 2017, empirically preferred the technical, vocational, and educational training for developing innovative behavior in entrepreneurship. Falahat et al., 2018 found financial performance, non-financial perceived performance, business growth, and the performance of competitors impact entrepreneurial creativity and innovation practices to a great extent.

Berne et al., 2019 highlighted the lack of a professional approach toward creativity in the company's management practices, absolute marketing distribution channel for products, and problems of policies and practices related to the business logistics of transportation and warehousing as the challenges that micro-enterprises of Brazil confront with. On the basis of entrepreneurs' behavior toward innovative practices, they classified the innovators of Brazil as (i) little innovators and (ii) occasional innovators. Mamun et al., 2019 suggested that governments and micro and small-scale enterprises with a development mission should emphasize the advent of entrepreneurial innovation skills. The majority of the studies present their profound concern regarding the challenges of innovation behavior confronted by micro and small enterprises due to which such enterprises are still backward in developing entrepreneurial innovative behavior (Kiani et al., 2021).

Need and Objectives for the Present Study

In the light of the above studies, the researchers decided to undertake the present study restricting the scope of study to micro and small-scale enterprises excluding medium-scale enterprises with the following objectives:

- To assess the extent of the organizational environment and leadership behavior provided by the employers towards entrepreneurial innovative practices.
- To study the perception of employees regarding employers' encouragement to them to display innovative and creative behavior.

Hypothesis of the Study

H₀: There is no significant relationship among the three variables (Employees' struggle to maintain the balance between innovative practices and recurring tasks, the Influence of organizational environment, and the Influence of transformational leadership) in developing entrepreneurial innovative practices.

H_a: There is a significant relationship among the three variables.

II. Research Design and Methods

The study is a descriptive and empirical-based research design that aims to analyze the entrepreneurial innovative practices in micro and small-scale enterprises. The researchers utilized a self-administered structured questionnaire and thus used the primary method of data collection. The questionnaire was categorized into two sections. The first section covered the demographic profile of respondents and the other consisted of questions that related to the objectives of the study. Research by (Faherty et al., 2015) helped the researchers to frame the questionnaire. A 5-point Likert scale was used in the questionnaire where the lowest response represented "strongly disagree" and the highest one was "strongly agree".

The Sample

Presuming medium-scale enterprises face fewer barriers mentioned above, this study has covered only micro and small-scale enterprises. The Questionnaires were sent online to 90 personnel of different micro and small-scale enterprises located in the regions of Gurugram (Haryana) and Delhi. Out of the 90 respondents, 70 employees of the enterprises actively responded to innovative and creative practices. Therefore, the data has been collected from 70 personnel from five private sector enterprises in Gurugram and Delhi. Through the questionnaire-survey method, the researcher probed questions related to their enterprises' entrepreneurial innovative practices and create innovative problem-solving skills from the employees who have been engaging in Micro and Small-scale enterprises. Table 2 describes the demographic details of the respondents. It shows that the sample was well representative of workforce diversity with respect to age, gender, education, year of experience, and business type (size of enterprises covered: both micro and small enterprises had almost equal representation)

Experience: sample included employees having One year of experience to twenty.

Education: employees with Higher Secondary Education to Doctorate were covered.

Age: employees with 21 years of age to 50 and above have been included in the sample.

Gender: sample had representatives from both males and females through the number of male respondents were almost double that of females.

Table 2: Demographic details of the respondents

VARIABLES	CATEGORIES	FREQUENCY	PERCENT AGE
GENDER	Male	44	66%
	Female	26	37%
AGE	21-30	28	40%
	31-40	35	50%
	41-50	3	6%
	Above 50	4	4%
EDUCATION	Primary	-	-
	Secondary	-	-
	Higher secondary	3	4%
	Graduation	21	30%
	Post-graduation Doctorate	44	63%
YEAR OF EXPERIENCE	1-5	10	14%
	6-10	35	50%
	11-15	20	29%
	16-20	5	7%
BUSINESS TYPE	Micro	34	49%
	Small	36	51%

III. Result and Discussions

Reliability and Validity of the Questionnaire

The results obtained for the reliability test as shown in table 3 show the data to be reliable. The table shows two values of Cronbach's alpha. The first Cronbach's alpha employs the covariances among the items, whereas the alpha based on standardized items employs the correlations among items. The latter alpha is based on the assumption that all items have equal variances, which is often false in practice. So the first value of Cronbach alpha has been used to test the reliability of the instrument used in research.

Table 3: Reliability Measurement

Cronbach's Alpha	Cronbach's Alpha Based on Standardized items	N of Items
.883	.862	15

Validity

Since the purpose of preparing the questionnaire was not to construct a standardized scale in the usual sense but to evolve an instrument that would meet purposes of the study, the researchers have relied on face validity and construct validity which was ensured through the pilot survey.

Statistical Analysis

- Frequencies were calculated for different variables asked in the questionnaire.
- Arithmetic means and mode values for responses to 11 questions were calculated.
- Anova single factor test was used to study the relationship among three variables, namely Employees' struggle to maintain the balance between innovative practices and recurring tasks, the Influence of the organizational environment, and the Influence of transformational leadership in developing entrepreneurial innovative practices.

Detailed Description of Table 4

- Only 10 respondents out of 70 strongly agreed that they are creative and innovative human assets for an enterprise, 41 respondents agreed, 18 respondents could not decide whether they are creative and innovative or not; and the remaining one respondent expressed that he was neither creative nor innovative.

Table 4: Responses to Questions by Respondent

Column1	SA	A	N	D	SD	AM
Employees perceive themselves as creative and innovative	10	41	18	1	0	2.14
Employees perceive themselves as having adequate problem-solving skills	11	36	21	1	1	2.21
Respondents perceived having used new approaches to solve traditional and new problems	12	18	36	4	0	2.45
Adopt creative and innovative ideas	9	22	38	1	0	2.44
Struggling in maintaining the balance between innovative practices	37	28	5	0	0	1.54

and recurring tasks						
Respondents' perception regarding 'enterprise appreciating employees' innovative and creative ideas.	12	40	15	3	0	2.12
Importance of colleague interaction towards entrepreneurial innovative practices	46	23	1	0	0	1.35
The organizational environment has a strong influence on the development of innovative entrepreneurial practices.	56	14	0	0	0	1.2
The strong influence of transformational leadership in the development of innovative entrepreneurial practices.	46	23	1	0	0	1.35
MSEs as high in entrepreneurial innovative practices	9	31	24	6	0	2.84
Importance of training for the development of creative and innovative behavior	62	8	0	0	0	1.11

Note: SA – Strongly Agree; A– Agree; N–Neutral; D– Disagree; SD– Strongly Disagree; AM – Arithmetic Mean; Highlighted cell indicates a mode of responses of that variable.

- The respondents had the adequate problem-solving skills necessary for confronting entrepreneurial innovative practices. 11 respondents strongly agreed with the statement, 36 respondents indicated agreeable responses, 21 respondents could not decide whether they have the

necessary skills to adopt entrepreneurial innovations, 1 respondent disagreed with the variable, and the remaining one respondent strongly expressed that he lacked necessary problem-solving skills.

- A number of respondents reported utilizing new approaches to solve traditional and new problems. The data shows that 12 respondents strongly agreed with the statement, 18 respondents agreed, 36 respondents indicated the option neutral and 4 respondents disagreed with the statement and expressed that they were not applying new approaches to solve problems.
- The table depicts the data which indicates the responses regarding the number of personnel always equipped with the creative and innovative ideas in an enterprise. The finding concludes that 9 respondents out of 70 respondents strongly agreed with the statement, 22 respondents provided agreeable responses, 38 respondents are neutrally satisfied and the remaining indicates disagreement regarding the statement.
- The enterprises should explicitly motivate and appreciate their personnel for developing innovative and creative ideas. The findings conclude that 12 respondents strongly agreed with the statement, 40 respondents agreed, 15 respondents were neutrally satisfied and 3 respondents disagreed with the statement.
- According to the literature, Colleague interaction is the fundamental basis to produce and develop creative and innovative ideas and the finding evidenced that the majority of respondents strongly agreed with the statement, 23 respondents agreed and the remaining indicate neutral agreeable responses toward the statement.
- According to the entrepreneurial literature, the organizational environment has a strong and effective influence on the development of innovative entrepreneurial practices. The findings evidenced that the majority of respondents strongly agreed and 14 personnel agreed with the statement.
- Transformational leadership is an approach of enterprises to encourage the employees to accomplish their organizational objectives. Numerous researchers have uniformly opined that transformational behavior has an influential effect on the growth and prosperity of an enterprise. The finding also concluded the same and evidenced that 46 respondents strongly agree with the statement, 23 respondents provided agreeable responses and the remaining respondents indicated neutral responses.
- Entrepreneurial innovation practices have a significant and crucial effect in the competitive world. To become an innovative frontier, organizations and government authorities must provide proper training facilities, adequate brainstorming sessions, a flexible discourse

system, and emerging policies for developing creative and innovative entrepreneurial behavior among the enterprises. Following the findings, 9 respondents strongly agreed with the statement, 31 respondents agreed, 24 respondents were neutrally satisfied and 6 respondents disagreed therefore not considering their enterprises as high in organizational innovative practices.

- The finding concludes that the majority of respondents experienced having adequate training facilities. 62 respondents out of a total population of 70 respondents, strongly agreed with the statement, and an additional 8 respondents indicate their agreeable response concerning providing training competencies.

Analysis of Table 4

Basing decisions on Modal values, it can be said that the study found:

- Employees were found to be agreeing with the perception that they are Creative, Innovative, and have adequate problem-solving skills.
- Employees were found to be neutral to the aspect of using new approaches to solve traditional and new problems.
- Employees were neutral to the aspect of being equipped with creative and innovative ideas.
- Employees strongly agree they were struggling to maintain the balance between innovative practices and recurring tasks.
- Respondents' perception regarding enterprise appreciating employees' innovative and creative ideas was that of agreeing.
- Respondents strongly agreed on the importance of colleague interaction for entrepreneurial innovative practices.
- The organizational environment was found to be strongly agreed as a variable having a strong influence on the development of entrepreneurial innovative practices.
- Transformational leadership was rated to be strongly necessary for the development of entrepreneurial innovative practices.
- MSEs were agreed to be high in entrepreneurial innovative practices.
- The importance of training for the development of creative and innovative behavior was strongly agreed to by a large majority of respondents.

Hypothesis Testing : H_0 has been tested using Anova Single Factor: On applying the test, the null hypothesis stands rejected on two counts (Table 5):

Table 5: Anova Single Factor

Source of Variation	SS	df	MS	F	P-value	F crit
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Between	3.8	2	1.9	3.108	0.0467	3.039508
				389	65	
Within	126.5286	207	0.611249			
Total	130.3286	209				

SS- Sum of Squares, df- Degrees of Freedom, MS-Mean square, F- Factor ratio

- The sum of squares was calculated to be 3.8 at 2 degrees of freedom, the mean square was 1.9, F value (F-ratio is the ratio between-group variance and within-group variance i.e. $1.9/0.611$) was 3.11. Since F critical value was 3.34 which is less than the F value, we conclude that the null hypothesis is to be rejected according to the decision rule⁴.
- The p-value for our data was calculated to be (0.046). The *P-value* means the probability, for a given statistical model, that, when the null hypothesis is true, the statistical summary would be equal to or more extreme than the actual observed results⁵. Since for our data, the p-value is less than .05, the null hypothesis fails to be accepted. So, the study concludes with strong evidence of statistical significance among the three variables tested, according to the decision rule. Therefore, it can be said that ‘employees struggling in maintaining a balance between innovation practices and recurring tasks’, ‘the organization environment’ and ‘transformational leadership’ all three of them related to one another in such a way that they influence the entrepreneurial innovative practices in micro and small-scale enterprises.

Limitation of the Study

The limitations of the present study are-

- The study confined itself to Gurugram and Delhi NCR to collect the responses from employees of respective companies. Therefore, the results of the study cannot be generalized.
- The study has just analyzed the data on the bases of frequency and percentages, arithmetic means, Mode, and ANOVA Single Factor test. Some more and stronger statistical tools could have been used to analyze the difference between micro and small-scale enterprises.
- Convenient random sampling method has been used which has its own limitations.
- If the sample size was larger, the result could have been much more representative of the population.

Scope for further Research

Keeping in mind, the limitations of the present study, the suggestions for future research are:

- Larger sample size should be selected.
- More rigorous statistical analysis should be done to

improve inferences.

- Enterprises selected should be from wider areas and different regions to allow better generalizations.
- The literature review can be improved and made more thorough.

IV. Conclusion

Micro and Small-scale enterprises act as a dynamic and vibrant sector of almost every economy, especially in India. Entrepreneurial innovative practices are fundamental for the persistent growth and survival of an organization. Entrepreneurial innovative practices have a significant effect not merely on strengthening the organization but also on the growth and prosperity of the economy and nation’s development. Entrepreneurial behavior and innovative practices have a substantial role in the triumphant success of management and the progress of assets of management. With the persistent application of innovative behavior, micro and small-scale enterprises become competent to cope with the flexible system of organizational culture. Moreover, the organizational environment and transformational leadership behavior strengthen the quality of creative and innovative ideas. Both components play a considerable role in emerging and developing progressive ideas. Several research works have been published on medium and large-sized enterprises which evidenced that these enterprises give more emphasis to developing creative and innovative behavior. Conversely, micro and small-scale enterprises confront a lot of hindrances in originated entrepreneurial innovative behavior in the culture of the organization. They resist the flexible approach of innovative practices. Discrepancies like outdated technological systems, lack of enthusiastic approach toward innovation, inflexible organizational environment, authoritative leadership behavior, resistance to risk-taking behavior, and far more are noted in the management of micro and small-scale enterprises. The culture and environment have a major role in generating creative and innovative ideas. The findings of the present research evidence that personnel of MSEs is consistently struggling in maintaining the balance between innovative practices and recurring tasks. Entrepreneurial innovative behavior should be a part of the whole structure thereby the management becomes habitual of these achievable practices. Since these are the motivational forces of a business environment. To become entrepreneurial and innovative, frontier organizations must provide progressive brainstorming sessions, flexible discourse systems, hybrid organizational structure, proper training sessions, and consistently utilize a transformational leadership approach to create a flexible organizational structure. Therefore, the study concludes with descriptive and empirical-based explanations regarding the development of entrepreneurial innovative behavior. The research highlights

the practical problem and provides the theoretical solution to enhance the behavior of creativity and innovation. Apart from that, the study empirically conclude that the organizational environment and transformational leadership behavior have mediatorial relation and significant influence in the context of creative and innovative ideas. Practically, the research will help SMEs in developing and promoting entrepreneurial innovative behavior in an enterprise.

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ANALYSING COMPETENCY MAPPING AND ITS LINKAGE WITH JOB PERFORMANCE: A CASE STUDY

Saloni Pahuja* Divya Goel**

Purpose: *In the current competitive and challenging scenario, where we have so much awareness, competency-based HR still is an unexplored procedure. This Competency mapping isn't only about finding the ideal people for the job, but it is considerably more complicated. Organizations currently are struggling hard and putting so much effort to plan the correct strategy for mapping the competencies. Thus, purpose of this research is to analyse the relation between competency-mapping and job performance.*

Design/methodology/approach: *Dependent variable is Job Performance whereas the variables of competency mapping were independent. Eight competency mapping variables have been analysed which are Adaptable Behaviour, initiative taking capability, decision making ability, planning ability, problem solving skills, self-development competencies, drive for goal achievement and technical knowledge. Data was collected from 100 employees of HCL located at Noida with the help of structured questionnaire. Techniques used for analysis were Correlation, regression, and multiple regression to analyse the linkage and impact of independent variables on dependent one.*

Findings: *It was found that the competency mapping and job performance are positively correlated. Also, findings revealed that job performance of the employees and firm is significantly impacted by competency mapping.*

Originality/value: *As identifying competencies is of utmost importance in this competitive era for organisation to succeed and have higher performance. Thus, findings provide significant value to company that by implementing effective competency mapping firm can enhance job performance and can enjoy the sustained competitive advantage.*

Keywords: Adaptable Behavior, Competency Mapping, Initiative Taking Ability, Job Performance, Problem Solving Skills, Decision making Ability and Self-Development Competencies.

JEL Classification code: M12, J24, J28

In order accomplish the objectives in this current era full of challenges and competition, improvement and up-gradation are turning out to be need of the hour. The organisation should realise the strategic role of Human Resource to excel. Higher performance is not just dependent on grades but competencies of the employees. There is need to understand the linkage between the strategic role of human resources, their competency profiling and performance. Management of HR is the most challenging task in terms of management. Organisations should recognise and develop proper mapping models to leverage best out of its employees. Mapping of competencies can be used as a great tool for selective hiring, training need assessment, engaging employees, placing them at right position, for making correct appraisal decisions, creating learning driven environment and thus for retaining the start performers. Also, if a firm has efficient mapping models, they can have efficient change and development process leading a firm to survive and sustain in tough times.

Defining Competency Mapping

Competency is skills, personal traits and abilities person has which helps him to do his role more effectively leading to higher performance. "Competency Mapping assists in

mapping the leading capabilities required for the job in the organisation and business & coordinating those capabilities in the different procedures of the firm (Boyatzia, 1982)

"Mapping of Competency assists in knowing a person's weaknesses & strengths and in this manner helps the person to understand important areas where he should focus to grow and further develop his career for being successful in his profession (The Economic Times).

Job Performance

Job performance is not just about the way worker is executing the task but more than that. Like if an employee is having the potential to carry out the task in an extraordinary manner, then he will enhance organizations performance since he is fit for carrying his/her task at a higher level as compared to other individuals and in an innovative way which will result in high

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efficiency and help the firm to excel. Job performance is executing the task execution and how logically he/she is performing. For reference shoe sales rep's performance execution is assess on the number of pairs of tennis shoes, shoes or work boots she is able to sell on an average day, week or month. Her relevant presentation rates, how well she coordinates with fellow workers and customers, how well she manages to sustain her performance in tough times.” (Lorna Hordos, 2018).

It refers to how an individual will perform his/her job role. In addition to training and inborn capabilities like aptitude or an inherent ability, job performance is solidly affected by various other factors such as working conditions, physically demanding jobs, employee morale, extended working hours, work life balance, quality of life and stress level. Like Poor quality of work life and stressed situations can lead to various unhealthy habits which can further deteriorate the performance and ability of employee. Healthy and conducive work climate can reduce stress leading to increase in job performance.

Competency Mapping and Job Performance

Competency mapping helps in knowing and identifying the strengths and weakness of the employees and thus identifies and maps the competencies of the individual with the requirement of the job, leading to extraordinary results and thus higher job performance. Job performance enhances when one performs the job duties as per their competencies and skills. Both job performance and competency mapping are directly related to each other. Effective mapping help in optimum utilisation of the resources. Firm’s that maps the competency of its employee’s gains higher edge over its competitors. When employees are placed as per their competencies and interests, they are more satisfied, have higher morale and give better results and thus have higher performance.

I. Review of Literature

(McClelland, 1973) discussed the idea for analyzing the skills or competence which are very important for efficient and effective work performance. (Boyatzis, 1982) highlighted capabilities as fundamental attributes of a person that are casually related to effective performance of the job. (Sanghi, 2000) portrayed the significance of competencies and examined striking features of competencies. Study demonstrated that abilities are required to perform up to the standards and the satisfactory performance of the workers is not ensured by the competency. It should not be mistaken with execution estimation. Competency is capacity of performing a particular job and performance on the other hand is the real outcome delivered at work.

(Ranjekar, 2003) explained the linkage between possession of Human Resource skills and reliability and thus recommended list of significant HR competencies including personal work propensities and productivity, sound subject information, comfort with issues and ambiguities etc. Individual credibility, group credibility and the consistency of such credibility are the three segments of credibility for a function or a firm.

Rice (2006) showed that restrained way to deal with profession development improve the association's exhibition and alongside this vocation making arrangements for wellbeing pioneers would set as creative procedures for advancement.

