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A Peer Reviewed Research Journal

Prin. L. N. Welingkar Institute of Management Development & Research

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September 2020

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Editorial

The recent announcement of the New Education Policy (NEP), 2020, is a significant milestone in determining our nation's future. The policy has come in at the appropriate time to transform the country's education system that plays a vital role in the nation's growth and development. The right educational policy of the country is of great importance in attaining the overall development of students/youths who are the future citizens of this beautiful nation.

The NEP, 2020 aims for holistic development by equipping students with critical skills required for the 21st century, critical thinking with focus, and experiential learning, which has substantial long-term implications for B Schools as well. The policy, to link education with employability, would serve as a panacea for solving massive unemployment and a low ratio of student enrolment by making education more inclusive and affordable.

Various vital improvements such as changes in pedagogical structure, digitalization, and integration of technology in education at all levels, the introduction of vocational courses at the school level, multiple entries and exit at various levels in education, reforms regarding inclusion and equitable education system, allowing global universities in India, and removing silos across various functional specialisations, disciplines and mindset are expected to raise the standards of the Indian education system in a holistic way for better tomorrow of our nation.

WeSchool shall thrive for inculcating these reforms in the best manner for imparting better education that has long term implications and not just limited to classroom teaching. We have taken initiatives to enhance further the quality and inclusion of research aptitude in line with policy reforms. At WeSchool, we have initiated a variety of such interventions to promote research culture and to improve research capabilities such as Research Conferences, Short-term Training Programs, Round Tables, Research Methodology Workshops, international tie-ups, and best of the learning center resources. It publishes a Bi-annual Journal "Aweshkar" that publishes original papers of high academic and professional standards across various social sciences and management disciplines. I am pleased to bring you the September 2020 issue of the Aweshkar Journal and hope you will find the issue interesting, engaging, and professionally useful.

Prof. (Dr). Uday Salunkhe

Editor in Chief

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12. Footnotes, italics, and quotation marks should be kept to the minimum.
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RESEARCH

Gig Culture – An Empirical Case For A Change In Employer Employee Engagement In Information Technology Industry In India

Y. Shekar*

ABSTRACT

Industry 4.0 is about the accelerated adoption of technologies like AI and Robotics, which are demanding new human skillsets. Organisational roles are becoming more complex, especially at the managerial levels, on account of flattening of their structures and due to the rationalisation of operational and support roles. Extensive automation and use of technologies like AI, Robotics are also perceived by top management as necessity to sustain and grow the business operations.

As speed and scale of business operation increases and the environmental makes outcomes uncertain, organisations need to become highly Analysis agile and responsive. Roles will get fungible and ready-to-use skills will be preferred to re-skilling existing employees. With access to new forms of data, which are critical and integral to decision making, new operating paradigms are emerging, making the work environment 'Hu-Tech' (human+technology). The co-existence of intelligent machines and human beings demands newer managerial skills besides developing newer management perspectives and methods for growing the business.

Employers believe that retraining in-house resources is far too expensive and tardy in the context of business agility and responsiveness. It becomes easier and economical to contract skilled resources as and when required. This leads to the Gig culture. Skilled resources are shared across multiple organisations or used exclusively by an organisation, but for a limited period of time. The organisation disengages with the skill and prefers to enter into another engagement, based on its needs and conveniences.

This paper provides empirical evidence on top management's intent to favour short-term engagements with the right skilled people. This therefore encourages the gig culture. The analysis is drawn from a sample size of 49 top executives in the Information Technology business vertical in India.

KEYWORDS – Gig, Technology, AI, AR, Employability, Human+Technology.

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SUMMARY:

Gig – a job usually for a specified time (Merriam Webmaster) – originated from the music industry where musicians gigged for different bands. Today, it refers to a kind of engagement between an organisation and individual popular as Temporary engagement. At the lower end of the spectrum it was daily wage and at the upper level it was the glorified 'consultant'. However, the connotation of gig in this paper is a form of formal engagement between a service provider (an individual) and a service receiver (an organisation), irrespective of the level.

This paper provides a perspective on employment arrangement at the managerial levels between individuals and organisations and the rationale for doing so. It empirically highlights the fact that gig is not restricted to a particular level or kind of work, rather, it is becoming the new form of engagement in which both the parties feel benefitted.

The empirical evidence is provided through a field research, using questionnaire as the instrument and convenience sampling as the method, focused in the Indian IT industry. The sampling was done at the top management level of IT companies in software development & services, communications infrastructure and business consulting. A total of 49 CXO level people were contacted for undertaking the survey and the responses have been analysed and tabulated.

The findings validate that gig for employment is desired by the top management especially on account of the changes influenced by technologies and the rapidly changing environment. The management activities would be done by skilled people on contract

basis. Outcome, more than process, becomes the important aspect, leading to compensations getting linked to outcomes. The desired skill takes priority over previous experiences and attitude of the individual, which hitherto were considered important facets of hiring and grooming. Organisations will invest in technologies much more than the investments made in training people for adopting new skills.

In conclusion, Gig is the form of engagement the top management prefers on account of rapidly changing business environment (VUCA). Automation and adoption of new technologies are perceived as essentials for business' sustainability, the flip side is that organisation's structure gets flatter and a significantly higher percentage of employees will be on contract basis.

1. CONTEXT:

'A growing number of American workers are no longer employed in jobs with a long-term connection with a company but are hired for 'gigs' under 'flexible' arrangements as 'independent contractors' or 'consultants,' working only to complete a particular task or for defined time. While the rise of this 'gig' economy is praised by some as a response to the wishes of a more entrepreneurial generation, it is more likely that it is driven by the concerns of businesses to lower wages and benefit costs during business down-turns while also reducing their vulnerability to unfair dismissal lawsuits (Friedman, 2014)'. The growth of Gig is assigned to the uncertainties in business models and the environment. The uncertainty in the environment is caused on account of technological changes which are influencing across the three axes of speed, scale and scope. In the context of Uber – the leading

ride sharing company - cab drivers and vehicle owners are considered to be part of the ecosystem and are not employees. This is where 'Gig' finds its relevance. Is gig entrepreneurial? In the research paper Can You Gig It? An Empirical Examination of the Gig Economy and Entrepreneurial Activity, researchers conclude that Gig doesn't raise entrepreneurship. Rather, it becomes the method of underemployed (Burtch, 2018). It shows that Gig is emerging as a topic of interest with a lot of diverse views around it. Research papers have been published on Gig Policy (Kaine, 2019), Labour (Olliverre, 2017) and on other aspects. However, the context of Gig is still wide open, despite the practices of consultancy or temporary employment being age old concepts. A reason for this is because Gig has an underlying context of technology, which is what this paper researches upon. The research is done in India, in the Information Technology industry through in-depth discussions and surveys with top management level professionals in large, medium and start-up companies.

1.1 Methodology

Convenience sampling method was used as this was most appropriate way to target respondents for the survey. The respondents needed to be from Information Technology vertical and at the senior management level.

Respondents were first contacted to seek their willingness to participate in the survey and only those who responded in the affirmative were subjected to the questionnaire method of data collection. In few cases, where it was feasible, an interview was also conducted. The questionnaire was initially tested for its

correctness – sequencing of questions and for a consistent interpretation of them. After testing on few samples and making the desired corrections, the final version was administered in person on the initial set of respondents and then done online.