Cernusca and Dima (2007) clarified the idea of competency and its association with execution and one's job advancement. Study explored couple of models of competency mapping and assessment instruments for execution of the board. A business may have incredibly fit HR; however, they sometimes won't deal with the position that best suits them. This is the place competency mapping and the assessment instruments come to assist the HR experts to pick the best suited employee.

Nigam (2009) revealed that mapping of worker competency is an innovative practice which is utilized for surveying the estimation of human capital and its advancement. Kodwani, (2009) communicated the job of mapping competencies in showing additional accustomed display. People with the right abilities are the best way to overwhelming execution. Skills are the course of action for such aptitudes and capacities (specialized just as social), which are needed for needs level of implementation. Farah (2009) uncovered that the nature of HR and abilities of them impacts the presentation and helps in getting phenomenal results.

Ulrich (2012) prescribed that HR experts have to ace six skills: Credible extremist; Change champion; Human resource innovator and integrator; Capability builder; Strategic positioner and Technology advocate.

Kodwani and Deo (2009) analysed that the mantra of the present business association is performance. Only the people with adequate capabilities can perform better. Capabilities are the game plan of such aptitudes & capabilities (specialized just as conduct) that are the fundamental for foreseen stages of activity. The correct abilities are the way to predominant execution. An enormous bit of the job affiliations is without suitable competency mapping as per the researches in the field.

Pandey et al., (2009) explained that representative competency mapping is one such creative practice that is generally being utilized by associations today. Competency

mapping is tied in with surveying the estimation of human capital and its improvement. Care should be taken to guarantee the inclusion of the whole association. The need to guide and screen the ability is seen by most associations as a device to increase the value of their distinct advantage regions as saw by the creators.

Vazirani (2010) expressed that in current scenario capabilities and Competency models are ordinarily polished in many of the firms. There is a strong business case for capacities at function as they lead to essential human resource progression that gives relationship with a competitive edge. In the case of competency, the board has focused to test the competence rather than intelligence which drummed up some excitement in the field of mechanical brain research Mc Clelland (1973). Capabilities independent from anyone else are inadequate for execution except if characterized in conduct terms. There is plentiful proof that skills structure the base for powerful and unrivaled execution. While firms have utilized the thought of skills for more than 50 years, the development of competency models inside the private sector and now, in open area has come about into expansion of definition, instruments, designs and application. Study presented the audit of the competency creating and an attempt to reveal some extra data into the field of capabilities and competency model regardless of the points of interest and inconveniences utilizing a competency model in an association.

Celia and Karthick (2010) measured the level of competency of employees. They focused on the worker's abilities, diverse departmental skills and offered recommendations to make improvement in their competency level. Their competency evaluation concentrated on six behavioural factors: Knowledge, communication, improvement of individuals, group direction, accomplishment orientation and customer orientation. They took a sample of three hundred employees from a population using stratified random sampling.

Yuvaraj (2011) stated that representative mapping of competency has reliably been the most relevant methods for perceiving the activity, social & individual abilities needed for an individual to perform better. Management should not just look at mapping in context with rewards, but all of the partners must comprehend the importance of competency mapping and are supposed to rehearse it as an open door for maintainability.

Balaji (2012) examined that competency is the ability of adhering or using information, aptitudes, capacities, practices, and a person's credits to viably execute basic job tasks, explicit capacities, or work in a mentioned job or position. Individual characteristics of individuals play a very critical role in defining their abilities and the way they handle their tasks and different situations. Suguna (2013) expressed

competency mapping as a scheme through which a person investigates the power as an individual representative and as component of a firm. Research revealed that the level of improvement firm wants is affected by how well organisation utilise the skills of labourers and do competency mapping to have advantage.

Uddin, et. al. (2012) has clarified different instruments for Competency model which includes job Analysis, competency matrix, 360-degree feedback and the like. Findings suggested that mapping of Competency can be utilised for training & progression arranging.

Gaspar (2012) perceived that selection method based on competency were more organised and effective. Contenders are evaluated on the abilities that they have to outline, when enrolled into the organization. Executing the executive's competency framework analyses the upcoming preparation and improvement necessities of the workers and it encourages the HR administrators to help representatives in choices like advancements and moves.

Chauhan and Srivastava (2012) measured that people associated with the organization are more important than the strategy. Strategies can be productively executed only when the organization has a competent work force. Strategies are implemented by its human assets. This is done by building up competency model and plotting each employee's performance on these competencies. Study attempted to gain insight into the field of competencies and competency models along with the implications and usage of these models in an organization.

Kaur and Kumar (2013) revealed that administration is needed to focus on key utilization of HR, and it is noteworthy for the companies to effectively execute the competency-based human resource management rehearses. The research portrays how and to what degree competency mapping assists the companies to be progressively compelling and proficient.

Jain (2013) breaks down the elements of worker abilities like individual characteristics, aptitudes, and information what's more, dissects the hole with real and wanted abilities and evaluates the requirement for worker preparing. It encourages disproving the exhibition of the workers and gives data to the association about the abilities they have. Study inferred that the term of competency includes qualities, aptitudes and learning parameters in detail and makes a whole examination in the actual and required abilities and surveys the preparation requirements of the employers.

Suguna and Tamilselvi (2013) discovered that competency mapping shouldn't be viewed as remunerations & it is not executed for confirmed agents of an organization & it should also be feasible for contact workers or for those who are seeking employment to demonstrate their abilities.

Johri (2014) unveiled to acknowledge that the organizations need to value and develop their HR. They should make arrangements for recognizing the traits and have engaged and supportive conduct. These types of practices are known as 'competency', & to perceive these abilities, the organization experiences the method of competency mapping.

Pandey (2014) proposed organizations needed to be adaptable & careful according to the varying client requirements & developing up-and-coming market trends. They should select proactive activity and adjust the organisation according to the adjustments in industry to get an upper hand among the competitors. Competency advancement plays a significant job in satisfying client necessities with least cost. Study featured that the competency based human resource management attempts to arrange HR procedures and frameworks to improve the capacity of the individuals at workplace. It very well may be construed from the investigation that vital administration of HR plays major role in creating competency required at workplace.

Sugumari (2014) analysed that effective management of human resource helps in meeting the goals of organisation and lead to achievement of their individual goals. Through proper competency mapping high talented and learning based employments are expanded. Human resource improvement goes for continually looking over competency needs of various people to play out the action doled out to them successfully & offer better chances to working up these abilities to set them up for future roles in the organization. Henceforth an attempt has been made to understand the connection between human practices followed and competency mapping in the organisation. Study also analysed the effect of competency mapping on individual and group. Management should realize its importance and its relevance in preparing candidates for all challenging roles.

Rajan (2015) suggested that for development of human resource development management should construct and use competency-based models that will help in excelling the business by enhancing the business results. The global economy needs analytical techniques in managing the work power as per analysis performed by Bhuvanewary (2015). With so much of competition and changing demographic and societal structures, increased expectations of industry it is required that HR should work on improving the capabilities of employees and make them ready for such challenging tasks. Improvement and upgradation is must to sustain in this competitive era. One of the most generally used HR practice is competency mapping for progression of the human resources. Perceiving and advancement of the capacities in an organization enables better execution as compensation and acknowledgement systems prompt progression. Moreover,

mapping of competency is a key by which one can enjoy competitive advantage with the help of HR.

Singh (2016) conferred that mapping of competency is needed to support corporate techniques, culture and vision. Competency mapping makes requirements for faultless execution, carrying an orderly method to manage capable advancement, improved occupation satisfaction and better agent maintenance. It makes getting ready and mastering improvement scheme feasible by relating them to the accomplishment criteria.

Nagesh (2017) depicted competency mapping as a method to figure out how ready the organization and its employees are. Competency mapping sees the person's characteristics and zones for advancement and aides them towards profession improvement viewpoints. It is fundamental to distinguishing the competency holes by looking at the normal arrangement of capabilities required to play out an errand/work with the real competency of a worker. Competency mapping has reliably been the most exact methods for recognizing the activity, social and individual abilities required for an individual to perform better.

The system of recognizable proof of the abilities capacities anticipated to perform plausibly a perfect course of action in the mentioned time is proclaimed as Competency Mapping. It joins breaking a set activity into little undertakings endeavours/practices & seeing the capacities (specific, administrative, social, hypothetical learning, frames of mind, aptitudes, etc) needed to execute the proportionate successfully. It might be used as the motive behind any competency evaluation. The evaluation of representative's abilities is the appraisal to which an employee or a lot of representatives pile up these skills needed by a specified job or set of jobs Awasthi (2017).

Worlikar (2017) clarifies that in the current aggressive state individuals are the most remarkable and important asset for any organization. They can't be copied as each individual is one of a kind. Subsequently it is basic for the associations to make use of this skill and increase the upper hand. It is possible for the organization to become aware of the worker's gifts, frames of mind and generally speaking execution through Competency Mapping. It is being use for perceiving key characteristics (learning, ability, and frames of mind) that are necessary to play out the organization's task productively. This examination paper is an audit of Competency Mapping, types and procedure for securing abilities and the reason for Competency Mapping

II. Research Design and Methods

Objectives of the study

- To study the various Competency Mapping factors and the Employees' Job Performance in HCL.
- To investigate the relation between Competency Mapping and the Employees' Job Performance status in HCL.
- To analyse how Competency Mapping helps in increasing the employee's performance in HCL.
- To study the impact of various factors of competency mapping on Job Performance of employees at HCL.

Research Design

Study is empirical in nature and the research design is causal and descriptive both. It is descriptive as prevailing level of competency mapping level and job performance was analysed and causal as it evaluates the relation and impact of competency mapping on job performance.

Data collection

Primary data was collected from employees of HCL with the help of questionnaire. Questionnaire was drafted keeping in mind the research objectives.

Secondary data was collected from the published sources such as journals, research reports, web links. They were referred to get more understanding about the topic.

Instrument used for Data Collection

Structured questionnaire was framed to collect the data from respondents. It has two scales one is to see the level of competency mapping and second scale is of job performance. Section I having 40 statements and Section II is having 10 statements on a Five-point scale ranging from 5 to 1 where 5 stands for Strongly Agree and 1 is for Strongly Disagree.

To check the reliability of the scale Cronbach's alpha was evaluated. Cronbach alpha is the coefficient of reliability or consistency, and its calculated value is shown in table 1 below.

Table 1: Reliability Analysis

Scale	Cronbach's Alpha Value	N of Items
Competency Mapping Level	0.82	40
Job Performance Status	0.85	10

Source: Survey Results

Cronbach alpha value for first scale "Competency Mapping Level" comes out to be 0.82 and for the second scale "Job Performance Status" is 0.85. As both values are more than 0.70 thus it depicts that both the scales are highly reliable.

Sample Design

The data was collected from 100 respondents of HCL India located in Delhi/NCR and the sampling technique is simple random sampling.

Techniques used for Analysis

Tools used for data entry and analysis were Microsoft Excel and SPSS version 20.0 respectively. Techniques used for analysing the collected data were descriptive statistics, correlation, regression, and multiple regression.

III. Result and Discussions

Relationship between Competency Mapping and Job Performance Status at HCL, IT Company: Correlation Analysis

The relationship between the competency mapping and job performance was studied to meet the second objective. Thus, correlation analysis was carried out to investigate the relationship between the two variables and is shown in table 2.

Table 2: Correlations between Competency Mapping and Job Performance

Job Performance		
Competency Mapping	Pearson Correlation	.933
	Sig. (1-tailed)	.000

Source: Survey Results

The coefficient of correlation as shown in table above comes out to be 0.933 and p value .000, revealed that there is significantly positive high degree correlation. Thus, there is significant relationship between competency mapping and the job performance status in the firm. Effective implementation of mapping will definitely improve the performance of the HCL.

Regression Analysis

The impact of the competency mapping on the job performance status was examined by applying regression analysis. The independent variable is Competency Mapping and the dependent variable is Job performance. The results were shown in table 3

Table 3: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-16.12	2.143		-7.523	.000
	Competency Mapping	.395	.015	.933	25.673	.000

a. Dependent Variable: Job Performance

Source: Survey Results

Value of t for competency mapping comes out to be 25.673, p value is .000 and beta value is .93 which is significant at 5 percent level of significance. Null Hypothesis 2 was rejected in this regard. Results showed significant high impact of competency mapping on the job performance status. HCL Management should focus more on mapping the competencies of employees for having high performance work system.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.933 ^a	.871	.869	2.075	.871	659.095	1	98	.000
a. Predictors: (Constant), Competency Mapping									
b. Dependent Variable: Job Performance Status									

Source: Survey Results

Value of R Square comes to be .871 which depicts that the Competency mapping accounts for 87.1 percent of variance in the scores of Job performance. Thus, it is a contributing factor, and the effective utilisation of competency mapping techniques can lead to increase performance of the employees to an extraordinary level.

F- Value comes out to be 659.095 is significant at 5 percent level of significance. Thus, regression model is valid and significant. We can say that there is potential and significant impact of competency mapping on Job performance Status. Effective competency mapping promotes the match of competencies and allocation of work thus employees feel more motivated which further will yield both extraordinary results and development of human capital leading to have competitive advantage. Results also supported the literature.

Impact of various factors of Competency Mapping on Job Performance status: Multiple Regression Analysis

Which factor has more impact in IT firm (HCL) and the influence of all identified factor on Job Performance status was examined by applying multiple regression analysis. Where dependent variable was Job performance Status and independent variables were eight variables of competency mapping as shown in table 5.

R square value revealed that all the competency mapping factors account for 88.0 percent of variance in the Job performance status for HCL. Value of Adjusted R square is greater than 0.5 which depicts that model is significant. Adjusted R Square comes out to be .870 which depicts that competency mapping factors can account for 87.0 percent of

variance in performance Status. Thus, there is significant impact of mapping factors on performance Status of employees in HCL and effective implementation of competency mapping can lead to competitive advantage with higher performance.

The Study results also depicted F- value is 83.78 and is significant at five percent level of significance. This revealed that regression model is valid and significant. We have identified whether the independent variable significantly influences the dependent variable or not by analyzing the t value and their corresponding p values at 0.05 level of significance.

Table 5, Determinants of Job Performance, (N= 100)

Independent Variables	Dependent Variable = Job Performance Status		
	Beta	t-value	Sig.
Competency Mapping Factors			
Adaptable Behavior	.171	4.440	.000
Initiative taking capability	.226	5.310	.000
Decision Making ability	.233	5.431	.000
Planning ability	.280	6.610	.000
Problem Solving Skills	.187	3.466	.001
Self-development competencies	.177	3.464	.001
Drive for Goal Achievement	.246	5.834	.000
Technical Knowledge	.203	4.288	.000
R = .938; R square = .880			
Adjusted R square = .870; F-Value: 83.78			

* Significant at .05 level, Source: Survey results

The results presented in the table above show job performance status of HCL employees is significantly influenced by Adaptable Behavior, initiative taking capability, decision making ability, planning ability, problem solving skills, self-development competencies, drive for goal achievement and technical knowledge prevailing in the employees. As per the employees' perception planning ability has highest impact on job performance status followed by drive for goal achievement, then decision making ability, after this initiative taking capability, then on fifth number we have technical knowledge, then problem solving skills, then self-development competencies and in last adaptable nature of employees.

To confirm this discussion was made with the managers and outcomes stated that to achieve excellence in performance they should map all the competencies with the jobs allocated.

IV. Conclusion

Match between the Job requirement and employee ability and interest is of most important efforts toward organizational improvement and excellence. Competency Mapping should be focussed at every stage especially during allocation of responsibilities, tasks and performance assessment in the organisation for surviving in this competitive scenario. To gain competitive advantage HCL have to focus on those practices which will create a conducive and knowledge sharing climate where all are inclined to learn, develop, interested in taking initiatives, drives for their own development and goal achievement, which will further make them competitive and innovative leading to engaged and high performers. HR professionals should take responsibility to access individual suitability for various allocated tasks and focus on the development for future allocated tasks. So that employees can excel in their assigned tasks. Competent and committed employees give extra ordinary results and helps firm to enjoy the competitive advantage.

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EXPLORING THE RELATIONSHIP BETWEEN HRM PRACTICES AND ORGANIZATIONAL COMMITMENT: THE MEDIATING ROLE OF JOB SATISFACTION

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Purpose: *The present study attempts to analyze the impact of HRM practices on commitment level of employees working in IT sector in Delhi NCR, India. A structured questionnaire was by 418 respondents.*

Design/methodology/approach: *From the previous studies, five major HRM Practices were embraced for the study, that is, compensation and rewards, employment security, performance appraisal, training and development and recruitment and selection. Partial least square Structural equation modeling (PLS-SEM) and Statistical Package for Social Sciences were employed for data analysis.*

Findings: *The major research finding of the paper is that HRM Practices has a positive impact on organizational commitment and job satisfaction partially mediates the relationship between HRM Practices and organizational commitment.*

Originality/value: *The research work includes the respondents working in IT companies in Delhi-NCR region. The paper presents a very important dimension for the managers and HR professionals in IT sector to reframe their HR strategies in order to obtain higher levels of organizational commitment.*

Keywords: HRM Practices, Organizational Commitment, Job Satisfaction, Structural Equation Modeling

JEL Codes: M120, M10, M12, J28.

In today's competitive and challenging environment, human resource is the important asset of any organization. Elarabi & Johari (2014) defined HRM as a process that focuses on improving skills and capabilities of employees that helps in supporting organization's growth. Academicians have revealed that HRM practices positively impacts organizational performance which further influences the organizational commitment (Naz et al., 2016; Stavrou & Brewster, 2005). Various researchers have explored the relationship between different HR systems and behavior of employees such as, intention to stay, satisfaction and citizenship behavior (Kehoe & Wright, 2013).

Porter et al. (1974) defined organizational commitment as "the strength of an individual's identification with and involvement in a particular organization". Steers (1977) viewed the concept of organizational commitment as attitude of employees; their behavioral intentions and intention to stay with the organization. Further, (Mowday et al., 1982) redefined the thought of organization commitment can be categorized by three aspects, trust in organizational values, put more efforts on organization's behalf and intention to stay. The employees who are satisfied have lesser chances of leaving the organization which helps in reducing the recruitment costs and such employees will have greater responsibility towards their work (Van Vianen, 2000 Shahnawaz & Juyal, 2006). The HRM practices considered in the study are: compensation and rewards, employment

security, performance appraisal, recruitment, selection and training and development.

IT sector has been considered as one of the fastest growing sector contributing to Indian economy. This sector has nearly 3.97 million employees in India, of which 105,000 were employed during FY18 (IBEF, 2019). Despite of having large number of employees working in IT sector, the companies are facing attrition concerns. To resolve the issue, companies have started making efforts to retain the employees working in the technological sector. India's major IT firms, for instance, Wipro, Cognizant and Infosys are also facing the retention concern. Wipro has initiated providing a retention bonus to its employees to have committed employees. Hence, there is a strong need to conduct a study in IT sector. Therefore, the main aim of the study is to examine the impact of HRM practices on organizational commitment of employees. Second, to examine the mediating effect of job satisfaction on the relationship between HRM practices and job satisfaction.

The present paper is organized as follows. Second section

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covers the relevant review of literature followed by the theoretical framework and research hypotheses. Further, the section covers the research methodology and data analysis. In the last section, the results and the implications of the study have been discussed.

I. Review of literature

Theoretical Framework

Discrepancy Theory

One of the major theoretical background of job satisfaction is discrepancy theory (the difference between the expected and actual outcomes). In some studies, it was revealed that discrepancy theory can help in predicting the level of satisfaction (Cooper and Artz 1995; Rice et al. 1989). An evaluation in which received outcome is less than the outcome that is expected, it will lead to employee's dissatisfaction (Lawler, 1973).

Social Exchange Theory

HR practices helps in developing sustainable exchange relationships between the organizations and employees also known as "Social exchange theory". The relationships of employment works on the basis of economic or social exchange (Blau, 1964). If organizations attain this concept, then as per the theory employees will respond back with positive attitude and improved performances (Aryee et al., 2002). In other words, employees will put more efforts and stay committed to the organization.

Conceptual Model and Hypotheses

The concept of organizational commitment has considerably gained importance from researchers and academicians (Mowday et al., 1979; Yahaya & Ebrahim, 2016). Previous studies revealed that commitment level of employees leads to individual growth and hence influences the organizational performance. (Agarwala, 2003; Ghosh, 2015) conducted research work in examining the relation between HRM Practices and organizational commitment. Further, in another study, it was revealed that there is a significant correlation between job satisfaction of employees and organizational commitment (Mackay, 2018). Previous studies have suggested that participation strengthens employees' motivation, increased satisfaction and improved commitment. Studies also revealed that the HRM practices influences the level of organizational commitment of employees (Khaliq et al., 2016; Lee and Lee, 2007; Petrescu and Simmons, 2008; Gellatly et al. 2009). With the growth and change in organizations culture, the managers are frequently looking for different ways to increase commitment level of employees and enhanced work attitudes such as job satisfaction, increased performance (Lok and Crawford, 2001; Yousef, 2000). In a research (Kreitner & Kinichki, 2006), it was found

that monetary benefits helps in motivating employees that further increases the commitment level of employees. Some other studies have discussed about the positive relationship of compensation benefits and organizational commitment (Khaliq et al, 2016; Monavvarian & Khamda, 2010; Bapiste, 2008). The positive impact of performance appraisal on organizational commitment was discussed by (Saxena & Rai, 2015). Previous studies have revealed that that HCHRM improves organizational commitment (Koster, 2011; Whitener, 2001).

Mediating variable: Job satisfaction

Various scholars have comprehensively studied the relationship between job satisfaction and HR practices. Some researchers have established a significant relationship between job satisfaction and organizational commitment (Chen Y.J., 2007; Liu & Norcio, 2008). In another study, (Suma & Lesha, 2013) it was revealed that the satisfaction related to salary, work and quality of supervision positively impacts the organizational commitment of employees. When there is dissatisfaction at work, employees will be less committed and further the chances of quit intentions will increase. Therefore, organizational commitment and employee satisfaction are important attributes in evaluating quit intentions of employees and their overall involvement towards the growth of organization. Various research studies among different sectors have found that there is a strong relationship between commitment and satisfaction level of employees (Chen, 2007; Mathieu and Zajac, 1990)."

HRM Practices and Job satisfaction

The relationship between HRM Practices and job satisfaction has been studied earlier in the past studies. Job satisfaction is related to how the employees act and react towards a particular situation. Some of the studies that have studied the relationship between HRM practices and job satisfaction are (Kaya et al., 2010; Petrescu and Simmons, 2008; Kooij et al., 2010; Jiang et al., 2012). Pratibha et.al (2021) stated that employees have given more preference to compensation practices and performance appraisal strategies of the organization.

H1: HRM Practices has a positive impact on Job satisfaction

Job satisfaction and organizational commitment

Committed employees have more affiliation and attachment towards their organization. When the employees are more faithful, they will contribute more towards the organization as compared to the employees who are less committed (Glebbeck & Bax, 2004). The relationship between organizational commitment and job satisfaction has been

examined by various researchers in the past studies (Zhao et al., 2007). Bedi and Khurana (2020) highlighted that appropriate practices help in enhancing employee attitude, commitment and effectiveness of the organization.

H2: Job satisfaction has a positive impact on organizational commitment

HRM Practices and organizational commitment

For the achievement of success in the competitive and vibrant marketplace, HRM practices have been recognized as a key component (Baum, 2015). HRM is considered as a planned way for the management of assets of the organization that are valuable and helps in the fulfilment of the organizational objectives. Park and Doo (2020) carried out a study to examine the impact of HR practices on the commitment and satisfaction level of female managers. The results found that HR practices influences the satisfaction and commitment and job satisfaction directly influences the commitment level of female managers. Various studies have examined the relationship between HRM practices and organizational commitment (Meyer and Smith 2000; Agarwala 2003; Gellatly et al., 2009; Fiorito et al., 2007 Shahnawaz & Juyal 2006; Guchait & Cho, 2010; Ghosh, 2015).

H3: HRM practices has a positive impact on organizational commitment.

H4: Job satisfaction mediates the relationship between HRM Practices and organizational commitment

On the basis of hypotheses framed, the proposed conceptual framework (figure 1) is developed.

Figure 1: Proposed conceptual framework



II. Research Design and Methods

The present study uses analytical research and descriptive research design. Survey was conducted in IT industries of

Punjab region. For the accomplishment of objectives, convenient sampling (non- probability) was used to collect data from employees using a structured questionnaire on a 7-point Likert scale, 1 “Strongly Disagree” to 7 “Strongly Agree”. The lower and middle level employees were selected to collect the data.

A structured questionnaire was distributed to 520 employees, however, 418 responses were found to be complete and useful for the research purpose with no missing information. The sample size was calculated using Cochran’s formula of sample size determination. The questionnaire was divided into two parts, first part was related to HRM Practices, Job satisfaction, Organizational Commitment and second section was the demographic profile of respondents. Structural Equation Modelling technique using Smart PLS software was employed to analyze relationship between HRM Practices and Organizational Commitment, also investigated the mediating effect of job satisfaction.

Table 1: Content Analysis - Variables and their sources

Variables	Number of Items	Source
HRM Practices	18	Quansah, 2013
Job Satisfaction	4	Hanaysha & Tahir, 2016
Organizational commitment	6	Mowday et al. 1982

Source: Author’s calculations

III. Result and Discussions

Descriptive analysis

Table 2 shows demographic profile of the respondents. Out of the 418 respondents, 269 (64.4 percent) were male while 149 (35.6 percent) were female. 26.3 percent of the respondents were below 25 years age group, 32.1 percent lies in 26-30 group, 27.8 percent lies between 31-35 years group and only 13.9 percent of the respondents have age above 36 years. Further, 313 respondents were married (74.1 percent) and 105 were unmarried (25.1 percent). The higher qualification was found to be Post Graduation 226 (54.1 percent) and 173 (41.4 percent) of the employees were graduates. Majority of the respondents 151 (35.5 percent) have 0-5 years of experience followed by the employees 119 (28.5 percent) who belongs to the category of 6-10 years of experience. 109 (26.1 percent) employees have 11-16 years of experience and only 39 (9.3 percent) employees have more than 16 years of experience. Only the employees who had at least one year of experience

with their current organization were requested to participate in the survey.

Table 2: Demographic profile of respondents

Age	Frequency	Percent	Educational Qualification	Frequency	Percent
Less than 25 years	110	26.3	Graduate	173	41.4
26-30	134	32.1	Post Graduate	226	54.1
31-35	116	27.8	Others	19	4.5
Above 36 years	58	13.9		418	100
	418	100			
Gender	Frequency	Percent	Work experience	Frequency	Percent
Male	269	64.4	1-5 years	151	35.5
Female	149	35.6	6-10 years	119	28.5
	418	100	11-15 years	109	26.1
			16 years and above	39	9.3
Marital Status	Frequency	Percent		Frequency	Percent
Married	313	74.1		418	100
Unmarried	105	25.1			
	418	100			

Source: Author's calculations

Assessment of Measurement Model

The two most important criteria for assessing measurement model in PLS SEM are the reliability and validity of the model. Therefore, smart PLS was used in examining the validity and reliability (Hair et al., 2019; Henseler et al., 2009).

Results of Measurement Model (Reliability and Validity)

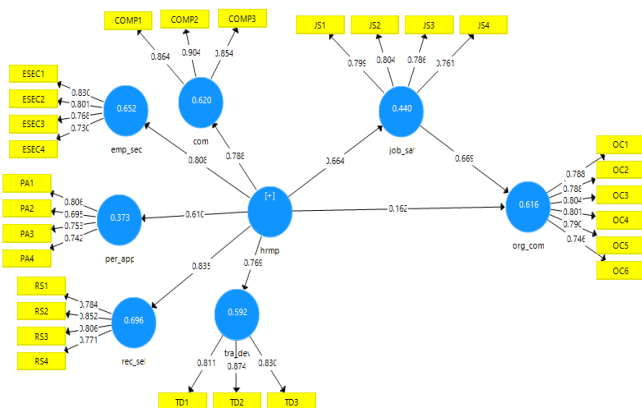
The measurement model was assessed to establish the reliability and validity before evaluating structural model (Henseler et al., 2009). Table 3 provides the result of reliability and validity. In assessing convergent validity, Average Variance Explained (AVE) should be higher than 0.5 (Hair et al., 2019). AVE of all the constructs are higher than 0.5, which indicates that the value is higher than the minimum threshold value 0.5 (Hair et al., 2019) as mentioned in Table 3. Hence, reliability of the research model was established.

Table 3: Reliability and Validity

Construct	Items	Factor Loadings	AVE	CR
Compensation and Rewards	COMP1	0.864	0.765	0.907
	COMP2	0.904		
	COMP3	0.854		
Employment Security	ESEC1	0.83	0.614	0.864
	ESEC2	0.801		
	ESEC3	0.768		
	ESEC4	0.73		
Performance appraisal	PA1	0.799	0.562	0.837
	PA2	0.804		
	PA3	0.786		
	PA4	0.761		
Recruitment and Selection	RS1	0.784	0.646	0.88
	RS2	0.852		
	RS3	0.806		
	RS4	0.771		
Training and Development	TD1	0.811	0.704	0.877
	TD2	0.874		
	TD3	0.83		
Job Satisfaction	JS1	0.806	0.62	0.867
	JS2	0.695		
	JS3	0.753		
	JS4	0.742		
Organizational Commitment	OC1	0.788	0.618	0.907
	OC2	0.788		
	OC3	0.804		
	OC4	0.801		
	OC5	0.79		
	OC6	0.746		

Source: Author's calculations

Figure 2: Measurement model



Hair et al. (2011) recommended that construct reliability is attained when the value of internal consistency reliability is above 0.70. The results of composite reliability presented in Table 2 represents that the values of construct reliability are higher than the minimum threshold value. The values of construct reliability ranges from 0.807 to 0.907 and the values between 0.70 and 0.95 are considered “adequate to good” (Hair et al., 2014).

Table 4: Discriminant Validity

	CR	ES	JS	OC	PA	RS	TD
CR							
ES	0.602						
JS	0.733	0.49					
OC	0.681	0.443	0.898				
PA	0.524	0.464	0.739	0.798			
RS	0.642	0.717	0.631	0.446	0.406		
TD	0.599	0.697	0.546	0.387	0.305	0.801	

Source: Author’s Calculations

Note: CR= Compensation and Rewards, ES= Employment Security, JS= Job Satisfaction, OC- Organizational Commitment, PA= Performance Appraisal, RS- Recruitment and Selection, TD= Training and Development

After establishing the reliability and validity, discriminant validity was assessed using Heterotrait -Monotrait Ratio. Discriminant validity helps in determining the extent to which a construct is empirically different from other constructs in the path model. All the HTMT values should be lower than .85 for the constructs that are conceptually different or .90 for those constructs which are conceptually similar (Henseler et al., 2015). All values are below .90. (Table 4). Hence, validity of the research model is established.

Structural model assessment

After the evaluation of measurement model, structural model was also assessed. Bootstrapping was performed to determine the path coefficients. R2 values of 0.25, 0.50, and 0.75 are respectively weak, moderate, and strong (Hair et al., 2019). R2 for job satisfaction was .440 and for organizational commitment, R2 was 0.616.

Table 5: Hypotheses testing

Hypotheses	Paths Coefficients	Beta value	Standard Error	t-value	Result
H1	HRM	0.66	0.034	19.57	Supported

	Practices-> Job satisfaction	4		6	
H2	Job satisfaction-> organizational commitment	0.669	0.035	19.145	Supported
H3	HRM Practices-> organizational commitment	0.162	0.040	4.043	Supported

Source: Author’s Calculations

To measure the predictive relevance of the model, blindfolding procedure was followed. Q2 is used to assess the predictive accuracy of the path model (Geisser, 1974; Stone, 1974). The Q2 values should be greater than zero (Hair et al., 2014). For the present model, the value of Q2 for job satisfaction and organizational commitment were 0.265 and 0.373 which is well above zero. Therefore, the model has some predictive relevance.

From the analysis, it was found that HRM practices has a significant relationship with job satisfaction ($\beta = 0.664$, $p < 0.001$) and job satisfaction has a significant relationship with organizational commitment ($\beta = 0.669$, $p < 0.001$). Also, the direct relationship between HRM Practices and organizational commitment is significant ($\beta = 0.162$, $p < 0.001$). Therefore, H1, H2 and H3 are supported.

Table 6: Mediation Analysis

Hypothesis	Relationship	Beta value	Standard Error	t-value	Decision
H4	HRM Practices->Job satisfaction-> organizational commitment	0.444	0.034	13.176	Supported

Source: Author’s Calculations

To examine the mediating role of job satisfaction, Baron and Kenny (1981) approach was used. The relationship between the independent variable and mediator is significant, the relationship between mediator and dependent variable is also significant. In the absence of mediator, the relationship between dependent and independent variable is significant and also in the presence of mediator, relationship between

HRM Practices and organizational commitment is also significant, but the relationship is weak. Therefore, H4 is supported and it is concluded that job satisfaction partially mediates the relationship between HRM Practices and Organizational commitment.

Research findings

The main objective of this research work was to determine the impact of selected HRM practices on Organizational Commitment. In the proposed model, there is one independent variable (one dependent variable and Job Satisfaction, which may play the role of mediating variable). The results revealed that there is a significant relationship between HRM practices and job satisfaction, findings are consistent with the previous studies (Kaya et al., 2010; Petrescu and Simmons, 2008; Kooij et al., 2010; Jiang et al., 2012). The second finding is that the relationship between job satisfaction and organizational commitment is significant. The findings are consistent with the previous studies (Glebbeck & Bax, 2004; Robinson & Rousseau, 1994; Zhao et al., 2007).

Also, the relationship between HRM practices and organizational commitment in the absence of mediator is significant, the results are consistent with the past studies (Gellatly et al., 2009; Fiorito et al., 2007; Shahnawaz & Juyal 2006; Guchait & Cho, 2010; Hemdi & Nasuridin, 2006; Ghosh, 2015).

The results found that there is a significant relationship between all the constructs (results of PLS Algorithm and Bootstrapping). In the presence of mediator (job satisfaction), the relationship between HRM practices and organizational commitment weakens ($\beta=0.444$), but this relationship is significant ($t\text{-value}=13.176$). Therefore, it can be concluded that job satisfaction partially mediates the relationship between HRM practices (independent variable) and organizational commitment (dependent variable). The findings of the present study were consistent with the previous studies (Antonaki & Trivellas, 2014; Chen Y.J., 2007; Liu & Norcio, 2008; Caykoylu et al., 2007; Chen, 2007; Leong et al., 1996; Lok and Crawford, 2001).

Discussion and implications of the study

The results of the present study indicates that HRM practices has an impact (indirect and direct) on the commitment level of employees. Using SEM, the study also revealed that job satisfaction has a mediating effect between the relationship of HRM practices and organizational commitment. The findings of the present study have some practical and managerial implications. As, retaining qualified and talented employees in the organizations has become a major area of concern. Therefore, the theoretical contribution of the study confirms the concept of social exchange theory that if the organizations are successful in framing fair and justifiable HRM practices then employees will also reciprocate by maintaining their

relationships with the organizations, improved performances and higher level of job satisfaction.

HR practitioners and experts should focus on maintaining a highly satisfied and motivated workforce in their organizations in order to maintain and retain talent in the organization. The HR managers should focus on executing proper training and development practices, proper recruitment and selection procedures, fair compensation and reward management system, transparency in the performance appraisal plans and employment security should be given to the employees so as to maintain and highly committed and dedicated workforce in the organization. The results also revealed that the relationship between job satisfaction and organizational commitment is very strong, therefore the HR managers should put their emphasis on maintaining high satisfaction level of employees so that their sense of belongingness with the organization will increase in long run.

Limitations of the study and future scope

Like other studies, the present study also has few limitations. As the findings of the present study are based on the data collected from the lower and middle level employees of IT companies in Punjab region. Therefore, the generalizability of such findings might not be applicable to the other sectors and a larger sample will give more realistic view of the relationship. Further studies can be conducted by considering the other mediating and moderating variables (if there are differences on the basis of demographics). Incorporating such variables can strengthen or weaken the relation between HRM practices, job satisfaction and organizational commitment, also some other HRM practices like workplace innovation, job autonomy, information sharing, equal employment opportunities can also be included in future research, therefore will provide more insights to the further studies.

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STRESSORS AND COPING STRATEGIES AMID COVID-19: A STUDY WITH REFERENCE TO COLLEGE TEACHERS

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Purpose: *The purpose of the study is to identify the main sources of stress and bring out different coping strategies used by teachers amid COVID-19 pandemic.*

Design/ Methodology/Approach: *A sample of 80 teachers (males, 40; females, 40) was drawn using the rolling snowball sampling technique from various colleges of Haryana for a primary survey. Teachers were enrolled, regardless of their experience and type of college, to quicken the data collection process.*

Finding: *The study brought forth several stressors the teachers grappled with during COVID-19. Prominent among these were fear of contracting COVID infection, pressure related to changing teaching circumstances, and learning new skills for online teaching. . The major coping strategies used by teachers include, staying updated regarding the disease and alert to the government guidelines, adopting preventive measures, keeping busy in different household activities, spending quality time with family members, developing a healthy lifestyle, and connecting with friends and colleagues.*

Originality/Value: *The present study is an empirical investigation based on primary survey.*

Implications of the study: *Based on the revelation of fear, stress and anxiety among teachers amid COVID-19. The study emphasizes that the strategies adopted by teachers will help others too in reducing stress and improving their mental health. It is also felt that counselling for mental wellbeing and training for using technology in the teaching learning process will act as important stress busters.*

Keywords: Stressors, Mental Health; College Teachers; Coping Strategies; COVID-19; Psychological Adaptation, Surveys and Questionnaires.

The havoc coronavirus disease (COVID-19) has played, irrespective of geographical boundaries, has become a buzzword all around; it has caused a lot of mental agony and stress among people from all walks of life. Even before the World Health Organization (WHO) declared it a pandemic, it had received the notorious status of being one. The name of the disease itself brought in its wake lots of fear and anxiety, causing a strong emotional impact on human beings. Preventive measures, such as the lockdown, quarantining, and social distancing, apart from heightening the feeling of isolation and loneliness, have caused stress and mental health issues. Besides fear and worry, the spate of job losses emanating from prolonged lockdowns and consequent business closures added its mite to the existing stress among bread earners. Though the impact may have varied, this phenomenon was not an absolute exception to any sector or geographical location. WHO visualizes mental health as a state of well-being, and it is through this state an individual realizes his or her abilities. WHO also contends that "through good mental health, one can cope with the normal stresses of life, can work productively and fruitfully, and can make a contribution to his or her community." Despite a focus on mental health, all people at one point in time or the other encounter situations leading to stress and mental illness.

Studies have revealed tremendous work and performance pressures, causing stress, anxiety, and depression among

teachers. The students are also not an exception to this phenomenon as they are also prone to developing post-traumatic stress disorders (Charnsil et al., 2020). According to the National Institute of Mental Health (2019), over time, continued strain on the body from stress may contribute to serious health problems, such as heart disease, high blood pressure, diabetes, and mental disorders such as depression or anxiety.

I. Review of Literature

Meenakshi et al. (2019) advocated using complementary therapies to reduce stress and improve mental health, based on the results of her study among teachers using these therapies for their physical and emotional well being. Focusing on the mind, body and spirit, they enhance the flow of energy through our body, resulting in a feeling of relaxation. Though dealing with a mental disorder can be difficult, especially when a person is unwell, the appropriate use of complementary therapies is one of the best options, the researchers argue.

In more recent research on emotional well-being and coping during the COVID-19 pandemic, Epel (2020) stated that

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enormous efforts are needed to manage emotions in such situations. Some of the tips suggested by the author were staying physically safe from the virus, limiting exposure to media and news related to the virus, getting and providing comfort and social support via phone, practicing health behaviours, consuming a nutrition-rich diet, and being compassionate.