The questionnaire had 25 questions pertaining to use, adoption and intention-to-use technology, and the perceived benefits to business at strategic and operational levels. Questions relating to its impact on organisation structure, roles of middle management and nature of engagement were also asked.. Besides, there were questions to collect profile information too.

Most questions used the 5-point Likert's Scale - strongly agree to strongly disagree. Few questions used scaling from 0-7 and from 0-100%, especially those that were seeking respondents' perception on choices.

Questionnaire was administered in a digital format. Responses were compiled in electronic form and then converted into excel spreadsheet, cleaned and normalised. The data was imported into Jamovi software – an analytical tool.

The responses were tabulated and sequenced in such a manner that it enabled an easy understanding of the role and relevance of automation in the eyes of the top management. For instance, even though automation may seem to be an obvious choice, it was ascertained that the top management looked forward to automating their business and wished to adopt newer technologies for business sustenance.

Once this fact was established (using Means), other hypothesis relating to organisation's structure, role of middle management, emergence of new business processes and shifts in employer-employee engagement were analysed and empirically validated.

1.2 Key Observations:

- 49 respondents had completed the survey and only their responses were considered for analysis.
- 14% of the respondents were women. 84% of the respondents were from the same city as the researcher.
- The distribution of sectors (type of organization) within information

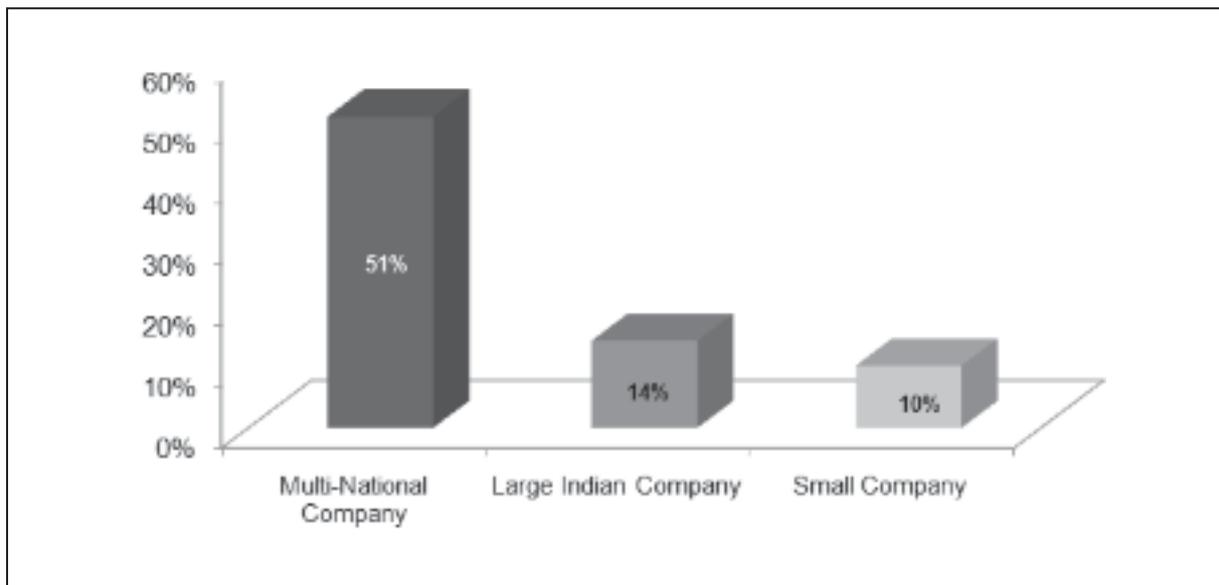
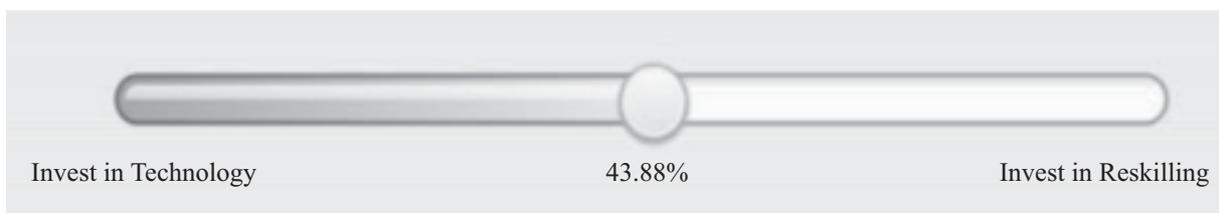


Figure 1: Respondents across Information Technology Companies in India

- Investment in Tech versus Investment in Reskilling Managerial Talent:



- ANNOVA test: It indicated that there was no significant difference in views of respondents across Sex, City and Size of Organisation. These three variables confirm that empirical analysis and inferences shall be consistent for the industry as a whole.

1.3 Findings & Analysis:

Pearson's correlation method was used for analysis besides Means for quantitative analysis. The correlation enabled the researcher to spot trends that provides an explanation for the outcomes in the future using data of today.

1.3.1 Perceived Need & Impact of Automation

The use of technology seems imperative. Top management believes that automation and use of technology gives them advantages in cost efficiency, productivity, innovation and in increasing revenue options – through deeper

reach and wider access. However, the least two important parameters appeared to be on the employee side - talent retention and increasing employees' job satisfaction - Graph 1 (Perceived Advantages of Automation and Adopting Technologies).

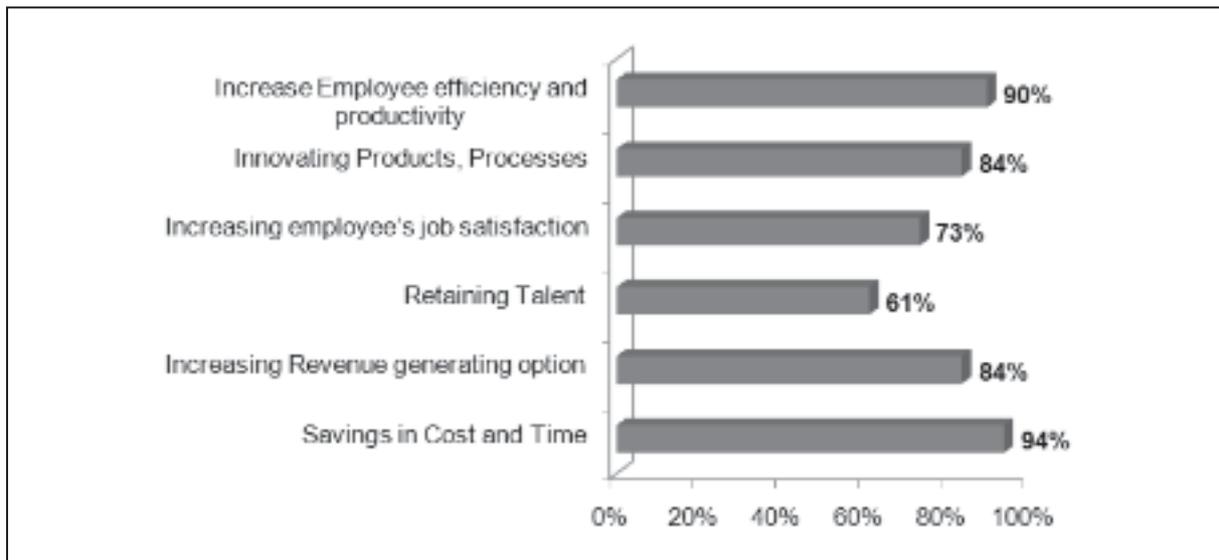


Figure 2: Perceived Advantages of Automation & Adopting New Technologies

The impact of automation and use of newer technologies are necessary for business sustenance but have an impact on the organisation's structure – the hierarchy gets

flatter. Table 1 – Correlation between Adoption of Technologies and its Impact on Organisation Structure explains this behavior.