Gautam and Sharma (2020) discussed the harmful effects of COVID-19 on the work-life and mental health of teachers in India, let alone the daily routine and educational system throughout the globe. Given low capabilities in using online platforms, teachers find it tough to prepare and deliver online lectures. In addition, the lack of seriousness among students and absence of control over them further adds to their agony. Their worry about getting infected by the virus remains a cause of concern.

From the above, it emanates that there have been several attempts to bring forth reasons for stress and coping strategies among teaching professionals. The issues raised and observations made in the earlier works prompted the researcher to take up a quick survey and bring forth research results concerning stress and coping strategies among college teachers. The researcher intends to add to the existing body of knowledge on the subject.

II. Research Design and Methods

Locale of the study and sample selection

The present study involved a sample survey that was conducted between November 1, 2020, and December 31, 2020, in the state of Haryana, India. Eighty teachers (males, 40; females, 40), teaching in various Government and Private Colleges of Haryana, were contacted through the snowball method, a non-probability sampling technique, and requested to participate in the survey via email. The age of respondents ranged from 33 years to 50 years, with a mean age of 39.2 years. Of the total, 80% of the teachers had a PhD degree, while the remaining 20% held a MAM/M.Sc./M.Com degree.

Data collection and analysis

A questionnaire was prepared to collect information on personal attributes, and to assess the stress of teachers amid COVID-19, an inventory was made a part thereof. Responses were in the form of either yes or no. The present analysis is devoid of advanced techniques for statistical analysis, as, given the nature of the survey, the results could be reached through simple analysis, using frequency counts and percentages as the statistical tools. The frequency and percentage of responses were based on the answers given by the respondents to the inventory of stressors and coping strategies, which was finalized after consulting selected

subject-matter experts. The coping strategies were recorded by asking an open-ended question; out of diverse strategies revealed by respondents, only seven with the highest frequency were included in the analysis.

III. Results and Discussion

Causes of stress amid COVID-19

As shown in Table 1, all respondents (100%) were worried that they and their family members might get infected by the virus. They expressed their worry regarding the possible unavailability of any vaccines or treatment to mitigate the virus in the future. Eighty percent of teachers felt anxious whether they would be able to cope with and sustain the changes made in their lifestyle amid COVID-19. The thought of quarantine, consequent to corona infection, was a source of fear in the minds of as high as 70% of the teachers, followed by those having a sense of being lonely and suffocated due to lockdown (60%). The lockdown, meant to control the spread of the coronavirus, had rendered most (90%) of the respondents' exhausted due to multitasking.

Table 1: Causes of stress amid COVID-19 (n=80)

	Frequency	Percentage
Worried about being infected	80	100.0
Worried about family members being infected	80	100.0
Fear of being quarantined if get infected	56	70.0
Feeling lonely and suffocated due to lockdown	48	60.0
Worried about future if there is no vaccine and proper treatment of this virus	80	100.0
Feeling anxious due to change in lifestyle amid COVID-19	64	80.0
Feeling exhausted with multitasking	72	90.0
Teaching from home is a difficult change	77	96.0
Pressure of learning online teaching methods	72	90.0
Pressure of preparing online learning material	67	84.0
Poor internet connection	58	72.0

Regarding stress related to teaching using online platforms, 96% of teachers viewed it as difficult. The percentages of teachers who felt pressured to learn online teaching methods and preparing online lectures were 90% and 84%,

respectively. Poor connectivity of the internet was not only interference in teaching but was a stressor for as many as 72% of the sampled teachers.

It can be interpreted from these findings that all teachers felt stressed during the outbreak of COVID-19. Their main concerns included getting infected by the virus, fear of being quarantined, worries about the future lifestyle changes due to coronavirus outbreak, and feeling exhausted. In addition, they felt stressed because of the changing teaching venues, the pressure of learning online teaching methods and preparing online learning material, and poor internet connection. The stressors were either related to themselves or their profession, and both appeared to augment each other.

Strategies to cope with stress amid COVID-19

As we know, the individuals respond to stress by eliciting coping strategies; therefore, through this survey, we also enquired how the teachers coped during the COVID-19 outbreak. The results implied that teachers utilized various coping strategies. As shown in Table 2, all of the teachers reported that they kept themselves informed about the viral outbreak and followed preventive measures to protect themselves and their families as per the guidelines issued by the government and doctors. All of them viewed the quality time spent with their families as a stress buster. Connecting with friends and colleagues was also one of the strategies utilized by all. The other strategies included following a healthy diet (96%), keeping oneself busy in household activities (90%), and practicing yoga, meditation, and indoor physical activities (70%).

Table 2: Strategies used by teachers to cope with stress amid COVID-19 (n=80)

Coping strategies	Frequency	Percentage
Seeking information about the virus	80	100.0
Following preventive measures as guided by government and doctors	80	100.0
Spending quality time with family members	80	100.0
Online connecting with friends and colleagues	80	100.0
Healthy diet to stay healthy and develop strong immune system	77	96.0
Keeping busy in household activities	72	90.0
Yoga, meditation and indoor physical activities	56	70.0

It can be interpreted from these findings that teachers used different strategies to cope with stress during the outbreak of COVID-19 and the lockdown period. They kept themselves updated about the latest information on the disease and used preventive measures to protect themselves and their families from getting infected. Spending quality time with their families and connecting with friends and colleagues reduced their stress. Eating healthy, performing household activities, and resorting to yoga, meditation, and indoor activities were the other strategies utilized to cope with stress.

Discussion

Through the survey results, we can discern that the entire teaching community in the colleges encountered stressful conditions during the pandemic of COVID-19, even though in varying degrees. Invariably, our findings were in concordance with the other studies conducted during this pandemic. Talidong and Toquero (2020) found that closure of educational institutions, home quarantine, and social distancing resulted in psychological problems among Philippines teachers. Rawat and Choudhary (2020) reported that students, teachers, and parents experienced adverse effects, such as stress, anxiety, phobia, helplessness, sadness and fatigue, during the COVID pandemic. Similarly, according to Gautam and Sharma (2020), teaching had been badly affected by COVID-19. Trial and errors while using technology were an obvious source of frustration and stress among the teachers. The lack of control over the audience during online lectures and the visibly diminishing interest of students in online classes also added to dissatisfaction leading to further increment in their stress levels.

Further, this study revealed different strategies used by teachers to cope with stress emanating from the consequences of the COVID-19 pandemic. Teachers kept themselves updated with information regarding the pandemic and used preventive measures to protect themselves and their families from the disease. Spending quality time with their family members and getting connected with their friends and colleagues acted as stress busters. In brief, their lifestyle had undergone a significant change. These results were akin to the findings reported by Talidong and Toquero (2020), where teachers in the Philippines practiced virtual learning, followed quarantine requirements, and undertook various stress-releasing activities as adaptive strategies. In another recent research on emotional well being, Epel (2020) offered tips that were similar to the coping strategies adopted by the respondents in our study. Previously, Meenakshi et al. (2019) reported that the teachers used complementary therapies, focusing on the mind, body, and spirit, for their physical and mental well-being; they found therapies as the best option to reduce stress and improve mental health. In the past, these therapies have been proven beneficial in relieving tension, anxiety, depression, anger, hostility, and fatigue among

individuals (Onishi et al., 2016). Interventions, such as mindfulness and meditation, may also improve psychosocial health and work performance (Ravalier et al., 2016). Rawat and Choudhary (2020) and Sahu (2020) recognized similar disruptions in the education system due to the ongoing pandemic. The latter recommended that counseling services should be provided for the mental well-being of students and staff during the ongoing pandemic.

IV. Conclusion

As an obvious outcome, the study revealed fear, stress and anxiety among teachers due to the pandemic of COVID-19. The lifestyle changes because of the coronavirus outbreak have heightened psychic costs. Teachers are employing different strategies to cope with stress during these difficult times. The findings of this research may have implications in dealing with stress and fear related to pandemic. The strategies adopted by teachers will help others in reducing stress and improving their mental health. To decrease the psychological impact of the pandemic among teachers, they must be counseled for mental well-being and imparted training for using technology in the teaching-learning process.

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THE IMPACT OF IFRS ON EARNING SMOOTHING AND DISCRETIONARY ACCRUALS ON THE AUTOMOBILE INDUSTRY OF INDIA

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Saurabh Singh ******

Purpose: *The study investigates the impact of IFRS on India's listed automobile companies with the assistance of discretionary accruals and earnings smoothing.*

Design/methodology/approach: *The study uses data from 59 automobile companies listed in BSE and NSE spanning over ten years from 2010 to 2020, Pre and post-IFRS impact has been analysed by applying a t-test. Correlation is used to check the association among variables. Further, panel regression is applied to observe the combined impact of all the variables of the companies' understudy with E-views' help.*

Findings: *The findings deduced from the empirical results that the applied analysis catalyses the reality of adopting IFRS in India as a decisive factor in improving the majority of automobile industries' financial statements. The results further supported IFRS with a significant positive effect on most variables selected for comparison. Meanwhile, the research output of the study is helpful for the automobile companies' managers, portfolio investors, and policymakers.*

Originality/value: *The study is among the earlier attempts to examine the association between IFRS on India's listed automobile companies with the assistance of discretionary accruals and earnings smoothing.*

Keywords: IFRS, Financial Markets, Accounts, Discretionary Accruals, Earning Smoothing.

JEL classification: G30, G38, G28,

The present economic scenario does not permit the nations to work in segregation. The financial world is a global village, and compliance with accounting standards is required. Indian firms are setting their foot in the global market and *vice-versa*. Standardized accounting statements will make it easier for both Indian and global firms. Moreover, firms would want to provide their investors a more transparent and reliable financial picture. Thus, the need for International Financial Reporting System (IFRS) was felt. "IFRS are a set of global accounting standards developed by the International Accounting Standards Board (IASB) for the preparation and presentation of public company financial statements" (Chakrabarty, 2014, p. 2).

IFRS are "principled-based standards" that provide a significant degree of flexibility, allowing accountants to implement discretion creating financial statements, thus representing the true image of affairs of the company (Malofeeva, 2018). Daske et al. (2008) support the IFRS, as their implementation brings efficiency in the financial reports, making the investor confident (Bodle et al., 2016). However, Soderstrom and Sun (2007) raise questions on the uniform applicability of IFRS, as their implementation may not enhance the value relevance and credibility solely on the reason of difference amongst economies. It is imperative to know about the essence of implementing the IFRS. Existing accounting standards may provide for stringent rules, restricted accounting options, restricting accountants' potential to act opportunistically (Callao and Jarne, 2010). Whereas flexible regulations can accommodate a greater degree of implied subjectivity in the application criteria, enabling accountants to assert their autonomy in firms' interests in the lack of appropriate regulatory systems (Jeanjean and Stolowy, 2008).

The "International Accounting Standards" (IAS), which incorporates standards that form part of IFRS, were established by the "International Accounting Standards Committee" (IASC) throughout 1973-2001. The aim was to minimize the gaps between national accounting standards and to ensure the comparison of accounting statements by companies from various nations (Camfferman et al., 2007). Since the adoption of IAS by IASB in 2001, the existing standards are valid until the time they are replaced or modified by setting the latest standards, *viz.* IFRS (Georgescu and Afrăşineţ, 2015).

India adopted the IFRS very recently as compared to other nations. It was in 2016 when IFRS was made mandatory. The secondary data is rarely available to ascertain the performance of Indian firms that

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have implemented IFRS. This research tries to compare the pre and post-impact of IFRS on the earning quality of Indian automobile firms listed at the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE).

India and IFRS adoption

With economies expanding at an unprecedented pace, global corporations need to venture out for funding, not only to boost development but also to remain operational (Sambaru and Kavitha, 2014). To put it in the words of Alexander et al. (2003), “with the global economy, instant communication and global finance market, the process of change is important” (p. 23). However, when it comes to maintaining accounts and financial statements, discrepancies do emerge. As there is a possibility of adopting different accounting standards by different nations, a need was felt to bring uniformity in financial reporting and accounting.

India, although it had a systematic accounting standard, in line with the International Accounting Standards, the “International Financial Reporting Standards” was proposed by the Government of India (GOI). While announcing the IFRS proposal, a voluntary adoption for the IFRS was proposed for the FY 2015-16 and made as a compulsion from FY2016-17 with certain conditions (Srivastava and Bhutani, 2012). The IFRS adoption in India is divided into two phases, as shown in Table 1.1. Before the two phases, i.e., from 1st April 2015, GOI made the adoption of IFRS voluntary for the Indian firms, with a condition of no rollback after implementation (Jain, 2011).

Table 1: Status of IFRS adoption in India

Period	Applicability	Terms
1 st April 2016	Mandatory	Firms that are listed or which are in the course of being listed on any Indian or foreign stock exchange having a net worth of Rs. 500 Crore or more. Unlisted firms with a net worth of Rs. 500 crores or more. Holding; subsidiary; JV or associate companies of the above mentioned firms.
1 st April 2017	Mandatory	All the firms that are listed or in the course of being listed not covered in 1 st phase. Unlisted firms with a net worth of Rs. 250 crores or more. Holding; subsidiary; JV or associate companies of the above mentioned firms.

Source: IFRS (2019)

There are specific differences in the IFRS and Indian GAAP, which are represented in Table 1.2.

Table 2: Difference between Indian GAAP and IFRS

Topic	Indian GAAP	IFRS

Accounting Framework		
Historical Cost	Includes historical costs, however properties, plant and machinery could be reassessed to fair value. Some derivatives are held at fair value.	It utilizes historical costs, although intangible assets, property and facilities (PPE) can be reassessed to fair value. Derivatives and some securities can be kept at fair value.
First-time adoption of accounting frameworks	First-time implementation of the Indian GAAP needs a retrospective application.	Full retrospective application starting on the filing date for a firm's initial Financial reports, with certain discretionary exemptions including restricted compulsory exceptions.
Financial Statements		
Components	2 year balance sheet of single entity parent company, income statement, CFS and accounting practices.	Balance sheet consolidated for 2 years, income statement, CFS, adjustments in equity as well as accounting practises.
Consolidated financial statements		
Consolidation model	On the basis of voting control or power over board composition of directors or the ruling body.	Focused on the possession of votes or the governance power.
Business combinations		
Types	No rigorous AS for business combinations.	All of the company combinations are acquisitions.
Revenue recognition		
Recognition	Analogous to IFRS, but there are some variations in detail.	On the basis of many requirements including the acknowledgment of revenue where risks, incentives and controls are being transferred and also the revenue can be calculated accurately.
Assets		
Property, plant and equipment	Historical cost is utilized.	Historical costs or reassessed sums shall be used.

Acquired intangible assets	Capitalized if the recognition requirements are met; all intangibles must be amortised over a life span with a rebuttable presumption not more than ten years.	Capitalized if the conditions for recognition are met; amortised over an expected lifetime.
Liabilities		
General Provisions	Analogous to IFRS, but discounting is not allowed.	Provisions for current commitments from historical events reported where resource outflow is likely and can be accurately calculated. Provisions shall be discounted to present value.

Source: PWC (2006)

Theoretical Framework

Since globally accepted accounting standards have become the mode of communication even for Indian firms, a few of the existing accounting standards have indeed been updated (Sambaru and Kavitha, 2014). ICAI is the formulating body of India's accounting standards, and in the year 2007, ICAI proposed to converge with the IFRS. So, in the present times, the Indian AS are the standards converged with the IFRS. Thereby, the Indian and the International accounting standard board proceed to work with each other to build strong, integrated accounting standards rather than adopt IFRS independently (Parvathy, 2017).

Application of institutional theory in adoption of IFRS provides necessary insights to the complex responses that organisations in various countries have made by implementing IFRS (Guerrio et al., 2020). An institutional theory framework boosts understanding of IFRS in global accounting benchmark. As accounting is a method which is bounded by rules and standard practices, thus challenging the rationalisation of accounting is difficult. Indeed there are less economic rationals which provide sufficient explanations for accepting IFRS. Whereas, various institutional arguments like transparency, quality and comparability of reports (Lara et al., 2008) and other factors serving the need of primary users of financial statements provide potential for diffusion of IFRS globally.

The theory further encourages greater regard to institutional work and dynamics which highlights support towards IFRS system.

Accounting standards contribute positively to accounting information and quality in developed nations (Hung and Subramanyam, 2007). The same cannot be said of developing nations. Recognizing that IFRS has better caliber compared to domestic accounting standards (Barth et al. 2008), Rudra and Bhattacharjee (2011) indicated that while accounting standards could in some instances regulate earnings management, this will not imply that a nation with high-quality accounting standards would also have high-quality documented financial reports and therefore

lower earnings management. That being said, Indian accountants and bankers consent to the importance of aligning accounting principles worldwide with the aid of IFRS. However, the same group finds this transition challenging, especially the older Indian male professionals (Sharma et al., 2017). Nevertheless, companies that voluntarily implemented IFRS in India reported improved "liquidity"; "profitability" and "assessment ratios"; as the shift to IFRS from Indian GAAP presented an impetus for "capital maintenance", as well as insurance for the failure risk (Kamarajugadda and Sireesha, 2015). In order to explore the discrepancies between Indian GAAP and IFRS financial statements, Gupta et al. (2017) listed "fair value measurement"; "revenue recognition norms"; "classification of assets and liabilities into current and non-current"; "share-based payments" and "recognition of deferred tax assets and liabilities" as significant contributors.

I. Review of Literature

Symphony in maintaining accounts around the globe is the need of the hour. Since multiple factors such as increased market uncertainty and economic slowdown at a global level have a significant impact on the global economy (Ashok, 2014). The formulation and application of international accounting standards have earned an extensive endorsement from various national and international accounting bodies (Sharma et al., 2017). However, the use of similar accounting quality metrics also generates mixed findings on the potential of the implementation of IFRS to increase the quality of accounting information (Pășcan, 2015). Christensen et al. (2015) find the mode of applicability (voluntary or mandatory) of IFRS as the cause of generating mixed findings. They state that "improvements are confined to firms with incentives to adopt" and "incentives dominate accounting standards in determining accounting quality".

The impact of IFRS depends on the region or a specific nation adopting it (Mardini et al., 2019; Wagaw et al., 2019; Key and Kim, 2020). After the European Union made IFRS mandatory in FY2005-06, the overall accounting quality deteriorated in Germany. Also, the earning smoothing and timely recognition of losses primarily confirm the factors leading to the accounting information's value relevance. This finding was not motivated by new adoptions of IFRS but was prompted by adjustments in standards (Paananen and Lin, 2007). With a broader scope of the study, Chen et al. (2010) infer that IFRS decreases earnings management by restricting duplicitous management discretion in calculating accounting figures.

Consequently, the rise in accounting quality, especially in the European Union, is due to IFRS instead of just improvements in management rewards and perhaps other external factors. Companies based in countries with a comparatively low level of corruption following the implementation of IFRS indicated that accounting quality had a significant effect on financial efficiency. As a result, the level of earnings management and the degree of discretionary accruals decreased substantially following the introduction of IFRS (Bouchareb et al., 2014; Boumediene et al., 2014; Martínez-Ferrero, 2014).

The North and South American regions portray negative findings in the context of IFRS implementation and its effect on earning

management and discretionary accruals (Shima and Yang, 2012; Wingard *et al.*, 2016). The mandatory implementation of IFRS by Canadian businesses has no significant effect on earnings management, nor has it had a significant impact on Return on Asset and EBIT variables. Even after the IFRS has been introduced, management employs discretionary accruals in order to smooth earnings. As a result, discretionary accruals escalated substantially following the introduction of IFRS (Said, 2019). Emphasis on nation-specific factors, such as economic stability and legal enforcements, has been given while understanding IFRS (Nobes, 2006; Kvaal and Nobes, 2010). Despite the implementation of IFRS, Latin American firms have demonstrated elevated levels of earnings control and higher levels of discretionary accruals (Rathke *et al.*, 2016).