Table 1: Correlation between Adoption of Technologies and its Impact on Organisation Structure

		Technology driving MM roles	Robotics and Artificial Intelligence will be implemented	Organisation structures are getting Flatter
Technology driving MM roles (\bar{x} =3.59)	Pearson's r	—	0.338*	0.286*
	p-value	—	0.018	0.046
Robotics and Artificial Intelligence will be implemented (\bar{x} =4.41)	Pearson's r	—	—	0.525***
	p-value	—	—	< .001
Organisation structures are getting Flatter (\bar{x} =3.73)	Pearson's r			—
	p-value			—

Note. * p < .05, ** p < .01, *** p < .001

Interpretation: The top management perceives that automation and use of emerging technologies as necessary for survival of the business and hence are keen to implement them (as seen from the mean value of 4.41). Hence, when such technologies and automation are adopted, the organisation experiences redundancy of layers and roles – human beings will not be required to perform some kinds of tasks. That brings down the number of levels in the hierarchy and rationalizes roles. The structure becomes flatter and leaner. This is visible in real life too, where it is not only a reduction in head count that technology companies have been talking about but also becoming nimbler and swifter by reducing the gap between the operations and top management levels.

Consequently, the tasks at the managerial levels are also becoming tech driven. The industry labelling of this is ‘digital’. Organisations that use technology to create

and use data for operational management and decision making are called digital firms and managerial tasks are becoming data driven. Thus, even at the managerial level, organisations expect them to be tech-savvy and have capabilities to visualise and capture data that becomes relevant for strategic and operational reasons.

As tech-companies, these organisations are at the forefront of experimenting with new technologies. They discover new methods for improving efficiency with scale and new data points for decision making, which give them a competitive advantage in the market place. These new methods and ability to take decisions based on new data points are the reasons why new-age companies are more efficient and responsive to change, thus posing challenges to established organisations leading to disruptions.. Table 2 explains this phenomenon.

Table 2: Correlation between Flatter Organisation Structure and its Impact on Business Efficiency

		Organisation structures are getting Flatter	Cost of operations reduces	Decision Making Lead Time improves
Organisation structures are getting Flatter ($\bar{x} = 4.06$)	Pearson's r	—	0.297*	0.329*
	p-value	—	0.038	0.021
Cost of operations reduces ($\bar{x} = 3.63$)	Pearson's r	0.297*	—	0.291*
	p-value	0.038	—	0.043
Decision Making Lead Time improves ($\bar{x} = 3.76$)	Pearson's r			—
	p-value			—
Note. * $p < .05$, ** $p < .01$, *** $p < .001$				

Interpretation: The top management's perception is that, automation and use of emerging technologies enable the organisation to become more efficient in costs and in responsiveness through the process of a

flatter structure. Both these elements – reduced operational costs and reduction in lead-time for decision making, are essential in a rapidly changing world, which the top management is highly concerned about.

The inference drawn from this table is that while adoption of automation (as seen from table 1) leads to reduction in hierarchy levels, it also leads to the cost of operations (overheads) reduce and increase the organisation's agility for decision making. These give the organisations the competitive edge, which is what the top managements are striving for.

1.3.2 New Methods & New Practices that Technology Introduces

Technology is known the change the status-quo. However, in the current context it is not just changing but disrupting. New practices are emerging only because there are new data points that technology is providing management with that are used for decision making, improving operational efficiency and to strategise for growth. Table 3 provides evidence for this.

Table 3: Correlation Between Adoption of Technology and its Influence on New Business Process

		Robotics /Artificial Intelligence will be implemented	Adoption of Newer business processes will be influenced by Technology
Robotics /Artificial Intelligence will be implemented ($\bar{x} = 3.59$)	Pearson's r	—	0.369**
	p-value	—	0.009
Adoption of Newer business processes will be influenced by Technology ($\bar{x} = 4.02$)	Pearson's r	—	—
	p-value	—	—
Note. * $p < .05$, ** $p < .01$, *** $p < .001$			

Interpretation: While the top management strives for business growth and its long term sustenance through the adoption of technology and automation, the impact of these on business processes is also an important outcome. While the perceived benefit is on differentiation or innovation in business, the flip side is that managerial skillsets keep changing as existing roles get consolidated into fewer ones and newer roles emerge. Both require managers to re-skill themselves to stay relevant to the context. The above correlation confirms the fact that with newer technologies, newer processes get influenced and this leads to gap in the managerial skill-sets.

The challenge then comes up as to how managers can re-skill themselves to stay relevant to the needs of the business. The question is, is this a new phenomenon? The answer is, it isn't. Skillsets have changed at managerial levels for a long time. The only exception now is that the skillsets are changing far more rapidly than ever before. Hence, the speed of change of business processes and methods necessitate the managerial talent to constantly upskill itself.

This becomes an important aspect in the context of how business leaders deal with manpower talent, which hitherto was termed as human capital.

1.3.3 Change in Perspective of the Employer – Employee Engagement model

Table 4 below is about the adoption of technologies and its impact on managerial roles, shifting the nature of engagement to a contractual type, is presented. A perspective of top management here is that, on account of rapid changes in the environment and the need to frequently change business processes, the role and function of the erstwhile Learning & Development department was becoming ineffective. It wasn't that this department was not required for providing training to in-house staff. The real challenge is that even large organisations find it difficult to have their L&D teams equipped with trainers who are skilled on the latest technologies that they need to teach.

This means that the right skills are difficult to be trained from within, as part of the existing structure, but easier to hire from the market outside. However, hiring people on a full-time basis means the problem of re-skilling them for the next change would become a challenge. At the managerial level, there's another challenge. With the organisation's structure getting flatter and skilled resources (at the entry level, especially) getting technical and temporary, the managerial function itself appears transient. Table 4 explains this through the correlation with adoption of technology and roles getting more tech-oriented.

Table 4: Correlation between adoption of Technologies and its Impact on Middle Management Roles

		Robotics/ Artificial Intelligence will be implemented	Technology is driving MM roles	MM will work on contract/ On-Demand
Robotics/Artificial Intelligence will be implemented (\bar{x} = 4.02)	Pearson'sr	—	0.338*	0.168
	p-value	—	0.018	0.249
Technology is driving MM roles (\bar{x} = 3.59)	Pearson'sr	0.338*	—	0.35*
	p-value	0.018	—	0.014
MM will work on contract/On-Demand basis (\bar{x} = 3.04)	Pearson'sr			—
	p-value			
Note. * $p < .05$, ** $p < .01$, *** $p < .001$				

Interpretation: As organisations rely more on automation and technology, the managerial roles too get driven by technologies – management roles becoming technical themselves – leading to they being required on on-demand basis. It becomes

imperative for organisations to let go off managerial skills that are not aligned to the changing needs of the organisation's objectives. Thus, the preference to having managerial talent on contract basis becomes obvious.

Table 5: below corroborates this fact at a generic level too indicating that top management would prefer skilled resources on contractual basis.

		MM will work on contract/On-Demand	Adoption of newer business processes will be influenced	Contract Employees as a % of Total Employees will increase
MM will work on contract/On - Demand ($\bar{x} = 3.04$)	Pearson'sr	—	0.296*	0.419**
	p-value	—	0.039	0.003
Adoption of newer business processes will be influenced ($\bar{x} = 4.41$)	Pearson'sr			0.234
	p-value			0.106
Contract Employees as a % of Total Employees will increase ($\bar{x} = 3.73$)	Pearson'sr			
	p-value			
Note. * $p < .05$, ** $p < .01$, *** $p < .001$				

Interpretation: The challenge of right skilling – having the right skill at the right time and place – is the issue of the near future. Rapid changes in the way businesses will work and compete will demand different kinds of skills periodically. The leadership team is also becoming technophilic (see Table 6 for reason). Therefore, the work environment of human beings and technology (Hu-Tech) will make most of the existing skills of human beings redundant as machines would start performing those tasks. Hence, there will be specific needs that human beings will need to fulfill in the overall working. In order to stay cost-efficient, organisations will employ only on need basis.

Table 5 depicts that not only will changes in

processes demand management skills to be on-demand, the drift is clearly towards increasing the workforce towards contract employment. That is the concept of Gig!

1.3.4 Top Management Needs to be Tech Savvy for the organisation to Attract Talent.

In order to attract and retain the right set of talents in a structure comprising human beings and technology called Hu-Tech, an important aspect happens to be that the top management itself needs to be tech savvy. This implies an upward spiral of use of technology, impacting mid-managerial roles. Table 6 refers to how organisations will demand that their top executives also be technophilic for attracting new skills and talent into the organisation.

Table 6: Correlation Between Top Management's Adoption of Technology to Retaining & Attracting Talent

		Retaining Talent	CXO Level being tech savvy	Management Level being tech savvy
Retaining Talent (\bar{x} = 3.84)	Pearson's r	—	0.559***	0.606***
	p-value	—	< .001	< .001
CXO Level -being tech savvy (\bar{x} = 4.18)	Pearson's r	—	—	0.868***
	p-value		—	< .001
Management Level being tech savvy (\bar{x} = 4.12)	Pearson's r			—
	p-value			—
Note. * p < .05, ** p < .01, *** p < .001				

Interpretation: Automation is not just about business sustenance. To be attractive to prospective employees, organisations need to have latest technologies and adopt recent practices, and their leadership team too needs to be tech-savvy. This, in the context of a flatter structure, implies that even if people are on contract basis, it is important for the organisation to have a clear strategy and vision on automation so that new skills can be attracted. The strong correlation between the variables indicates that the management needs to be tech savvy to attract good/right talent. Therefore, in order to retain or attract new talent in an organisation automation is a definite factor, which prospective employees will also consider.

1.3.5 Impact on the Organisation when Top Management becomes Technophilic

Table 7 below indicates an interesting trend. As top management becomes tech-savvy, the influence of that is very high on its immediate two junior levels, but has no impact on the levels below those. This happens serially, implying that the reporting level accepts technology if the managerial level is using technology. However, this may not be true for the skip level. Thus, automation is an organisation-wide impact causing subject, but in layers.

Table 7: Correlation Between Immediate Levels in the Hierarchy

		CXO Level using AI	Sr. Management using AI	Middle Management using AI	Supervisory level using AI	Operating Level using AI
CXO Level using AI (\bar{x} =4.18)	Pearson's r	—	0.868***	0.544***	0.189	0.151
	p-value	—	< .001	< .001	0.193	0.3
Sr. Management using AI (\bar{x} =4.12)	Pearson's r		—	0.503*** \	0.158	0.083
	p-value		—	< .001	0.279	0.573
Middle Management using AI (\bar{x} =3.88)	Pearson's r			—	0.644 ***	0.43
	p-value			—	< .001	0.002
Supervisory level using AI (\bar{x} =3.55)	Pearson's r				—	0.715 ***
	p-value				—	< .001
Operating Level using AI (\bar{x} =3.08)	Pearson's r					—
	p-value					—

Note. * p < .05, ** p < .01, *** p < .001

Interpretation: The adoption of automation has an impact in the reporting level but the significance of it drops sharply from the skip levels. As gig can happen at any level in the organisation, the level below can also behave in a similar manner. A question raised is, can the management of a company be Gig?. In future, this too shall become a norm, as revealed by the data.

1.3.6 Other Factors Impacted on account of Gig

While Gig is confirmed to be the way technology companies would like to engage with their managers, there are some other factors too to be considered. The convenience of work place becomes material. This relates to convenience of time, location, etc. As the workforce sees more number of the new

generation employees, the expectation is to allow them to choose their workplace and time, while the organisation defines the scope of work, timeline and expected outcomes. This structure, in comparison to the traditional organisation structure and reporting system, is very stark and renders to the gig work style of outcome oriented engagement.

As gig encourages outcome-based reward mechanisms, the work style will also change from telling the employee what and how to do to allowing the employee to figure out the process and provide some degree of assistance as coaching – the self-management practice. In the context of solving unknown problems, this approach appears very pragmatic.

Table 8: Correlation between Skills in Managerial Roles

		Convenience of work place, flexibility of work-time	Managers need to think and work like entrepreneurs
Convenience of work place, flexibility of work-time (\bar{x} = 3.16)	Pearson's r	—	0.545***
	p-value	—	< .001
Managers need to think and work like entrepreneurs (\bar{x} = 3.83)	Pearson's r	—	—
	p-value	—	—
Note. * p < .05, ** p < .01, *** p < .001			

Interpretation: The need for outcome-based engagement implies that there be flexibility of workplace and time. Rather than being told what tasks needs to be done and how, the employee chooses the methods and the

convenience of work time and place, and therefore is not administratively bound to the organisation. This is, in essence the definition of gig.

2. CONCLUSION:

There is empirical evidence to show that the employer-employee engagement, in the Indian Information Technology industry is moving the Gig way. While this refers to the management role, especially the middle management role to get impacted, references to other roles are also being examined, as shown in figure 3.

The important aspect here is the speed of change. Use of technology and automation are very essential for an organisation's growth and sustenance, but they also impact the structure, roles and responsibilities as well as the nature of engagement with human beings in the organisation. Gig is the nature of employee-employer engagement which is becoming short term oriented. The reason is obvious – when change happens too fast, organisations will prefer to hire skills that they need at any given point of time. It is not the cost but the value of impact that will drive the engagement.

It is also to be understood here that the focus shifts to skill much more than competency.