Firms in China reported an increase in earning management after adopting IFRS (Alqatan *et al.*, 2019). However, with more independent directors on the board, earning management took a plunge after implementing IFRS. On the contrary, Wang and Campbell (2012) argue that IFRS prevents the smoothing of earnings relative to China's GAAP. Institutional factors, e.g., investor protection (Leuz *et al.*, 2013), can be attributed to a lowered level of earning smoothing in Chinese firms (Nnadi, 2013). At the beginning of the 2000s, South-East Asian countries had poor corporate governance practices. As a result, some companies also annexed small investors' resources and then used earnings management practices to cover it, even after the convergence of IFRS (Shahzad *et al.*, 2017). Wijesinghe (2017) further confirmed a rise in earnings management by raising the discretionary accruals by the Sri-Lankan firms, irrespective of the notion that transition from domestic accounting standards to IFRS would yield better accounting reports (Webb, 2006; De George *et al.*, 2016).

Since the convergence of IFRS in India is very recent, empirical support is not extensive to approve or disprove the claim that international accounting standards help reduce earning management and discretionary accruals. This leaves a research gap to be explored. The arguments outlined above reflect the possible improvements from IFRS. After incorporating IFRS, Indian firms are likely to undergo several reforms in their reporting framework due to the comprehensive reporting and market-oriented essence of IFRS (Tawiah and Boolaky, 2020).

II. Research Methodology

In the current paper, the author investigates the primary changes that have been made as an outcome of change in accounting policy with effect from 31 December 2016 in the automobile sector of 59 companies in India for understanding the underlying adjustments as per the IFRS. The target population of this research is all those automobile companies in India that have incorporated IFRS. In the study, a comparison on pre and post-adoption of IFRS is also compared.

Following the study's objective, the analysis focused on all the automobile companies that are 59 initially, but due to missing figures and suspicions errors, it was required to eliminate six companies. Data for the variables selected in the study were adopted

from various financial reports of respective companies and were later verified with the values available with proweess software. The Data period for the study is ten years, from 2010-2020. Post IFRS period taken for comparison is after 2016 till 2020.

Hypothesis of the study:

H_{0A} : There is no impact on earning quality of the automobile firms listed on BSE after the implementation of IFRS.

H_{0B} : There is no impact on earning quality of the automobile firms listed on NSE after the implementation of IFRS.

III. Research Findings and Discussion

The descriptive statistics, which were utilized to analyze the effect of the transformation to IFRS on the merged proclamations of monetary situation, are summed up in the accompanying table.

Table 3: Comparative measures of the main variables adopted from financial statements of Automobile Industry

Variable	Minimum	Maximum	Mean	Std. Deviation
Asset	34275.664 9	75901.5922	53791.6 678	4780.820 53
Income	235.35454 5	1104.08621	675.230 799	086.6144 170
Cash Flow	3977.2486 5	12242.7882	7134.22 308	862.2590 108
Sales	51176.022 2	140172.623	89899.5 588	7377.329 079
Capital	2353.6947 4	20126.0933	08043.5 413	1606.782 637
Total Liabilities	26169.402 6	59539.86	35163.4 499	2845.159 994
Reserve & Funds	12447.486 8	52415.2233	22761.3 012	3647.017 925

Source: Own processing in EViews 9 based on data from Automobile companies

According to the result of the analysis, values predict that the mean values of sales have increased over the years, after which the cash flow position of the companies has also improved. On the contrary amount of capital has decreased over the period for these companies. Apart of this, it is observed from the analysis that income and cash flow has the lowest deviation whereas, sales and assets are among the financial variable which has a most significant standard deviation.

Further, by applying correlation analysis, we get the correlation matrix values that help us understand the association of variables. Following is the matrix with values of correlation between every pair of variables.

Table 4: The Correlation Matrix

Variables	Asset	Income	Cash Flow	Sales	Capital	Total Liabilities	Reserve & Funds
Asset	1						
Income	0.22214	1					
Cash Flow	0.793653	0.0331	1				
Sales	0.794562	0.2311	0.6474	1			
Capital	0.910717	0.0641	0.8326	0.886	1		
Total Liabilities	0.806772	0.0456	0.7934	0.9135	0.96867	1	
Reserve & Funds	0.825283	0.0831	0.7895	0.9248	0.96142	0.99008	1

Source: Own processing in EViews based on data from Automobile companies and financial statements

Between the variables, it is found that assets and capital are highly correlated to each other. Income is the variable that is significantly less associated with any of the variables to that extent and only related with sales at 23%. Cash flow is maximally related to the capital and then to assets. It is minimally correlated with income. Sales are found associating very closely with reserve and funds and liabilities with approximately 90% level and found to have the lowest relation with income with only 23%. Capital is the only variable with a high level of association with every variable except with income which stands low at 6% only. Total liabilities are 99%

related to the company's funds and found to have only a 4% relation with the income earned by companies over the years. Reserve and Funds are also closely related with more than 90% among all variables except income which has a low association.

To compare the effect of IFRS on automobile industries T-test has been applied, and the pre-post result is studied for all variables. The pre-IFRS period is before 2016, and the post-IFRS period is from 2017 till now.

Table 5: T-test paired analysis of two samples for means

t-Test: Paired Two Sample for Means	Assets		Income		cash flow		Capital		Total Liabilities		Reserve & Funds	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
	42475 .61	6480 1.2	343.9 3	779. 942	3977. 249	8651. 606	9547 8.04	93560. 63	30526.98	36269. 22	16517.65	24237.84
Mean	51683 .134	7394 9.9	635.1 35	780. 067	5541. 191	10726 .35	7596 2.62 5	120507 .7	31249.14	47221. 39	16597.26	38835.94
Variance	26587 784	3469 881	56850 .3	8685 6	13444 11	56799 48	3116 3424	3.52E+ 08	2403909	1.14E+ 08	8475508	1.51E+08
Pearson Correlation	0.308 7859		0.276 23		0.646 268		0.85 1548 8		0.98739		0.972278	
t Stat	- 7.851 93		- 0.775 1		- 4.833 36		- 5.38 7091		-3.01717		-4.06505	
P(T<=t) one-tail	0.007 9178		0.259 68		0.020 12		0.01 6386 8		0.047266		0.027762	
t Critical one-tail	2.919 9856		2.919 99		2.919 986		2.91 9985 6		2.919986		2.919986	
P(T<=t) two-tail	0.015 8356		0.519 37		0.040 24		0.03 2773 5		0.094532		0.055524	
t Critical two-tail	4.302 6527		4.302 65		4.302 653		4.30 2652 7		4.302653		4.302653	

Source: Own processing in EViews based on data from Automobile companies and financial statements

For all the variables Degree of freedom is 2, Hypothesized mean difference is 0.

As seen in table 5, the mean value of Assets in the post-period is 73949.9, and it is more than the pre-period, which is valued at 51683.134. Different p-value at both one and two tails is also less than 0.05. Therefore, it is inferred that after the implementation of IFRS, the value of Assets has been improved. For Income, it is found that the mean value increased from 635.135 to 780.06 in the post-IFRS period with a p-value significant at 0.05% at both one and two tail. The result implies that IFRS has been useful for Income as there is a significant increase in its value. For cash flow, the post means the value is approximately double the mean value in the pre-period. It has risen from 5541.191 in pre to 10726.35 in the post period. P-values in one tail and two tail for cash flow are 0.02 and 0.04, respectively. As both the values are less than 0.05, it signifies that cash flow has been significantly affected by the introduction of IFRS in the automobile sector. The value of capital in the post-period is 93560.63, and it is less than the pre-period, which is valued at 95478.04. Further p-value at both one and two tails is also less than 0.05. Therefore, it is inferred that after the implementation of IFRS, the value of capital has deteriorated. For total liabilities, values of mean have risen from 30526.98 to 36269.22 from pre to post period with significant p value at one tail and insignificant p-value at two tail signifying that after IFRS the liabilities have of companies has risen. Lastly, mean values of reserve and fund have also risen in the post-period with significant p-values implying the positive effect of IFRS on reserve and funds of companies.

Table 6: Showing Panel Regressions with dummy variable

Variable	Regression
Asset	0.0264045(0.04204)*
Income	0.007819(0.015264)*
Cash Flow	0.0091663(0.05283)*
Capital	-0.1434571(0.02230)*
Total Liabilities	0.0454999(0.02239)*
Reserve & Funds	-0.0211749(0.0548)*
IFRS	84.42859(0.05948)*
R square	0.800442(0.06669)*
Adjusted R square	0.75376(0.048047)*
F (significance)	-1608.377941

Source: Author's own calculation

Table 6 is reporting the results of panel regression by taking into account all the company's understudy. It is observed that variables asset, income, cash flow, total liabilities, and IFRS show the positive impact on the dependent variable, and the variables that reflect the negative impact on the dependent variable are capital and reserve & fund. It is further observed that R-square and adjusted R-square values are coming out to be 0.800442 and 0.75376, respectively, which assures that the results obtained are quite reliable. Apart from this, all the variables are found to be statistically significant too.

IV. Conclusion

The empirical analysis results assured that the introduction of IFRS has a positive impact on the performance of automobile companies in India. The applied analysis catalyzes the reality of adopting IFRS in India as a vital factor in improving the majority of automobile industries' financial statements. The results further supported IFRS with a significant positive effect on the majority of variables selected for comparison. However, the significance level varies from variable to variable and does not necessarily depend on IFRS.

On the contrary, the current study is limited to only listed automobile companies of India; the impact generated by adopting IFRS differs highly depending on the sector of Industry. The positive effect of IFRS for the automobile industry may not be the same for telecommunications or other power sectors. In the light of this paper, further studies can focus on measuring the impact of IFRS for various other industries in India, and a detailed study could help to effectuate a better understanding of the effect that arises in applying IFRS in a country as a whole for the first time. Further, studies can also focus upon measuring the impact of IFRS from a different angle wherein instead of measuring the impact on the company's financial position, the impact of IFRS on government revenue and taxes can be measured.

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A STUDY OF FACTORS AFFECTING JOB SATISFACTION OF MANAGEMENT FACULTIES WITH RESPECT TO GENDER BASED DIFFERENCES: THE CASE OF GENDER BASED DIFFERENCES IN TEACHING SECTOR

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Purpose: *The current study is aimed at identifying the gender based differences in workplace focuses on the differences in male and female counterparts over various constituents that ultimately lead to their satisfaction or dissatisfaction at their current workplace.*

Methodology: *Gappa conceptual model was used to identify the constructs over which the differences would be studied. The unit of analysis comprises those tenured faculties across Indian universities or the higher education institutions that have prior teaching and research experience across with effective student enrollment and optimum budgetary allocation for the education*

Findings: *The prevalence of gender based differences across the respondent sample population confirms the existence of the bias and differentials with regard to perceptions of work experience and salary based satisfaction. The male and female faculties are not alike in their perception formation with regard to Gappa's six dimensional frameworks of work experience acquisition and accumulation.*

Originality: *The study is one of its kind to focus on gender based differences that exist between the male and female counterparts in teaching sector over various constructs in relation with the perception towards work and salary.*

Key Words: Contexts, Academia's Job Satisfaction, University Faculty, Gender Based Differences, Factor Analysis, SEM

JEL Code: J16

Background to problem: Contexts of developing economies

The focus on education administration and governance in developing nations is increasing yet the organizational challenges do exist across the emerging economies. The gradual opening up of private sector across BRICs economies and the increasing participation of privately run education institutions in Indian perspective is creating problems for achievement and realization of faculty's sense of satisfaction in transforming work cultures. This research examines the challenges from the social chronology based contextual approach whereby the focus is on the interpretation of phenomenon with regard to social influences on the career development and the respective academia's satisfaction with work culture and salary expectations.

Approaches to identifying the constituent factors

The review of existing literature suggests that the attempts at interpreting "job satisfaction" as a construct (COALDRAKE, Stedman, 1999) have been non convergent (HOUSTON, Meyer, Paewai, 2006). The review of literature further leads to non-conclusive definitions and interpretations of the phenomenon of the job satisfaction in the evolving disciplinary interface. Some studies observed that the construct is hard to define appropriately as the dynamics of

the construct are beyond one's through interpretation. The studies were however unanimous on the ever changing dynamic nature of the construct as it is definitely affected in varying propositions by personal, organizational and the environmental factors (HOUSTON, Meyer, Paewai, 2006) .

I. Review of Literature

The very consistency and static nature of concept has been repetitively questioned on account of the evolution of diverse parameters to gauge the individual's sense of satisfaction or dis satisfaction. The employee or the individual perceptions across developed and developing economies, across the sectors, across the geographies and across the nations have

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been observed to be different on account of diverse elements that are believed to shape the “job satisfaction” construct.

Job satisfaction in academia” as a construct, has been explored in multiple aspects and dimensions. The personality related dimensions or the personal aspect, focus on the personality of the employee. Individual’s affective and cognitive response to work (SPECTOR, 1985), individual’s sense of contempt with work conditions (Fritsche and apprish, 2005), individual’s self-evaluation of work conditions and content (weiss, cropanzani, 1996), individual’s well-being (oshagbemi, 1996); are some of the aspects covered under this proposition.

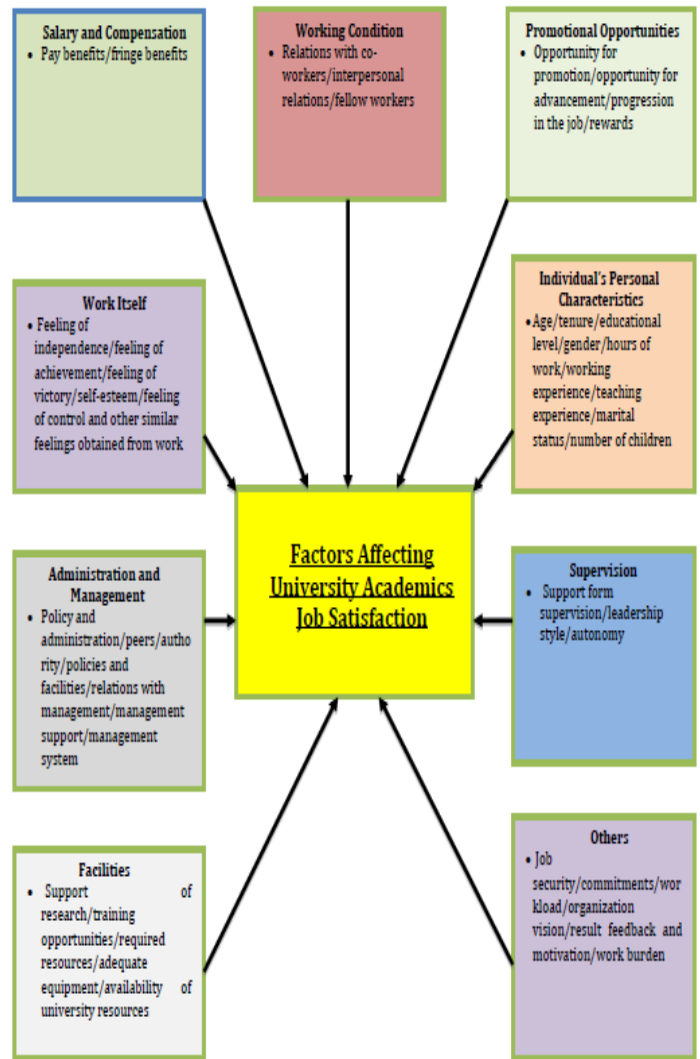
Individual related determinants of job satisfaction have also been explored as an individual driven attitude (jex, 2002) and as individual’s sense of motivation and innovativeness (TRUELL, Price, Joyner, 1998) to create an environment that promotes learning and assimilation.

“Job satisfaction in academia” as a construct, has also been explored in the organizational perspective. The existing research points towards the complex and uncertain state of affairs.

In their seminal paper on “Job satisfaction”, Judge and Klinger regard the notion of work as central to individual’s distinct identity. They observed the individual’s job title as synonymous with their subjective well-being. Their inquiry of the individual’s job attitudes has remained a central proposition of organizational psychology.

Their research stressed the role of cognitive and affective aspects in job attitude quantification. Their categorization of theoretical frameworks as either the situational or the dispositional or the interactive; is still valid and acceptable across the literature.

The conceptualization of “faculty job satisfaction” has remained a tedious exercise across the history of research. Biasak (2015) evolved a theoretical framework of the factors affecting university academics job satisfaction and categorized the constituent factors as salary and compensation, working conditions, promotional opportunities, work itself, individual’s personal characteristics, administration and management, supervision, facilities and other. The theoretical research framework (BIASAK, Govender, 2015) proposed the existence of multiple variables that affect the conceptualization of “job satisfaction” across academia.



Source: (BIASAK, Govender, 2015)

Some studies point at the lack of faculty tenure strengthening measures as well as consistent lack of institution’s support to incumbent’s training and career advancement in academia (FITZGERALD, White, Gunter, 2012). The considerable decrease in lucrativeness of profession in post globalization era has changed the intentions of the scholars to scout for opportunities in commercial research and industry instead of teaching (VASILEVA, Baird, Blair, 2011). The studies also point towards the management’s biased support to male gender with regard to promotions and salary determination (WEISBROD, Ballou, Asch, 2010). “Job satisfaction” across academia and academic workforce in Indian context has been grossly under researched and the existing studies are non-convergent with regard to content and context. The non-convergent research with regard to antecedents of “job satisfaction” across Indian academic workforce; lays the foundation for this research task.

Two main functions of the academic staff categories are teaching and research. Within universities, the combination of teaching and research is often understood as an essential and complementary characteristic of the institution. Academic staff are equally likely to be engaged in transmitting knowledge through teaching as in producing new knowledge through research. Through being taught by people active in research in their subjects, students are taught in an environment where they are learning from the current practical research experience of their tutors. Research may equally well be stimulated through the process of discussing aspects with students and considering their questions and ideas. (Adam R. Szromek and Radosław Wolniak , 2020)

Existing loopholes

Further the “job satisfaction in academia” as a construct has never ever been defined in Indian contextual perspective especially with regard to gender based differences with regard to perceptions and approach. In fact the interpretation of job satisfaction in context of faculty and academia in Indian context has been nonexistent and non-convergent in nature. The dominating impact of the organizational elements on the realization of faculty’s potential has remained the under explored aspect of the problem assumed for research purpose.

II. Research Design and Methods

The gender as a grouping variable has been a major contributor towards the emergence of substantial differences across the faculty in particular. A host of studies point towards the prevalence of gender based differences with regard to the job satisfaction in academia across the developing and developed countries alike. Hence the assumed hypothesis for this research:

There is substantial difference in faculty satisfaction with respect to gender age groups.

Methodology and Factor refinement

The current research operationalizes the core constructs of “faculty work experience” and “salary satisfaction” on the basis of Gappa, Austin, Trica (2007) conceptual model of variables envisions the crucial role of three aspects of faculty work experiences (academic freedom and autonomy, professional growth, collegiality) and three characteristics of academic organizations (resources, leadership, rewards). The construct of “organizational context of work experience” has been a widely researched aspect of impacts on faculty’s functioning and perception formation regarding the academic work related satisfaction or non-satisfaction. The current research is basically quantitative in nature and its sole focus is on the interpretation of the relations that exist across the

faculty’s perceptions of work experience across Indian educational institutions and salary expectations. The unit of analysis comprises those tenured faculties across Indian universities or the higher education institutions that have prior teaching and research experience across their respective disciplines of study across UGC recognized educational institutions with effective student enrollment and optimum budgetary allocation for the education. The choice of such a population segment is consistent with earlier studies on the faculty’s perceptions. The “tenured and permanent faculty” members across the various disciplinary schools of study would only be considered for this research exercise. The measurement scales were analyzed collectively for extractive factor analysis for further extraction of context specific significant factors representing the phenomenon for research.

Hypothesis Validation

As per the output of t-test, the differences were observed across the gender dimension as well as the age basis.