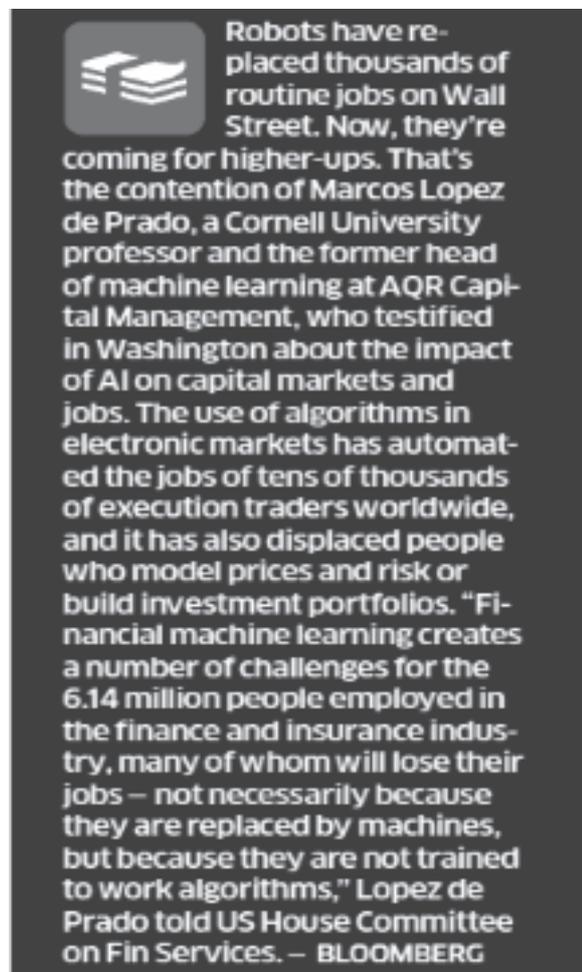


Figure 3 :
Source: Economic Times, Bangalore, Dec 6-2019, page 6

With greater operational speeds, human roles are likely to become too much skill based.

Long term engagement brings in the fears of unknown. In the Hu-tech work environment, intelligent machines will have a declining cost of ownership while they become more efficient and reliable in performing their specific tasks. For human beings, it is exactly the opposite – with more time spent in an organisation, human beings become more expensive and tend to get inefficient too, unless they reskill. That is the reason why contractual employment will be on the rise in the near future and appropriate techniques and methods of engagement will also evolve.

There's a tremendous scope for further research in this area as things are evolving, not just in the Information Technology industry but in other industries too and for some newer roles too.

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RESEARCH

Intelligent Collaboration of AI and Human Workforce

Dr. Sonal Pandey*

ABSTRACT

Many researchers and economists speculate that there will be mass unemployment in the future because of rapid technological changes in all economic sectors. There are fears that artificial intelligence will automate jobs away. US Department of labor data analyzes that there will be fewer or more jobs over the coming decades and also examined about 1000 occupations. The work activities of these occupations are broken down into 41 tasks. They classified activities as basic, repetitive and uniquely human. Most of the jobs required skilled workforce because lower skilled jobs have been replaced by automation. Paradoxically this will result in a shortage of labor as people do not have that level of advanced technological knowledge and the results we all can see everywhere: automation and robots. Here the suggestion is for the intelligent and productive collaboration of AI and human workforce. We require the most advanced training and education to make ready the workforce for the jobs that expect most of us as humans to control and operate technology to make world grow.

KEYWORDS — *Artificial Intelligence, Human Workforce, Future of Work, Future of Employment.*

INTRODUCTION:

With the mindfulness of thoughts about the advancement in robotics, artificial intelligence and digital technology, my paper tries to answer some doubts about the job availability. After ten years or so would there be more jobs or fewer? Economists always acknowledge that technology has historically been a job generator. Even this viewpoint is supported by the US labor force's migration over the past 20 years that workforce migration took place from the farm land (primary sector) to the factory (secondary sector) to the tertiary sector. So emergence of technology would never eliminate human workforce but help to change for betterment.

On the other hand, people with different perspectives and findings do not support that there is an increasing number of jobs because of the type and progress of technological change. The belief is that strong technologies will replace workers everywhere, whether that would be retail sector, manufacturing sector or in professions, including law, financial, services, education and medicine. According to estimation of Oxford University, 47% of US job will be under the risk of AI (Frey and Osborne, 2013). This estimate is on the higher side. For the developing and less developed countries, the digits might be 77% for China and 69% for India (Citi bank 2016). This information is

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also revealed by the US Department of Labor (DOL). After all these findings, we experience different conclusions that tasks get automated, not the job, and jobs disappear only if they consist of clockwork and automate tasks.

Considering Tasks

All occupations can be classified into tasks divided among the following three categories as shown below:

Basic

- Getting information
- Monitoring processes, materials, or surroundings
- Estimating the quantifiable characteristics of commodity, affairs, or information
- Processing information
- Evaluating information to determine compliance with standards
- Documenting/recording information
- Taking information with supervisors, peers, or subordinates
- Talking directly with persons outside the organization
- Operating to provide organizational units
- Monitoring and controlling resources

Repetitive

- Controlling machines and processes
- Handling and moving objects
- Operating vehicles, mechanized devices, or equipment
- Inspecting equipment, structures, or material
- Plan work and activities
- Executing administrative activities
- Scrutinizing data or information
- Enacting general physical activities

Uniquely human

- To identify objects, events and actions
- To maintaining and repairing appliances
- Repair and maintain electronic appliances
- To judge the quality of services and product
- Problem solving and decision Making
- Thinking creatively
- To use and update related knowledge
- Responsible for developing objects and strategies
- Explaining the information for others
- Thinking creatively
- To make decision and solving problem
- To care and assistance for others
- To influence others
- To resolve problem and negotiations
- To work and perform with public
- For team building
- To educating and training

Sources: U.S. DOL and Vanguard.

The “Uniquely Human” category requires people, much of the “Basic” category is still done by people, but the “Repetitive” category can be automated. After exploring these historical changes, one can see the insight into the future of work. According to my study experience regarding this, the importance of repetitive function has declined, and on the other hand, uniquely human tasks, has increased. We can examine which job sectors would decline and which job sectors would increase at the time of post transition of automation. World Economic Forum estimated that 3-14 % of total global workforce will need to switch occupational categories by 2030 and acquire new skills by that time.

A new MGI report on the future work

examined which jobs would decline and which jobs would increase post transition at the time of automation. According to MGI Report between 75 million and 375 million people around the world may need to change occupational categories and acquire new skills by the year 2030.

Here the question is – will there be enough jobs in the future? Let's analyze rising prosperity around the world, particularly in developing country markets. These people have more money though need to consume everything from automobiles to media. We see changing demographics and aging populations require more health care which will be delivered by the people. There is a need to develop technology, an infrastructure gap around the world, and a need to build everything from bridges to buildings. All of this will require human labor even if there is a lot of automation. For the energy transition to a more green economy, we also require human labor. And there is a lot of domestic work such as cooking, child care, cleaning, and health care. So these are all we know about right now, but we as humans are generating new opportunities every day.

Let's look at the perspective of people who are pessimistic that there will still be jobs for humans as automation increases. In most cases, these people are unaware of how humans can collaborate with AI in an intelligent way, and they do not have the details about how job markets are evolving. We often see this view of automation presented in the media in the following ways: excessive automation is a mistake and

humans are underrated. The higher the organizational degree and focus on workforce and technology collaborations, the higher the productivity would be. For example, with the great collaboration of human and machines in the BMW factory, production increased by 85% (MGI Report).

I found the finest example of AI and Human workforce collaboration when both collaborated on the diagnosis of breast cancer cells and identified 99.5% accuracy of cancerous tissue detection (MGI Report).

We can see significant interaction of AI and Human workforce in the financial sector too. An economic analysis was recently carried out of factors that will affect change from today to 2022.

I defined AI as a technological system that prospects, feels, understand, asks, and acquires knowledge. These technology comprise devices like computer vision and voice recognition with Alexa, Siri or Google Assistant technologies.