		Gender	N	Mean	Std. Deviation	Std. Error Mean
FACTOR: CLIMATE (part of faculty’s academic freedom scale)	Climate_1	Male	381	6.7769	.51819	.02655
		Female	267	6.7715	.53122	.03251
	Climate_2	Male	381	6.7717	.48972	.02509
		Female	267	6.7079	.55931	.03423
	Climate_3	Male	381	6.7218	.59936	.03071
		Female	267	6.6854	.58029	.03551
	Climate_4	Male	381	6.6903	.70235	.03598
		Female	267	6.6742	.66222	.04053
	Climate_5	Male	381	6.7244	.60276	.03088
		Female	267	6.6330	.70452	.04312
	Climate_6	Male	381	6.7717	.53097	.02720
		Female	267	6.6779	.65551	.04012
	Climate_7	Male	381	6.7585	.56145	.02876
		Female	267	6.6554	.75667	.04631
	Climate_8	Male	381	6.7323	.56822	.02911
		Female	267	6.6779	.62618	.03832
	Climate_9	Male	381	6.6877	.68409	.03505
		Female	267	6.6742	.66222	.04053
FACTOR : PERCEIVED COLLEGIALLY RELATIONS (part of faculty work experience scale)	C1	Male	381	5.6325	.92417	.04735
		Female	267	5.6554	.96616	.05913
	C2	Male	381	5.5643	.95100	.04872
		Female	267	5.5431	.98151	.06007
	C3	Male	381	5.5328	.88085	.04513
		Female	267	5.5730	.88710	.05429
	C4	Male	381	5.4987	.92516	.04740
		Female	267	5.4719	.94300	.05771
	C5	Male	381	5.4856	.89321	.04576
		Female	267	5.5056	.89009	.05447
	C6	Male	381	5.4829	.89903	.04606

FACTOR; VALUE ALIGNMENT (part of academic freedom scale)	C7	Female	267	5.4794	.89828	.05497	FACTOR : TENURE EXPECTATION PERCEPTIONS(part of faculty work experience scale)	AccR6	Male	381	6.6404	.81068	.04153		
		Male	381	5.4383	.98382	.05040			Female	267	6.5693	.86596	.05300		
		Female	267	5.4831	.95120	.05821			AccR7	Male	381	6.6745	.72845	.03732	
	C8	Male	381	5.4777	.96663	.04952		Female		267	6.6404	.75464	.04618		
		Female	267	5.4869	.91500	.05600		AccR8	Male	381	6.6903	.70235	.03598		
	C9	Male	381	5.4567	.98747	.05059			Female	267	6.6030	.78978	.04833		
		Female	267	5.4869	.93129	.05699		AccR9	Male	381	6.6693	.75102	.03848		
		Valign_2	Male	381	5.7743	.89823			.04602	Female	267	6.6030	.78978	.04833	
	Valign_3	Male	381	5.7034	.81674	.04184		FACTOR : TENURE EXPECTATION PERCEPTIONS(part of faculty work experience scale)	Tenure Exp_1	Male	381	6.6798	.70512	.03612	
		Female	267	5.6479	.81551	.04991				Female	267	6.6479	.70152	.04293	
		Valign_4	Male	381	5.5696	.90526			.04638	Tenure Exp_2	Male	381	6.8688	.50115	.02567
			Female	267	5.5581	.78004			.04774		Female	267	6.8427	.57319	.03508
		Valign_5	Male	381	5.7060	.78986			.04047	Tenure Exp_3	Male	381	6.8294	.61966	.03175
	Female		267	5.5693	.84397	.05165			Female		267	6.8240	.58402	.03574	
	FACTOR; PERSON- ORGANIZATION FIT (part of faculty work experience scale)	P1	Male	381	6.0000	.75742			.03880	Tenure Exp_4	Male	379	6.8179	.61386	.03153
Female			267	6.0300	.77012	.04713	Female		266		6.8083	.56040	.03436		
P2		Male	381	5.8609	.73918	.03787	Tenure Exp_5		Male	381	6.8031	.68101	.03489		
		Female	267	5.9139	.78285	.04791			Female	267	6.7715	.72305	.04425		
P3		Male	381	5.8294	.74677	.03826	Tenure Exp_6		Male	381	6.8320	.55072	.02821		
		Female	267	5.8539	.82102	.05025			Female	267	6.8352	.57107	.03495		
P4		Male	381	5.8819	.65632	.03362	Tenure Exp_7		Male	381	6.7795	.66388	.03401		
		Female	267	5.8539	.74919	.04585			Female	267	6.7903	.66676	.04080		
FACTOR: WORK LIFE BALANCE PERCEPTIONS(part of faculty work experience scale)	W1	Male	381	4.2362	1.74623	.08946	FACTOR: FACULTY CONTROL OVER CAREER		Control_1	Male	381	4.1811	.70432	.03608	
		Female	267	4.1723	1.77713	.10876				Female	267	4.1910	.72873	.04460	
	W2	Male	381	4.5617	1.94517	.09965		Control_2	Male	381	4.2178	.70881	.03631		
		Female	267	4.5506	1.93704	.11855			Female	267	4.2434	.74384	.04552		
	W3	Male	381	4.4672	1.95666	.10024		Salary_1	Male	381	6.7165	.76672	.03928		
		Female	267	4.4757	1.93949	.11869			Female	267	6.7303	.76233	.04665		
	W4	Male	381	4.4383	1.96134	.10048		Salary_2	Male	381	6.7060	.62213	.03187		
		Female	267	4.4157	1.96860	.12048			Female	267	6.6704	.69096	.04229		
	W5	Male	381	4.6483	1.83165	.09384		Salary_3	Male	381	6.7428	.55439	.02840		
		Female	267	4.5880	1.85841	.11373			Female	267	6.6779	.64394	.03941		
FACTOR: PROFESSIONAL VITALITY(part of faculty salary outcomes scale)	Vital_1	Male	381	3.8084	1.29067	.06612		FACTOR: SALARY SATISFACTION	Salary_4	Male	381	6.7008	.74673	.03826	
		Female	267	3.8502	1.32360	.08100				Female	267	6.6479	.83375	.05102	
	Vital_2	Male	381	3.8845	1.30477	.06685			Salary_5	Male	381	6.7087	.65426	.03352	
		Female	267	3.9588	1.30722	.08000				Female	267	6.6966	.66159	.04049	
	Vital_3	Male	381	3.7690	1.25202	.06414			Salary_6	Male	381	6.7480	.59341	.03040	
		Female	267	3.8277	1.25966	.07709				Female	267	6.7453	.61523	.03765	
FACTOR: ACCESS TO RESOURCES AND TRAINING OPPORTUNITIES (part of faculty work experience)	AccR1	Male	381	6.7349	.70380	.03606	FACTOR: TE NURE CAREER LOCUS		T1	Male	381	3.6824	1.38656	.07104	
		Female	267	6.6891	.69151	.04232				Female	267	3.6592	1.38736	.08490	
	AccR2	Male	381	6.7165	.67158	.03441			FACTOR: SALARY SATISFACTION	Salary_7	Male	381	6.7480	.59783	.03063
		Female	267	6.7004	.63135	.03864					Female	267	6.7116	.66828	.04090
	AccR3	Male	381	6.7034	.66784	.03421				Salary_1	Male	381	6.7165	.76672	.03928
		Female	267	6.6442	.74389	.04553					Female	267	6.7303	.76233	.04665
	AccR4	Male	381	6.7060	.69030	.03537	Salary_2	Male		381	6.7060	.62213	.03187		
		Female	267	6.6704	.70710	.04327		Female		267	6.6704	.69096	.04229		
	AccR5	Male	381	6.6955	.72308	.03704	Salary_3	Male	381	6.7428	.55439	.02840			
		Female	267	6.6704	.72805	.04456		Female	267	6.6779	.64394	.03941			

T2	Male	381	3.6325	1.40165	.07181
	Female	267	3.6929	1.37488	.08414

The research outcomes reflect and vindicate the earlier research findings that gender based differences (GARCIA, Marzo,Rivera, 2005), (NEELY, 1986) are more on the grounds of cross gender variations for the different contributing variables or the factors considered for research (SAUSER, York, 1978). As per the outcomes of the test for degree of similarity of the factors across the gender basis, substantial differences were observed across the comprising sample. A value of 0.90 or more than that mark indicates the prevalence of the respective higher degree of similarity across the two considered factors for the research study. Whereas in our sample , such an observation was rather missing, thus proving the evidence of substantial differences across the male and female faculty in terms of their perceptions with regard to work experience and salary expectation.

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Climate_1	.101	1	646	.751
Climate_2	8.316	1	646	.004
Climate_3	.706	1	646	.401
Climate_4	.003	1	646	.956
Climate_5	9.344	1	646	.002
Climate_6	13.465	1	646	.000
Climate_7	13.577	1	646	.000
Climate_8	4.421	1	646	.036
Climate_9	.036	1	646	.850
C1	1.288	1	646	.257
C2	1.011	1	646	.315
C3	.002	1	646	.962
C4	.464	1	646	.496
C5	.078	1	646	.781
C6	.001	1	646	.970
C7	.263	1	646	.608
C8	.528	1	646	.468
C9	1.009	1	646	.316
Valign_2	.882	1	646	.348
Valign_3	1.637	1	646	.201
Valign_4	1.950	1	646	.163
Valign_5	7.017	1	646	.008
Valign_6	2.052	1	646	.153
P1	.457	1	646	.499
P2	.338	1	646	.561
P3	1.567	1	646	.211

P4	6.616	1	646	.010
W1	.003	1	646	.960
W2	.015	1	646	.902
W3	.033	1	646	.855
W4	.000	1	646	.986
W5	.064	1	646	.800
Vital_1	.222	1	646	.638
Vital_2	.000	1	646	.988
Vital_3	.001	1	646	.981
AccR1	1.711	1	646	.191
AccR2	.003	1	646	.959
AccR3	3.723	1	646	.054
AccR4	.863	1	646	.353
AccR5	.301	1	646	.583
AccR6	2.670	1	646	.103
AccR7	.807	1	646	.369
AccR8	7.650	1	646	.006
AccR9	2.777	1	646	.096
TenureExp_1	.299	1	646	.585
TenureExp_2	1.612	1	646	.205
TenureExp_3	.041	1	646	.839
TenureExp_4	.073	1	643	.787
TenureExp_5	1.119	1	646	.291
TenureExp_6	.009	1	646	.925
TenureExp_7	.107	1	646	.744
TenureExp_8	.550	1	646	.459
TenureExcp_9	.329	1	646	.566
Control_1	.366	1	646	.546
Control_2	.590	1	646	.443
Salary_1	.209	1	646	.647
Salary_2	1.801	1	646	.180
Salary_3	7.562	1	646	.006
Salary_4	2.937	1	646	.087
Salary_5	.064	1	646	.800
Salary_6	.028	1	646	.867
Salary_7	2.058	1	646	.152
T1	.035	1	646	.852
T2	.249	1	646	.618

The SPSS output for equality of means similarly point towards the less than significant equality across mean terms thus proving the point that the inter item mean was not equal and hence supports the notions of prevalence of cross gender differences across tenured faculty in National Capital Region.

The gender based SEM diagram presents the staring differences across men and women faculty in the surveyed respondents to the study. The gender based SEM plot depicts the differences across two broader age groups across the respondents. The responses vary across work experience and salary related satisfaction. The gender based differentials as presented and analyzed here presents substantial variances of

the respondents to the constituent factors for measuring work experience and salary based satisfaction. As per the AMOS based hypothesized relations across the factors, grouped by gender; the male faculty's perceptions of academic freedom in existing organizational contexts has been observed to negatively impact their tenure locus and male faculty's value alignment is negatively correlated with vitality development across Delhi based educational institutions. Also their sense of the professional vitality development has been observed to negatively correlate with their salary related expectations and satisfaction.

Grouping variable =1 (males)

			Estimate	S.E.	C.R.	P	Label
CONTROL	<---	Accr	.106	.054	1.974	.048	par_49
CONTROL	<---	P	.203	.054	3.784	***	par_50
CONTROL	<---	C	.683	par_51			
CONTROL	<---	TENUREEXP	.050	par_52			
CONTROL	<---	W	.025	.018	1.373	.170	par_53
VALIG	<---	CLIMATE	.687	.073	9.427	***	par_58
T	<---	CLIMATE	-.094	.124	-0.758	.448	par_59
VITAL	<---	VALIG	-.181	par_60			
VITAL	<---	T	.120	par_61			
VITAL	<---	CONTROL	.153	.123	1.243	.214	par_63
SALARY	<---	CONTROL	.357	.054	6.589	***	par_54
SALARY	<---	VITAL	-.014	.021	-0.682	.495	par_62

In terms of female faculty across NCR based high education institutions, work life balance is a major aspect and the female faculty's perceptions of existing work life problems negatively impacts the control over their respective career development in subsequent time across the tenure progression. The female faculty respondents have been observed to possess negative impact of their academic freedoms on their tenure based locus of career.

Grouping variable=2 (females)

			Estimate	S.E.	C.R.	P	Label
CONTROL	<---	Accr	.181	.061	2.992	.003	par_49
CONTROL	<---	P	.397	.066	6.052	***	par_50

			Estimate	S.E.	C.R.	P	Label
CONTROL	<---	C	.454	par_51			
CONTROL	<---	TENUREEXP	.025	par_52			
CONTROL	<---	W	-.022	.021	-1.040	.298	par_53
VALIG	<---	CLIMATE	.751	.081	9.279	***	par_58
T	<---	CLIMATE	-.115	.148	-.777	.437	par_59
VITAL	<---	VALIG	.035	par_60			
VITAL	<---	T	.133	par_61			
VITAL	<---	CONTROL	.113	.148	.763	.445	par_63
SALARY	<---	CONTROL	.441	.072	6.092	***	par_54
SALARY	<---	VITAL	-.029	.027	-1.077	.282	par_62

IV. Conclusion

This study concludes that assumed hypothesis is validated and upheld.

Factor paths		Cross gender Estimates and evident differences in regression weights	
CONTROL	<---	Accr	.106 .181
CONTROL	<---	P	.203 .397
CONTROL	<---	C	.683 .454
CONTROL	<---	TENUREEXP	.050 .025
CONTROL	<---	W	.025 -.022
VALIG	<---	CLIMATE	.687 .751
T	<---	CLIMATE	-.094 -.115
VITAL	<---	VALIG	-.181 .035
VITAL	<---	T	.120 .133
VITAL	<---	CONTROL	.153 .113
SALARY	<---	CONTROL	.357 .441
SALARY	<---	VITAL	-.014 -.029

The prevalence of gender based differences across the respondent sample population confirms the existence of the bias and differentials with regard to perceptions of work experience and salary based satisfaction. The male and female faculties are not alike in their perception formation with regard to Gappa's six dimensional frameworks of work

experience acquisition and accumulation. As per the existing studies on the concerned matter, the cross gender differences are more prevalent with regard to faculty's "perceived access to organizational resources for professional growth and training opportunities". The research findings vindicate the earlier research on access to professional resources and opportunities.

The next "cross gender concern" was with regard to "perception of academic freedom" for instructional and research based engagement in the prevailing academic climates with in the current organization. The male and female faculty was equivocal of the concern for the essential academic freedom impartment with regard to instructional improvement and the research based contribution enhancement.

Yet another cross gender challenge was witnessed across the perceptions of equity and transparency with regard to tenure based expectations as part of work experience, being acquired across the current organization (employing educational institution). The male and female faculty across the sample respondents voiced their maximum possible concerns with regard to the tenure based aspirations and equity of the process.

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PERFORMANCE EVALUATION OF EQUITY PORTFOLIO CONSTRUCTION MODELS: A CASE STUDY OF NIFTY 50

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Purpose: Every investor wants to outperform the market. Technical models require financial and mathematical expertise to construct a portfolio for the same. However, a majority of investors are not financial experts. The objective of this study is to construct and compare portfolios based on: (a) a technical model which relies on mean-variance profile of stocks and (b) non-technical models which can be adopted by people with little financial literacy.

Methodology: Sharpe's Single Index Optimization Model is considered to construct the complex mathematics based equity portfolio. The second portfolio comprises of top company, based on market cap, of each of the sectors from Nifty 50 and the third one includes stocks commonly preferred by large cap mutual funds. All the portfolios are then compared with the index Nifty 50.

Findings: Although the portfolios constructed using non-technical models could not outperform the one constructed using Sharpe's model, they comprehensively beat the market. The second portfolio almost matches the returns generated by Sharpe's model.

Value: The study provides simple techniques to construct a portfolio that reasonably matches the technical models.

Key words: Portfolio Construction, Markowitz Optimization model, Sharpe's Single Index model, Nifty 50, Equity Returns, Diversification, Mutual Funds.

JEL Classification: G11

Harry Markowitz (1952) proposed the modern portfolio theory, the first stage being estimation of future performance of securities based on probability distribution. The second stage involved determining efficient set of portfolios based on such estimations. And the third stage involved selection of portfolio by the investor based on his risk-return preferences. This was a mean-variance optimization model. It was based on quadratic programming which made it costly and time consuming.

The model was studied by many researchers including Sharpe (1963) and Tobin (1965). Similar to the theory of Markowitz, Tobin (1965) also mentioned optimization model based on mean-variance approach. Sharpe (1963) developed a model for applying Markowitz optimization model. This model was simpler than the complex quadratic program model of Markowitz and at the same time was less time and cost consuming. Fewer parameters were considered and yet the model could give results as good as the Markowitz model.

In traditional approach, individual securities were analyzed based on standard deviation and expected mean returns ignoring the importance of covariance between any two stocks. The modern portfolio theory given by Markowitz addresses the issue. However, since the model is complex, many researchers have tried to develop simpler models of portfolio optimization. Elton et al. (1978), Bawa et al. (1979) and Chen and Brown (1983) have all developed simpler

models for the portfolio selection problem. Here the word 'simpler' does not connote 'easy to understand for the common investor'. It simply means simpler than the complex quadratic program model.

The key aim of portfolio construction is to diversify risk by putting the investment in different assets. A portfolio which generates highest possible return at a given level of risk is known as efficient portfolio. Selection of an efficient portfolio which suits the mean-variance preference of the investor leads to optimal portfolio.

Selection of such portfolio is the objective of this paper. For the same Sharpe's 'Single Index Model' is used. It is assumed that the investors are financially literate. However, they may not be financial experts to apply the single index model.

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Hence, a couple of non-technical models are also developed and the outcomes of all the models are compared.

I. Review of Literature

The classical theory given by Markowitz (1952) is based on a simple rule that expected return (E) is a desirable thing and variance of return (V) is an undesirable thing. Based on the preference of the investor, he could select his E-V combination which could provide highest expected return for a given level of risk undertaken.

Theory given by Markowitz generated a lot of interest in portfolio studies. Sharpe (1963), Lintner (1965), Jensen (1969) developed models either based on Markowitz' theory or as an improvement of the same.

Model given by Sharpe (1963) was simpler than the complex quadratic programming model of Markowitz. Lintner (1965) studied the relationship between the value of a risk asset and its expected return, variance and co-variance with other risk assets. He concluded that any amount of diversification would still be unable to eliminate risk. Jensen (1969) developed a model to evaluate performance of portfolios comprising of risky assets based on the theories of capital asset pricing given by Sharpe (1964) and Lintner (1965). He found that the fund managers were unable to predict future stock prices correctly, on an average.

Elton et al. (1978) studied the reasons why Markowitz portfolio theory could not be implemented. The reasons they identified included estimation of inputs and cost involved in constructing efficient portfolios. Their research focused on tracing out the efficient frontier. They provided simple mechanism of portfolio construction without applying mathematical programming. However, when practically applied, the model treats true values of unknown parameters as sample estimators. Ignoring estimation risk eventually can lead to selection of suboptimal portfolio (Chen and Brown, 1983).

Fama and French (1992) developed a three factor model examining the impact of these factors on the stock returns. They proved that the model, when compared with Sharpe's CAPM, was better in prediction abilities.

In recent years, researchers from across the globe have undertaken studies in this field. Sirucek and Kren (2017) constructed multiple portfolios. They used CAPM to derive weights of stocks in the portfolios. One portfolio was constructed mirroring the benchmark, another one was constructed based on beta coefficients and third one was constructed by picking random stocks. The objective was to arrive at the optimal portfolio.

Ivanova and Dospatliev (2017) studied Markowitz portfolio optimization with reference to the Bulgarian stock market. They constructed multiple efficient frontiers with the objective of minimizing risk, maximizing returns and maximizing Sharpe's ratio. They found that if investment was made in an efficient portfolio, then the portfolio performance was better than any individual stock.