In the Figure 2 we can see two kinds of job-level views of geographical employment. One can figure it out that more than half of the US economy's technology based employment are shaded in the left part of the figure including California and Massachusetts. On the other hand, the right portion shows that job tasks keep changing in every state. This reveals that “Future of Work” is spread out in just a few locations. But views according to the task-level present a more realistic picture.

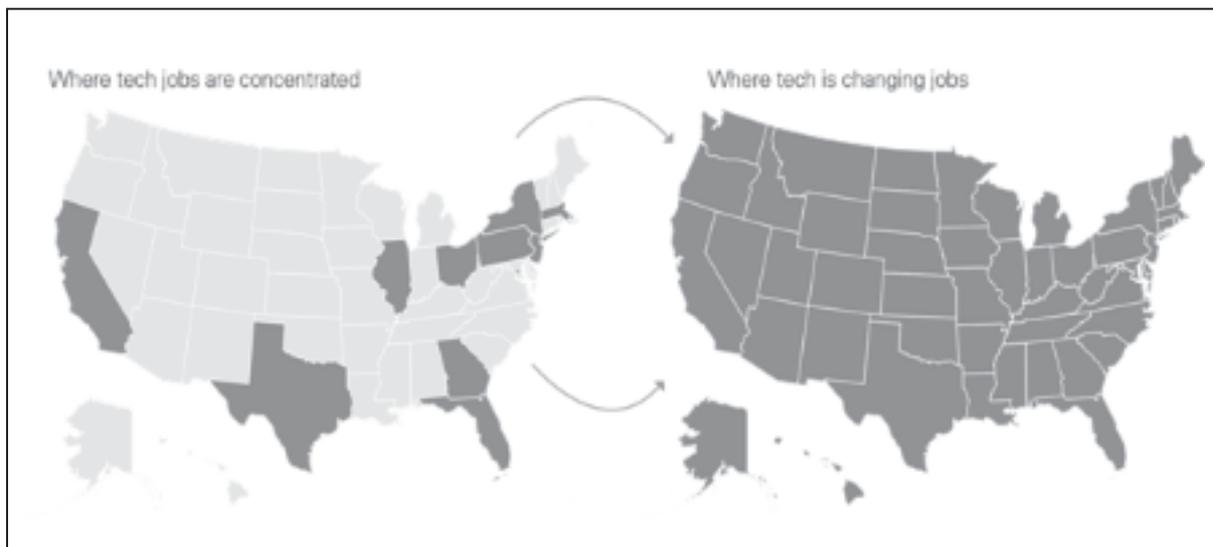


Figure 2: Two job-level views of geographical employment.

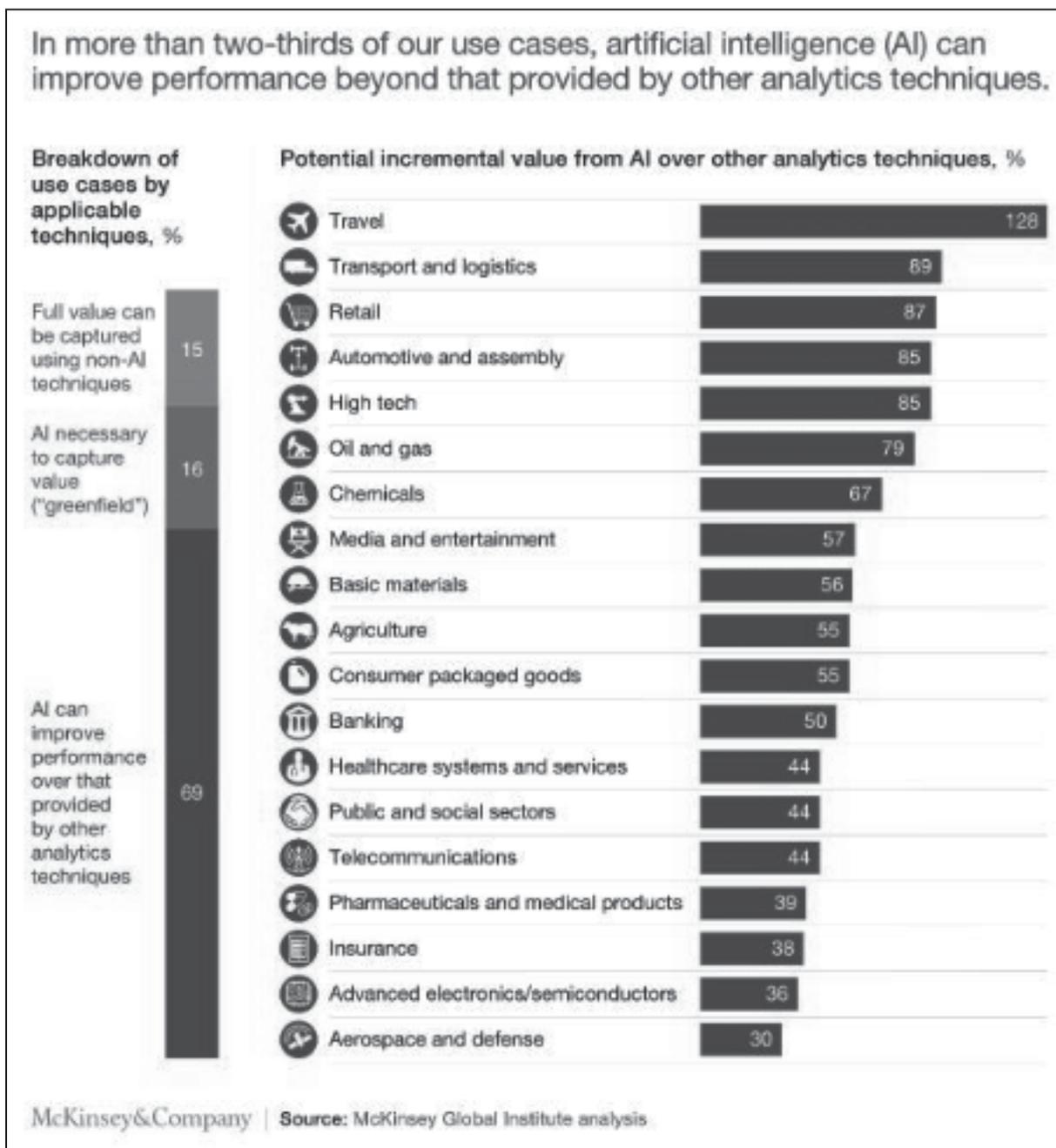
Sources: Vanguard, using data from the U.S. Census Bureau American Community Survey and Department of Labor O*Net Online.

THE FUTURE OF WORK:

Economists approximate that half of the United States labor market jobs will disappear in the next 10 years. These estimations reflect a confusion regarding whether they are giving approximations for jobs or for tasks. But the fact is that technology is automating some tasks but not all of them, so no chance of disappearing jobs. They are just advancing because jobs include so many tasks.

After examining 41 work tasks that generate nearly 1000 occupations, the US Department of Labor tracked these 1000 occupations, and found that the work activity in every occupation have shifted towards advanced

tasks. In the next decade, we are likely to see that because the number of jobs concentrated on uniquely human tasks increases, the level of automation rises, which could result in labor shortages. Our biggest challenge is to cultivate four essential capabilities to the future of work: creativity, agility, technological awareness, and emotional empathy. This can be done by providing education and training to close the gap of rising level of technology and shortage of skilled labor. In the Figure3 below, we can see and compare the performance of other analytics techniques in different sector with performance of AI.