Many researchers have applied Sharpe's single index model to construct the optimal portfolio. Syamni and Muntasir (2013) constructed portfolio, for optimization, comprising of stocks in IQ-45 index in Indonesia stock exchange using Sharpe's model. Ramanathan and Jahnavi (2014) constructed a portfolio in media and entertainments sector and concluded that there are a variety of factors including political, economic and psychological which influence the optimization of mean-variance portfolio. Subashree and Bhoopal (2017) constructed a portfolio comprising of stocks from banking and automobile sectors and found that the Sharpe's model selected more stocks from the automobile sector as compared to the banking sector. Jambotkar and AnjanaRaju (2018) constructed portfolio taking blue chip stocks for minimizing risk. Satyaprasad and Anusha (2018), constructed portfolio comprising of FMCG and pharmaceutical stocks using Sharpe's model.

All the above research since last 5 decades is still based on the theories given by Harry Markowitz and William Sharpe. Unfortunately, the common man-investor is unable to understand the same. The question is, 'What about those who have the ability as well as the willingness to invest, but not the expertise?' Hence the study also tries to develop a few models which can match the returns of the sophisticated model, yet at the same time do not require much mathematical expertise. Since the models are developed for not-so-financial-experts, to minimize risk, the study includes only blue-chip scrips.

II. Research Design and Methods

For this research, data and information is gathered from primary as well as secondary sources. Primary data is collected through structured questionnaire. The sample consists of 50 financially literate investors and the method is random sampling. The purpose of this questionnaire is to understand the approach adopted by the investors for investing in equity instruments.

The secondary data is collected from official website of NSE. Portfolio is constructed by applying three models. The first portfolio is constructed using a well-known model given by William Sharpe, the single index model. The second portfolio comprises of top company of each of the sectors in Nifty50. The last one includes stocks which are most preferred by large cap equity mutual funds.

For all the investment models a hypothetical amount of Rs. 100 lakh is invested on 1st January 2014. For appraising the performance of the portfolios, bonus issue and face value split effects are considered. The value of investment is examined after 5 years (31st December 2018), after 6.25 years including COVID19 induced market crash (31st March 2020) and after 8.25 years post COVID19 stock market recovery (31st March 2022).

Sharpe's Single Index model

Single index model assumes that variance in individual stocks is influenced by variance in securities market. The securities are connected with each other through the common market index. Thus relationship between one stock and the other could be measured through the market index. This is possible for each such pair of securities. This also solves the large input data requirement of Markowitz model (Nalini, 2014)

Single index model is applied on Nifty 50 stocks. Expected return for each stock is calculated based on past 3 years' data, as

$$R_i = \alpha + \beta R_m$$

R_i is the expected return

R_m is the market return (Nifty 50)

In standard form of single index model as describing the co-movement between the securities, the justification of any stock in the optimal portfolio is based on its excess return-to-beta ratio. Excess return is the difference between the expected return on the stock and the risk-free rate of return. Excess return is given as $\frac{R_i - R_f}{\beta_i}$.

Where R_i is the expected return, R_f is the risk-free rate based on the rate of return on government securities and β_i is the beta of individual stock.

This ratio measures the additional return on a stock (excess return over the risk-free rate) per unit of non-diversifiable risk. The stocks are ranked based on excess return to beta ratio. The number of stocks to be selected depends on a unique cut-off point. All the stocks at and above the cut-off point are included in the portfolio. Stocks with higher excess return-to beta ratio are included in the portfolio. The cut-off point is found with the use of following formula:

$$C_i = \frac{\sigma_m^2 \sum_{i=1}^j \frac{(R_i - R_f)}{\sigma_{ei}^2} \beta_i}{1 + \sigma_m^2 \sum_{i=1}^j \frac{\beta_i^2}{\sigma_{ei}^2}}$$

Where,

σ_m^2 = Variance of return on stock market.

σ_{ei}^2 = Unsystematic risk.

R_i = Expected return of stock.

R_f = Risk free interest rate.

β_i = Beta of the stock.

Once the stocks are selected, next step is weight allocation i.e. the proportion of investment to be made in each individual security.

To assign weight to the stocks:

$$W_i = Z_i / \sum Z_i$$

Where,

$$Z_i = \frac{\beta_i}{\sigma_{ei}^2} \left[\frac{R_i - R_f}{\beta_i} - C^* \right]$$

C^* is the cut-off point

Top company of each of the sectors of Nifty:

From each sector in Nifty 50, one company having largest market cap in its sector is selected and a portfolio of 21 stocks is formed. Weight to individual stock is assigned based on individual stock's market capitalization as a proportion to total 21 companies' market capitalization. The objective of selecting Nifty 50 is to safeguard the interests of the investors. Companies in Nifty 50 are all blue chip companies and do not pose risk as we find in mid-cap and small-cap stocks.

Most preferred stocks by large cap equity mutual schemes

Top 10 large cap equity schemes, based on CRISIL MF Ranking (CMFR), are identified. Common and most preferred stocks in each of these schemes' portfolios, in descending order by way of percentage of asset under management (AUM) invested in the respective stocks, are identified. The average of the proportion of investment made by these schemes in the respective stocks is computed. Weight of each stock is computed as the ratio of average proportion of investment made by these schemes in the respective stock to the sum total of average proportion of investment made by these schemes in each of the stocks. Investment amount is allocated based on the weights assigned.

To compute average of the proportion of investment made by these funds in the respective stocks:

$$M_{ai} = \sum M_i / n$$

Where,

M_i = Proportion of a stock in respective fund's AUM.

M_{ai} = Average proportion of a stock in funds' AUM.

n = Number of funds.

To assign weight to the stocks:

$$W_i = M_{ai} / \sum M_{ai}$$

III. Results and Discussion

Investors' Approach

A structured questionnaire was presented to investors. Their preferences for investment avenues, sources of information, cap based preference for investment in equity instruments, frequency of portfolio revision, portfolio diversification and awareness about portfolio composition of MF schemes were asked. Figures 1 to 6 depict the outcome of the survey.

Figure 1: Ranking of Preferred Investment Avenue

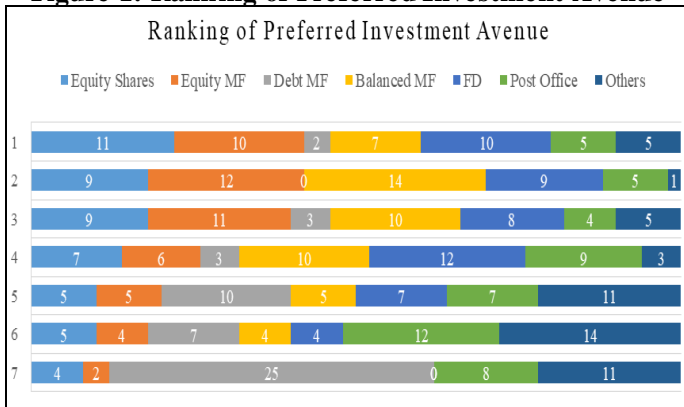


Figure 2: Topmost Source of Information

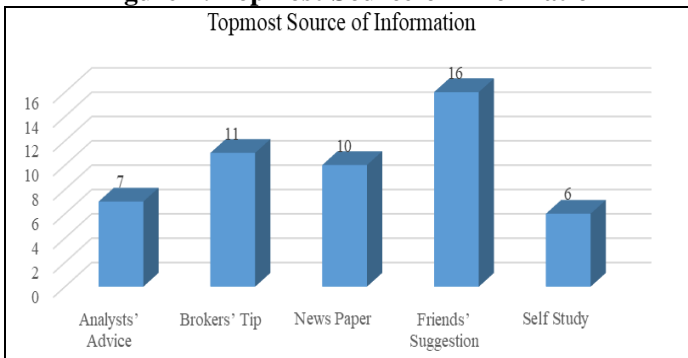


Figure 3: Cap Based Preference for Investment

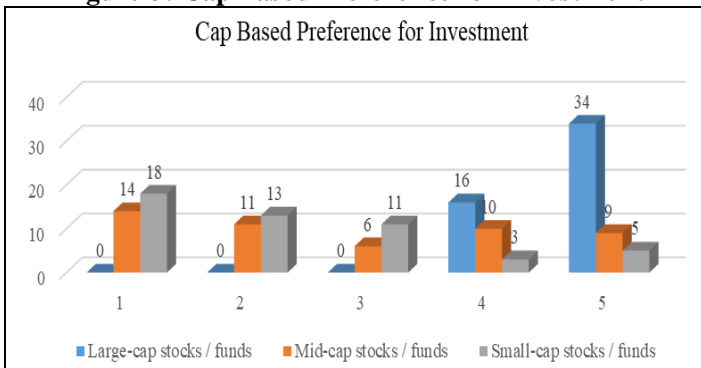


Figure 4: Frequency of Portfolio Revision

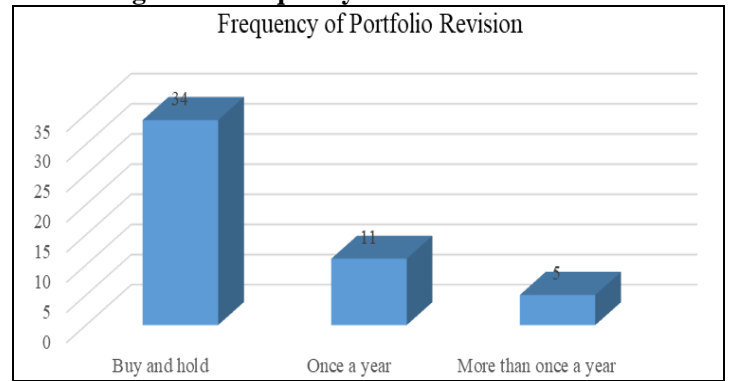


Figure 5: Portfolio Diversification

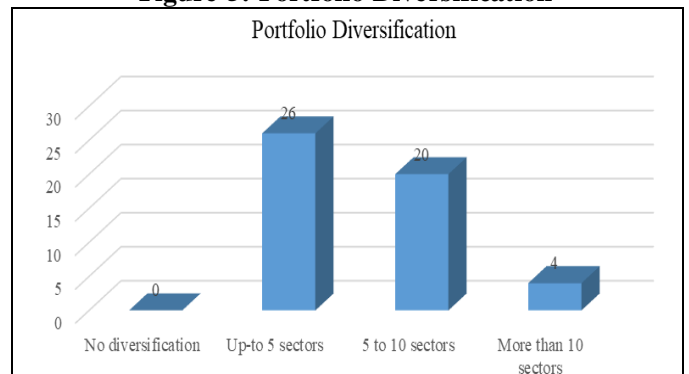
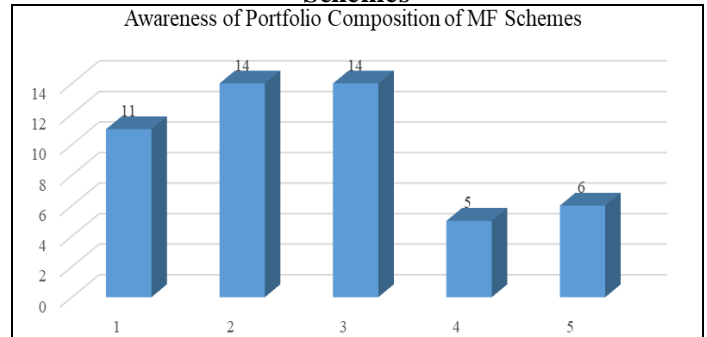


Figure 6: Awareness of Portfolio Composition of MF Schemes



The respondents showed preference for equity instruments, especially large cap. Although they relied on outside agencies for investment decision making, they knew a thing or two about diversification. Not one respondent had an un-diversified portfolio. The respondents did not make efforts to revise the portfolios nor did they try to analyze the portfolio composition of mutual fund schemes. The above survey lead us to develop models which can be understood by financially literate though not expert investors.

The Models

Sharpe's Single Index Optimization Model – Portfolio 1

Table 1: Ranking, Cut-off Point C_i , Weight Calculator Z_i , Weights W_i and Investment

Stock	$\frac{R_i - R_f}{B_i}$	Rank	C_i	Z_i	W_i	Amount Invested	Share Price as on 01/01/2014	No of Shares purchased
ONGC	215.74	1	0	1.04	0.63	63016	289	218
EICHERMOT	77.33	2	0.02	9.84	5.95	594561	5002	119
HINDUNILVR	66.93	3	0.03	8.81	5.32	532331	572	930
ULTRACEMCO	57.39	4	0.05	10.71	6.47	646917	1769	366
ASIANPAINT	52.45	5	0.06	7.33	4.43	442496	500	885
BAJAJFINSV	50.04	6	0.08	4.95	2.99	298866	760	393
BAJFINANCE	49.52	7	0.11	8.16	4.93	492817	1570	314
ITC	43.16	8	0.13	10.14	6.13	612647	322	1900
ZEEL	42.9	9	0.15	4.34	2.62	262286	277	947
SUNPHARMA	37.7	10	0.17	7.25	4.38	437978	572	765
TITAN	30.91	11	0.19	4.57	2.76	276296	231	1197
BAJAJ-AUTO	28.78	12	0.22	6.24	3.77	376835	1917	197
INDUSINDBK	26.12	13	0.29	7.94	4.8	479664	423	1133
GRASIM	23.28	14	0.32	6.72	4.06	406150	2715	150
TECHM	22.04	15	0.35	3.49	2.11	210712	1828	115
HCLTECH	21.65	16	0.39	5.46	3.3	329882	1259	262
YESBANK	21.33	17	0.48	7	4.23	422499	374	1128
HDFCBANK	21.21	18	0.6	14.16	8.55	855082	665	1286
KOTAKBANK	21.16	19	0.68	8.25	4.98	498223	723	690
TATAMOTORS	14.65	20	0.75	3.95	2.39	238752	375	637
M&M	13.83	21	0.8	3.82	2.31	230806	948	243
POWERGRID	12.71	22	0.83	3.89	2.35	235118	100	2363
COALINDIA	12.68	23	0.84	1.57	0.95	94586	292	324
HDFC	12.26	24	0.87	2.53	1.53	152832	794	193
CIPLA	9.9	25	0.88	1.59	0.96	95999	402	239
TCS	9.2	26	0.91	2.01	1.22	121570	2153	56
DRREDDY	7.56	27	0.92	1.25	0.76	75541	2537	30
MARUTI	7.4	28	0.94	1.11	0.67	66885	1764	38
AXISBANK	7.22	29	1.05	2.82	1.7	170273	1292	132
ICICIBANK	6.65	30	1.23	4.31	2.6	260182	1098	237
ADANI PORTS	4.05	31	1.24	0.3	0.18	18200	156	116
SBIN	0.15	32	1.20	--	--	--	--	--
Value of Investment					100	10000000		

Table 1 shows the ranking of stocks based on excess return to beta ratio, computation of cutoff point and weight allocation. C_i at Adani Ports is highest (1.24) and is the cutoff point. 31 stocks up till Adani Ports are included in the portfolio. 32nd

stock is shown in the table for C_i comparison. Bottom 18 stocks are not shown in the table. W_i shows the weight of individual security in the portfolio.

Table 2: Returns

Stocks	No of shares on 31/12/2018*	Share price as on 31/12/2018	Value on 31/12/2018	% Annualized Return	No of shares on 31/03/2020*	Share price as on 31/03/2020	Value on 31/03/2020	% Annualized Return	No of shares on 31/03/2022*	Share price as on 31/03/2022	Value on 31/03/2022	% Annualized Return
ONGC	327	150	49017	-5%	327	68	22334	-15%	327	163.9	53595	-2%
EICHERMOT	119	23158	2755850	36%	119	13096	1558424	17%	1190	2457.2	2924009	21%
HINDUNILVR	930	1820	1692275	26%	930	2299	2137605	25%	930	2048.7	1905245	17%
ULTRACEMCO	366	3991	1460688	18%	366	3245	1187615	10%	366	6602.3	2416442	17%
ASIANPAINT	885	1373	1215149	22%	885	1667	1474853	21%	885	3080.0	2725756	25%
BAJAJFINSV	393	6477	2545441	53%	393	4591	1804342	33%	393	17060.5	6704757	46%
BAJFINANCE	3140	2645	8305771	76%	3140	2216	6957612	53%	3140	7260.0	22796243	59%
ITC	2850	282	802703	6%	2850	172	489345	-4%	2850	250.7	714353	2%
ZEEL	947	476	451198	11%	947	124	117381	-12%	947	288.4	273067	0%
SUNPHARMA	765	431	329333	-6%	765	352	269510	-7%	765	914.8	699784	6%
TITAN	1197	931	1114407	32%	1197	934	1117639	25%	1197	2536.2	3035772	34%
BAJAJ-AUTO	197	2720	535870	7%	197	2022	398403	1%	197	3653.0	719641	8%
INDUSINDBK	1133	1599	1812007	30%	1133	351	398023	-3%	1133	935.4	1059808	10%
GRASIM	750	826	619200	9%	750	476	357075	-2%	750	1664.0	1248000	15%
TECHM	1150	723	831623	32%	1150	566	650325	20%	1150	1499.5	1724368	29%
HCLTECH	524	964	505319	9%	1048	873	914694	18%	1048	1163.8	1219610	17%
YESBANK	5640	182	1025352	19%	5640	22	126618	-18%	5640	12.3	69372	-20%
HDFCBANK	1286	2122	2728506	26%	2572	862	2216807	16%	2572	1470.4	3781740	20%
KOTAKBANK	1380	1257	1733970	28%	1380	1296	1788549	23%	1380	1753.9	2420313	21%
TATAMOTORS	637	173	110010	-14%	637	71	45259	-23%	637	433.8	276299	2%
M&M	486	804	390671	11%	486	285	138486	-8%	486	806.6	391983	7%
POWERGRID	2363	199	469410	15%	2363	159	375953	8%	3151	216.8	683137	14%
COALINDIA	324	241	78003	-4%	324	140	45376	-11%	324	183.1	59308	-6%
HDFC	193	1968	379892	20%	193	1633	315188	12%	193	2390.4	461347	14%
CIPLA	239	520	124161	5%	239	423	101061	1%	239	1018.1	243314	12%
TCS	112	1893	212022	12%	112	1826	204523	9%	112	3740.0	418874	16%

DRREDDY	30	2617	78495	1%	30	3121	93623	3%	30	4295.5	128864	7%
MARUTI	38	7466	283689	34%	38	4288	162955	15%	38	7561.3	287329	19%
AXISBANK	660	620	409134	19%	660	379	250140	6%	660	761.2	502359	14%
ICICIBANK	1185	360	426778	10%	1185	324	383644	6%	1185	730.3	865406	16%
ADANI PORTS	116	388	44973	20%	116	251	29151	8%	116	774.2	89807	21%
Value of Investment			33520914				26132512				60899900	
CAGR				27%				17%				24%

Table 2 shows the returns generated from investment for the three different investment periods. The portfolio so constructed using Sharpe's model is able to deliver more than 20% annualized return whether invested for 5 years (27%) or 8.25 years (24%). The remarkable point to note though is that

even when the stock market crashed due to COVID19 induced 1st lockdown, the portfolio was able to generate decent annualized return of 17%.