THE FUTURE OF EMPLOYMENT:

After doing all the comparison and analysis of changes in job tasks before and after the recession period of 2003-2007 and 2010-2015, we can conclude that before 2003-2007 financial crisis, repetitive and basic tasks made the largest marginal contribution to economic output, but after crisis period, most powerful engine of marginal output growth

known as uniquely human tasks and that result is the same for 2010-2015. My study reveals the fact that the machines are outracing humans when the task is repetitive, but in advanced tasks, humans are setting the progress. As a result, technology is making humans more valuable. Uniquely human tasks contribute more in economic output than the basic and repetitive.

METHODOLOGY:

I used comparative and analytical methodology to get better idea about the topic. Approaches related to performance measurement of AI-Human collaboration as a comparison of human performance vs. AI performance vs. human-AI-collaboration performance.

CONCLUSION:

We all are discussing that stage is all set for the revelatory future without jobs with increasingly capable technologies such as despot vehicles and AI. But the fact is that the kind of job is changing, like people used to do less repetitive work, now repetitive work is mostly done by machines. So emergence of technology and machines increases the productivity of human work force because humans are more on uniquely human tasks and for other things they use machines and save time and energy. These tasks (repetitive) are disappearing because it's done by machines so we all assume that jobs are less now but that is not true.

RESULT AND DISCUSSION:

In the next ten years employment would be reshaped if these trends will continue as it's going on, and will accelerate the pace. The result will be not enough skilled labor, but a labor market paradox: more robots. Here my suggestion is accelerate education and training to prepare the workforce for jobs.

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RESEARCH

Role of Logistics Management in Supply Chain Efficiency and Supply Chain Responsiveness in Organized Retail Sector

Dr. Sushma Patil*

ABSTRACT

Purpose of Research - Coordination systems and logistics network are the prime elements for focused edge in composed retail division. Productive logistics network, the executives has demonstrated to be a potential method to improve execution through coordinating market in the aggressive world. Logistics is that piece of the Supply chain process that deals with the productive, successful stream and capacity of merchandise, benefits, and related data from the purpose of source to the point of utilization so as to meet client's prerequisites In this exploration paper an endeavour has been made to consider the role of logistic network in boosting supply chain effectiveness and responsiveness. The essential goal of this paper is to consider the effect of chosen logistics parameters on the efficiency and responsiveness of retail inventory network.

Design/Methodology - Essential information is gathered utilizing organized meetings of 85 composed retail network experts in a city of Mumbai and Navi Mumbai. Auxiliary information is gathered from websites, papers and articles, reference books.

Findings - The research finds that all chosen logistics parameters for example Lead time, number of transporters, precision of information significantly affect logistics network efficiency and responsiveness regarding fill rate, flawless request satisfaction, crisis accessibility of merchandise, on time conveyance to customer.

Originality/Value - The results demonstrate that firms will be profited on the off chance that they consider the suggested logistics procedures that will improve the production network productivity and responsiveness in composed retail area.

KEYWORDS — Supply Chain, Supply Chain Efficiency, Logistics Management.

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INTRODUCTION:

India is currently at the significant stage for globalized retail as over the most recent two decades, because of monetary progression of 1991, India's working class has extraordinarily extended thus has its acquiring power. Retailing is a noteworthy piece of financial exercises of both created and building up nations' economies, with wholesaling and retailing esteem included. The significant objective of the retail business or retail promoting framework is to impact potential customers to buy an item grouping at a retail location.

Supply Chain Management is the significant part of retail industry. Organized retail store network includes getting item from the correct merchants to the correct clients, while limiting stock levels, warehousing and transportation cost. Clients are requesting, and retailers are contending to fulfill them, and the customer request in the market turns out to be progressively unstable. As worldwide challenge expands, the retailers need to concentrate on store network techniques that have noteworthy effect on improving logistics network exercises like quality, item structure and get together, dissemination and shoppers needs.

With the gigantic development the retail division is confronting difficulties on the facades of raising land cost, shortage of talented workforce and organized stock of product. One of the most significant difficulties in sorted out retail in India is poor store network and logistics management.

Role of Logistics in Supply Chain Efficiency and Responsiveness

Logistics is a significant component of supply chain management and joining of logistics

forms better to serve the clients. The logistics specialist should concentrate on logistics since it includes the biggest expense in the worldwide exchange (Rodrigues et al., 2005) and supply chains fill in as the connections between providers, producers, venders, clients (Lai and Chang, 2003) and logistics. The edges in retail area can be improved fundamentally by simply improving store network and logistics in the network.

The Council of Supply Chain Management (2007) characterizes logistics the executives as "that piece of SCM that plans, actualizes, and controls the productive, powerful forward and turn around stream and capacity of merchandise, benefits and related data between the purpose of birthplace and purpose of utilization so as to meet clients' necessities."

Lambert says that Logistics is that piece of the Supply chain process that plans, executes, and controls the productive, successful stream and capacity of merchandise, benefits, and related data from the purpose of inception to the point of utilization so as to meet client's prerequisites. Christopher (1998) implies that the entire motivation behind logistics system is to give clients the level and nature of administration that they require and do as such at less expense to the all out Supply chain.

So, in this exploration paper an endeavour has been made to consider the role of logistics in boosting production network proficiency and responsiveness.

LITERATURE REVIEW:

James S. Keebler, Richard E. Board in paper titled Logistics performance measurement in the supply chain: a benchmark, gave a novel

commitment by giving a benchmark to the condition of logistics execution estimation in the USA. They expressed that Logistics estimation can improve firm execution. By a Delphi study including in excess of 100 professionals, scholastics, and advisors recognized as logistics specialists; individual meetings they reasoned that there is a requirement for joint effort between exchanging accomplices on meanings of connecting exercises and forms and their proportions of execution and those organizations that comprehend the worth creation character of superior logistics are bound to put resources into improving its ability, in this way making it increasingly significant as an exchanging accomplice.

Anupindi et al. (2006), in the book titled, "Managing Business Process Flows Principles of Operations Management" talks about that Wal-Mart has made an exceptional logistics the executives framework incorporating organization claimed transportation armada and correspondence system to interface its stores, for accomplishing these apparently conflicting destinations to guarantee quick recharging of drained stocks, the organization imparts its place of offers information to providers through its restrictive data framework called Retail Link.

Inda Sukati, Abu Bakar Abdul Hamid, Rohaizat Baharun, Mohd Norfian Alifiah, Melati Ahmad Anuar, (2012), in paper titled "Competitive Advantage through Supply Chain Responsiveness and Supply Chain Integration" included to the information production network incorporation, inventory network responsiveness and aggressive. They spoke to the connection between

inventory network joining, store network responsiveness, and upper hand.

Mohd Iskandar receptacle Illyas Tan and Iziati Saadah bt Ibrahim (2010) in look into paper titled "The Relationship Between Supply Chain Management Practices And Supply Chain Efficiency Indicators" examined the present status of SCM and E-Commerce innovation selection among the LSP concerning the recognitions and the effect on the utilization of SCM and E-Commerce innovation in Malaysia. This examination has demonstrated that the LSPs utilized SCM innovation most broadly to help every one of the procedures of their logistics exercises.