Top company of each of the sectors of Nifty – Portfolio 2

Table 3: Stock Selection, Weight Allocation and Investment

Stocks	Sector	Market Capitalization (Rs. in crore)	Weight	Amount Invested	Share price as on 01/01/2014	No of shares purchased
HINDALCO	Aluminum	46257.76	0.98	98316	122	807
MARUTI	Automobile	214204.97	4.55	455272	1764	258
SBIN	Banks - Public sector	258768.42	5.50	549987	1765	312
HDFCBANK	Banks - Private sector	572686.20	12.17	1217188	665	1830
ULTRACEMCO	Cement	98815.68	2.10	210023	1769	119
UPL	Chemicals	38755.88	0.82	82372	198	415
ITC	Cigarettes	344077.11	7.31	731302	198	3685
TCS	Computers software	721095.77	15.33	1532618	2153	712
GRASIM	Diversified	50861.40	1.08	108101	2715	40
BAJFINANCE	Finance	152583.65	3.24	324302	1570	207
LT	Infrastructure	183824.07	3.91	390700	1069	365
ZEEL	Media & Entertainment	39734.50	0.84	84452	277	305
COALINDIA	Mining & Minerals	138983.89	2.95	295397	292	1011
ONGC	Oil Drilling & Exploration	183900.26	3.91	390862	288	1357
ASIANPAINT	Paints & Varnishes	132556.34	2.82	281735	500	564
HINDUNILVR	Personal Care	381919.84	8.12	811733	572	1418
SUNPHARMA	Pharmaceuticals	102787.22	2.18	218464	572	382
NTPC	Power-Generation & Distribution	115518.96	2.46	245524	138	1777
RELIANCE	Refineries	736548.46	15.65	1565461	889	1761
JSWSTEEL	Steel-large	67512.97	1.43	143492	1015	141
BHARTIARTL	Telecommunication services	123599.61	2.63	262699	338	778
	Total	4704992.96	100	10000000		

Table 3 shows the stocks selected for portfolio construction and calculation of weight for model 2.

Table 4: Returns

Stocks	No of shares on 31/12/2018*	Share price as on 31/12/2018	Amount as on 31/12/2018	% Annualized Returns	No of shares on 31/03/2020*	Share price as on 31/03/2020	Value on 31/03/2020	% Annualized Return	No of shares on 31/03/2022*	Share price as on 31/03/2022	Value on 31/03/2022	% Annualized Return
HINDALCO	807	226	182543	13%	807	96	77230	-4%	807	570	459587	21%
MARUTI	258	7466	1926099	33%	258	4288	1106381	15%	258	7561	1950815	19%
SBIN	3120	296	923208	11%	3120	197	614172	2%	3120	494	1539876	13%
HDFCBANK	1830	1968	3602081	24%	3660	862	3154554	16%	3660	1470	5381481	20%
ULTRACEMCO	119	3991	474923	18%	119	3245	386137	10%	119	6602	785674	17%
UPL	415	758	314674	31%	622	327	203083	16%	622	770	478691	24%
ITC	5527	282	1556680	16%	5527	172	948986	4%	5527	251	1385343	8%
TCS	1424	1893	2695703	12%	1424	1826	2600366	9%	1424	3740	5325689	16%
GRASIM	200	826	165120	9%	200	476	95220	-2%	200	1664	332800	15%
BAJFINANCE	2070	2645	5475461	76%	2070	2216	4586706	53%	2070	7260	15028097	59%
LT	548	1438	787777	15%	548	809	443058	2%	548	1768	968672	12%
ZEEL	305	476	145317	11%	305	124	37805	-12%	305	288	87947	0%
COALINDIA	1011	241	243398	-4%	1011	140	141591	-11%	1011	183	185064	-6%
ONGC	2035	149	304029	-5%	2035	68	138991	-15%	2035	164	333537	-2%
ASIANPAINT	564	1373	774400	22%	564	1667	939906	21%	564	3080	1737092	25%
HINDUNILVR	1418	1820	2580264	26%	1418	2299	3259273	25%	1418	2049	2904986	17%
SUNPHARMA	382	431	164451	-6%	382	352	134579	-7%	382	915	349435	6%
NTPC	1777	149	264862	2%	2132	84	179514	-5%	2132	135	287820	2%
RELIANCE	3522	1121	3949043	20%	3522	1114	3922628	16%	3522	2635	9279590	24%
JSWSTEEL	1410	307	432518	25%	1410	146	206213	6%	1410	733	1033037	27%
BHARTIARTL	778	312	242853	-2%	778	441	343020	4%	778	755	587351	10%
Value of Investment			27205402				23519412				50422580	
CAGR				22%				15%				22%

As in table 2, table 4 shows the value of investment at the end of the three investment horizons of 5 years, 6.25 years (market crash) and 8.25 years (market recovery). The value of investment grows by an annualized return of 22%, 15% and 22% respectively. The portfolio herein constructed is without working complex mathematics for stock selection and asset allocation.

Most Preferred Stocks by Large Cap Equity Mutual Funds – Portfolio 3

The top 10 equity large cap mutual fund schemes as per CRISIL Mutual Fund Ranking (CMFR) are shown in table 5.

The portfolio composition of the schemes is studied and the most preferred stocks are identified.

Table 5: Mutual Fund Scheme List*

Sr.No	Mutual Fund Scheme Name
1	Aditya Birla Sun Life Focused Equity
2	Aditya Birla Sun Life Frontline Equity
3	Axis Bluechip equity
4	Canara Robeco Bluechip Equity Fund
5	Edelweiss large cap fund
6	HDFC Top 100 Fund
7	ICICI Prudential Bluechip fund

8	Invesco India Large cap fund
9	Mirae Asset Emerging Bluechip fund
10	Motilal Oswal Focused 25

*CRISIL Mutual Fund Ranking

Table 6: Stocks Most Preferred, Weight Allocation and Amounts Invested

Stocks	Weight	Amount Invested	Share Price as on 01/01/2014	No of Shares purchased
HDFCBANK	20.00	2000000	665	3007
ICICIBANK	12.00	1200000	1098	1093
INFY	12.00	1200000	3468	346

ITC	6.00	600000	322	1861
HDFC	9.00	900000	794	1134
RELIANCE	9.00	900000	889	1013
SBIN	6.00	600000	1765	340
LT	7.00	700000	1069	655
MARUTI	5.00	500000	1764	283
AXISBANK	5.00	500000	1292	387
BRITANNIA	2.00	200000	918	218
TCS	7.00	700000	2153	325
Value of Investment	100.00	10000000		

Table 6 shows the stocks most preferred, weight allocation and the amounts invested in each of the stocks.

Table 7: Returns

Stocks	No of shares on 31/12/2018*	Share price as on 31/12/2018	Value on 31/03/2018	% Annualized Return	No of shares on 31/03/2020*	Share price as on 31/03/2020	Value on 31/03/2020	% Annualized Return	No of shares on 31/03/2022*	Share price as on 31/03/2022	Value on 31/03/2022	% Annualized Return
HDFCBANK	3007	2122	6379952	26%	6014	862	5183467	16%	6014	1470	8842685	20%
ICICIBANK	6012	360	2165222	13%	6012	324	1946385	8%	6012	730	4390564	17%
INFY	2768	659	1823974	9%	2768	642	1775672	6%	2768	1907	5278161	20%
ITC	2792	282	786367	6%	2792	172	479386	-4%	2792	251	699815	2%
HDFC	1134	1971	2235193	20%	1134	1633	1851935	12%	1134	2390	2710714	14%
RELIANCE	2026	1121	2271653	20%	2026	1114	2256458	16%	2026	2635	5338004	24%
SBIN	3400	296	1006060	11%	3400	197	669290	2%	3400	494	1678070	13%
LT	983	1438	1413112	15%	983	809	794756	2%	983	1768	1737600	12%
MARUTI	283	7466	2112737	33%	283	4288	1213589	15%	283	7561	2139848	19%
AXISBANK	1935	620	1199507	19%	1935	379	733365	6%	1935	761	1472825	14%
BRITANNIA	436	3115	1358314	47%	436	2689	1172382	33%	436	3206	1397990	27%
TCS	325	1893	615241	-3%	325	1826	593483	-3%	325	3740	1215484	7%
Value of Investment			23367330				18670167				36901758	
CAGR				19%				11%				17%

Table 7 compares the annualized returns over the three investment horizons. The investment is able to deliver returns of 19%, 11% and 17% respectively. The performance may not be as good as the earlier two portfolios, yet, it's a fairly competitive one.

Hypothetical Investment in Nifty 50

The results from the portfolios are compared with the performance of the benchmark index Nifty 50.

Table 8: Hypothetical Investment in Nifty 50

Date	Nifty 50 Price	No. of Hypothetical Nifty 50 Shares	Value of Investment (Rs.)	CAGR
01/01/2014	6302	1587	10000000	
31/12/2018 (5 years)	10860	1587	17234820	12%
31/03/2020 (6.25 years)	8598	1587	13645026	5%
31/03/2022 (8.25 years)	17465	1587	27716955	13%

Table 8 shows the growth in investment value had the hypothetical investment been made in Nifty 50.

Table 9: Comparison - CAGR

Portfolio / Investment Horizon	5 Year Period (%)	6.25 Year Period (%)	8.25 Year Period (%)
Portfolio 1	27	17	24
Portfolio 2	22	15	22
Portfolio 3	19	11	17
Nifty	12	5	13

Table 9 compares the returns generated under the three portfolios and Nifty 50. Portfolio 1, based on mathematical methodology, beats the other two portfolios as well as the market. The simpler portfolios are also able to beat the market. The more appropriately diversified portfolio 2 beats the portfolio 3 wherein stocks preferred by the fund managers without giving due consideration to diversification are selected.

IV. Conclusion

A retail investor's objective is to earn 'best' returns with 'tiniest' risk. Sharpe's model is beyond his cognitive

willingness. So, he relies on tips from brokers and/or invests in equity MF schemes. However, tips and fund managers can go wrong. It's necessary to have control over one's money. The investor needs to be independent. Hence this study.

Portfolio 1 is based on complex mathematics involving expert knowledge of financial parameters in the stock market and beats other models. Portfolios 2 and 3 require financial knowledge about the stock market and the mutual fund market. Portfolio 2, a simple diversified portfolio, almost matches the returns generated by the proven complex model and is able to comprehensively beat the market index for all the three investment horizons. Although portfolio 3 lags behind the first two, it convincingly beats the market.

Finally, it can be concluded that though technical models like Sharpe's model are empirically proven models, they are complicated. If simpler methods of portfolio construction are used, they can also generate enough returns to beat the market.

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VICKS PICKS ON THE SOCIAL NERVE!

Jyoti Kukreja*

Electronics and Emotions are all crucial factors for driving business in today's world. Envisaging a brand from a pharmaceutical industry to emotionally touch the issues of marginalized section of the society is remarkable. Working on the concept of social inclusion, transgender who are still ostracized in our otherwise robust democratic political structure are denied the human rights in general. Not only do they suffer a lot of rejection, ridicule and mockery from society which enhances their social and emotional trauma are forced to live in inhuman conditions. The very touching and sentimental advertisement had been released not very late of Vicks which deserves an appreciative discussion here.

Keywords: Vicks, Marketing, Brand, Social, Mother, CSR, Human, Advertisement,

JEL Classification: Advertising: 32C, 184 P

A recent advertisement of the brand, Vicks has proposed a revolutionary idea. The ad very subtly dovetails two mutually-exclusive concepts of child adoption and transgender-social-inclusion. When the advertisement director, Mr. Neeraj Gheywan, BCCL, was quizzed upon the brewing up of this superb mindful idea, he mentioned an instant assent to the idea of the advertisement by ad agency, Publicis Singapore. The concept had been highly thought-provoking and more than contemporary. This ostracized section of the society which is least respected in the society, has no special schools and colleges for them.

Reservations are made on the basis of casteism and a regular tussle between men and women but none to wink a thought upon their fate and fortune. The idea of a transgendered person taking care of a child has been amazingly portrayed. It is about the girl travelling in a bus to her school and reminiscing the time spent with her surrogate mother. It successfully portrays the twin case of parent and child adoption issues.

There has been a successful attempt in breaking traditional brand imagery. It is the most appropriate time to challenge the stereotypes in advertising. The conventional mode of child-bearing and child-rearing has paved its way to picking up on the unconventional mode of child adoption and emotional fulfillment.

The double-edged sword of purpose driven branding was genuinely felt that it was essential to acknowledge that the emotion was bigger than the necessity to have the brand presence itself. In pure advertising terms, it was a deliberate plan to keep the brand secondary and keep the play of emotions between Gauri and Gayatri (the daughter) at the forefront. The attachment of causal marketing has worked

wonders into making the brand equity and entrenchment successful with social media campaigns picking on social nerves. The government never took any measure to build any separate schools, colleges and vacancies for them. None of the political leaders ever winked a thought on their upliftment. What if God, denied them, the right to be biological parents; what if their speech and looks are different from the normal looking heterosexuals: are these causes enough to make them feel and treat them illogically inhuman? Why is it not that they have the right to live their lives with the same self-respect and earning opportunities as equal as every other? Was being born in such a format a matter of their choice? Wherever the legal world lacks, the media fills the gap. Claiming for human rights of right to live in the society with its norms is difficult for those segments of the society who are considered to be socially exclusive.

The point is 'What is really a dysfunctional family'? Aren't we all dysfunctional at some level? Why is the image of a heteronormative smiling-through-the-dinner table family, the hallmark of ideal advertising? Why can't we question our understanding of what comprises an ideal family? When such powerhouse brands take such bold steps, it starts a dialogue. Though motherhood is universal but the abnormalities of biological processes are rampant now. This advertisement highlights themes of women empowerment and female child adoption. The strength of the protagonist to be so unusual and different from society is highlighted here.

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A Book Review on “Creating, building and sustaining an institution: A momentous journey of Institute of Public Enterprise”

Author: R K Mishra and P Geeta

Publisher: Academic Foundation, New Delhi

Year of Publication: 2022

Price: Rs. 1295

J Kiranmai* Deepak Tandon**

This outstanding book documents the golden journey of the Institute of Public Enterprises (IPE) Hyderabad, the unique Indian institution devoted to the study of public enterprises, over the last fifty years and its bold diversions into innovative fields in the academic, research, consultancy, and executive education domains. The book narrates the courageous saga of winning a global status by an Indian institution, despite many challenges. The book is a fine documentation of a momentous journey in time and gives a perspective into years of institution-building exercise. There are a small number of academic professional organizations within any society that provide such important research and analysis that one could say that if they did not exist, it would be critical to invent them. The Institute for Public Enterprise is one such organization. The book highlights the eventful journey of the Institute since its inception and provides a peep into its future. The book narrates why IPE was established in 1964 as an Institute to serve the public sector enterprises which have been instrumental to India's economic development. Further on, how its intellectual prowess attracted the Indian Council of Social Science Research to recognize it as a 'Centre of Excellence' in social science research (p25). Impressed by its activities the State Government followed suit to appoint the Institute as its consultants for the state-level public enterprises. The authors have made an interesting attempt to show the phase-wise progression of the Institute and the challenges faced by its glorious contribution.

As India's public sector was on the growth path, there was a strong need to support it to achieve managerial efficiency. In the year 1963, some eminent public sector executives, and senior policymakers, mooted the idea of setting up a specialized institute to train the public sector personnel (p 17). This idea led to the establishment of IPE as a think tank for providing training and research to support public sector enterprises. The state government allocated two acres of land while the Government of India sanctioned Rs 1.00 Lac for construction purposes. The main objectives of the institute were to focus on research, case writing in areas of economics, management of enterprises, organizing training courses, seminars, conferences, publish brochures, journals, etc. (p18).

Dr. V V Ramanadham was appointed as the first Director of the Institute. He focused on planning and operationalization of the various activities. In 1972 the institute faced a tremendous setback as Dr. Ramanadham left for the United Nations. The institute had a fluctuating fortune with short tenures of the directors succeeding Dr. Ramanadham. The Institute approached public sector enterprises for their financial support and could register six of them as corporate members. Diversifying the research activities from 1981 to 1993, the Institute focused on undertaking research and consulting activities from the central public enterprises, and state-level public enterprises operating under the aegis of the state bureaus of public enterprise. During this phase, the Institute was deeply involved in assisting the state governments in their reform programs including Andhra Pradesh, Odisha, Madhya Pradesh, Rajasthan, Assam, and Uttar Pradesh in reforming public sectors. It is worth mentioning the contributions of Padma Bhushan Shri T L Sankar as the Director who gave a makeover to IPE in the eyes of the state and the central public enterprises. After Shri Sankar stepped down as director, the Institute went through rough weather. Frequent changes in the leadership pushed the Institute backward. Despite the challenges, Institute started its first Postgraduate program in 1995. Later, Prof T Navneeth Rao former Vice-Chancellor, Osmania University took over as the Director in 1996. With his academic and networking strengths, he explored the first joint research and exchange program between IPE and Erasmus University, Rotterdam in Applied Economics and Sociology for masters and doctorate scholars. This heralded a new beginning towards collaboration with various national and international agencies.

The growing demand for consulting, training, and networking opportunities required addition to the existing infrastructure facilities at the Institute (p34). Mr. M Golapakrishna, a former

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bureaucrat, brought along with him a wide and varied administrative managerial experience to IPE. He promoted consulting in the areas of health and human development (p35). During his tenure, the Institute was enlisted as a provider of research projects by the Department of Foreign and International Development, UK. Prof R K Mishra, succeeding him as a stop-gap arrangement in 2001 strengthened the post-graduate program by bringing in the curriculum in tune with the best in Asia. In appreciation of this restructuring, the Institute drew manifold applications to its post-graduate program.

The transformation phase of IPE began in 2004 which paved a new path for the growth of the Institute. Institutional activities started growing rapidly in the areas of consulting, teaching, research, publications, and networking. As the first step, the Osmania University Campus was renovated and modernized. Pressed by the non-availability of land in the Osmania University Campus, the Institute acquired a few pieces of land to construct a state-of-the-art campus in Shamirpet (p44). Prior to moving out to the new campus its long-term education programs in management, a new revenue model was put in place resting on the diversification of such programs stretching from general management to functional ones, garnering resources from memberships, and enhanced consulting activities. Between 2004 and 2016, IPE came to be known as the employee-centric Institute which in certain regards put the Institute ahead of the IIMs and IITs.

IPEs' research thrust was to contribute toward policy initiatives through generating inputs related to social science and management research. Over the years, the institute has developed wide linkages with global and national institutions. Apart from sponsored research, the Institute also started creating its in-house research domains in the areas of public sector management. The Institute has undertaken major research projects for the Planning Commission, Finance Commission, various ministries of the Government of India, state governments, and international agencies such as the World Bank, Common Wealth Secretariat, Asian Development Bank, and United Nations. Many Maharatna, Navratna, and Miniratna enterprises have benefited from their research. The Government of the Netherlands' biotechnology program was also supported by the Institute. Over years the Institute has created various specialized research centers to work on emerging areas such as corporate governance, corporate social responsibility (CSR), public policy, and sustainable development. In recognition of the work by the centers on corporate governance and corporate social responsibility, Chairs have been instituted by Maharatna and Navratna Public Enterprises.

The institute has identified management development programs as a future growth area with a thrust on programs in

the domains related to general management, artificial intelligence, cybersecurity, and business analytics. These programs would be high quality delivered with minimum margins. To boost its networking, the institute plans to develop linkages with knowledge superpowers. To disseminate knowledge the Institute publishes occasional papers and monographs. IPE publishes six journals of which one is a Scopus Indexed Journal.

Over time, the Institute has also streamlined its processes and policies by developing internal control systems. The accounting process also had been moved to the best financial techniques including activity budgeting and accrual-based accounting (p 122). The institute has registered a steep growth since 2005 in terms of MDPs, research, consulting, and post-graduate education. The faculty strength also improved. Initiatives such as industry interface, summer internship, long-term projects, network interaction for students and faculty, etc. helped the institute to create brand awareness. The cash flows also have taken a U-turn for the better. The ranking and accreditations have improved tremendously as it has the NBA and NIRF labels.

The institute visualizes moving forward with 'triple crown' accreditation. The basic success mantra for IPE has been the dedication, determination, and hard work of its board, faculty, staff, and stakeholders (pp133). The authors sum up the work by concluding that the futurity and success of any organization are subject to quality, risk-taking capacity, networking, grand vision, effective communication, and reinforcement. There lies the future of the Institute.

There are a small number of academic professional organizations within any society that provide such important research and analysis that one could say that if they did not exist, it would be critical to invent them. Certainly, the Institute for Public Enterprise is one such organization. The book is a must-read for public policy professionals, civil servants, professors, and executives in the public and private sectors. This glorious account of IPE should inspire other academic institutions to blossom into eminence and excellence.

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