Catalan and Kotzab, 2003 in investigate paper titled "Assessing the responsiveness in the Danish mobile phone supply chain", Supply chain responsiveness is characterized in two sections which is one section concerning time signs of both the flow of data and the flow of merchandise in the inventory network, They characterized four hypothetical assessment factors time viability, deferment techniques, the presence of the Bullwhip impact and data sharing that were helpful for examining every one of the three builds in the SCM examination model that are production network structure, store network procedures and inventory network connections.

Neeraj Anand and Neha Grover, in the paper titled "Measuring retail supply chain performance Theoretical model using key performance indicators (KPIs)" expressed the hypothetical structure which recommends a connection between the recognized KPIs and the ROA. The paper distinguishes key markers for execution estimation and

characterizes them into four significant classes: transport enhancement, data innovation streamlining, stock advancement and asset improvement.

THE OBJECTIVES FOR THE STUDY:

- 1) To study about the organized retail showcase situation in Indian setting.
- 2) To contemplate the role of logistics in organized retail network.
- 3) To identify variables of logistics management influencing supply network efficiency and store network responsiveness in organized retail sector.

RESEARCH METHODOLOGY:

Research Design:

The investigation is Exploratory, Descriptive and Causal in nature. The Exploratory investigation of research is utilized to recognize the different components influencing the store network the executives as for logistics n chosen retail outlets in Mumbai and Navi Mumbai. Elucidating study is utilized in dissecting the different components of logistics for viable store network the board. Causal examination is utilized in considering the effect of different characteristics of logistics and SCM efficiency and network responsiveness.

Sample size – From the universe of sorted out retail outlets (Supermarket gathering) in Mumbai and Navi Mumbai 85 general stores having complete square feet territory over 500 sq. Ft. are chosen over every one of the four zones of Mumbai and Navi Mumbai. The inspecting strategy utilized for the examination is non probabilistic convenience sampling method.

- To study the overall organized retail market scenario in Indian context.

- To study the role of logistics management in organized retail supply chain.
- To identify factors of logistics management affecting supply chain efficiency and supply chain responsiveness.

HYPOTHESES:

H1-There is association between logistics management and Supply Chain efficiency.

H1a-Lead time of logistic system is having a significant impact on ability to deliver the correct quantity as ordered (Fill Rate).

H1b- Number of carriers is having significant impact on lead time of logistic system.

H1c-There is association between extent of accuracy of information available from logistic network and delivery of the correct quantity as ordered.

H1d-There is association between extent of accuracy of information available from logistic network and frequency of deliveries in the right condition.

H2-There is association between logistics management and Supply Chain responsiveness.

H2a-There is association between extent of accuracy of information from logistic network and emergency availability of goods.

H2b-There is association between extent of accuracy of information from logistic network and on time delivery to customer.

H2c-Lead time is having significant impact on emergency availability of goods.

DATA COLLECTION METHOD :

In the phase of essential information assortment, the store managers from complete 85 stores are being met by taking earlier appointment. All things for efficiency and responsiveness were estimated on scales

with rating choice going from 1 (No Impact) to 5 (Very solid Impact). Different Research papers, articles, papers, Reference books are utilized for optional wellsprings of information assortment.

DATA ANALYSIS & INTERPRETATION:
Data analysis and interpretation involves frequency distribution and hypothesis testing based on primary data. Chi-Square test, a non-parametric test and Anovais used for hypotheses testing

1) Frequency distribution:

1) Rating of logistic system					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Needs strong improvement	4	4.7	4.7	4.7
	Needs some improvement	11	12.9	12.9	17.6
	Needs improvement	19	22.4	22.4	40.0
	Excellent	51	60.0	60.0	100.0
	Total	85	100.0	100.0	

Table 1: Rating of logistic system.

Source: Field survey

2) Extent of accuracy of information available from logistic network

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 80%	21	24.7	24.7	24.7
	80-89%	27	31.8	31.8	56.5
	90-100%	37	43.5	43.5	100.0
	Total	85	100.0	100.0	

Table 2: Information accuracy from logistic network.

Source: Field survey

3) Number of transportation carriers of logistic system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	14.1	14.1	14.1
	2	30	35.3	35.3	49.4
	3	15	17.6	17.6	67.1
	4	9	10.6	10.6	77.6
	5	6	7.1	7.1	84.7
	6	2	2.4	2.4	87.1
	7	2	2.4	2.4	89.4
	8	2	2.4	2.4	91.8
	10	2	2.4	2.4	94.1
	15	4	4.7	4.7	98.8
	20	1	1.2	1.2	100.0
	Total	85	100.0	100.0	

Table 3: Number of transportation carriers.

Source: Field survey

4) Capability of handling transportation carriers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	59	69.4	69.4	69.4
	No	26	30.6	30.6	100.0
	Total	85	100.0	100.0	

Table 4: Capability of handling transportation carriers. Source: Field survey

5) Ability of logistic system to deliver the correct quantity as ordered (Fill Rate)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 80%	27	31.8	31.8	31.8
	80-89%	22	25.9	25.9	57.6
	90-100%	36	42.4	42.4	100.0
	Total	85	100.0	100.0	

Table 5: Fill rate frequency. Source: Field survey

6) Frequency of deliveries in the right condition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 80%	20	23.5	23.5	23.5
	80-89%	28	32.9	32.9	56.5
	90-100%	37	43.5	43.5	100.0
	Total	85	100.0	100.0	

Table 6: Frequency of deliveries in the right condition. Source: Field survey

7) Lead time taken by logistic system for delivery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2 days	52	61.2	61.2	61.2
	More than 3 days	33	38.8	38.8	100.0
	Total	85	100.0	100.0	

Table 7: Frequency of lead time. Source: Field survey

HYPOTHESES TESTING:

Ho- There is no association between logistic management and supply chain efficiency

H1- There is association between logistic management and supply chain efficiency.

This hypothesis uses lead time, number of carriers, extent of accuracy of information from logistic network as independent variables and fill rate, perfect order fulfilment and lead time as dependent variables. So, Hypothesis

H1 has following sub hypotheses

1) **H0a:** Lead time of logistic system is having no significant impact on ability to deliver the correct quantity as ordered (Fill Rate).

H1a: Lead time of logistic system is having a significant impact on ability to deliver the correct quantity as ordered (Fill Rate).

Table 8: Chi-Square test for lead time of logistics management and impact on fill

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.062 ^a	2	.001
Likelihood Ratio	13.057	2	.001
Linear - by-Linear Association	8.860	1	.003
N of Valid Cases	85		

a. 0 cells (.0%) have expected count less than 5.

The minimum expected count is 8.54. From above Chi-square and Correlation analysis as p value is less than 0.05 H1a is accepted i.e, there is significant impact of lead time of logistic system on fill rate.

2) **H0b: Number of carriers is not having a significant impact on lead time of logistic system.**

H1b: Number of carriers is having significant impact on lead time of logistic system.

Table 9: Descriptive statistics for lead time and number of carriers of logistic system.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Low impact	11	2.55	2.018	.608	1.19	3.90
Moderate impact	16	2.88	1.708	.427	1.96	3.79
High impact	27	3.22	3.080	.593	2.00	4.44
Very high impact	31	5.29	4.748	.853	3.55	7.03
Total	85	3.82	3.646	.395	3.04	4.61

Table 10: Descriptive Number of carriers

	Minimum	Maximum
Low impact	1	8
Moderate impact	1	8
High impact	1	15
Very high impact	2	20
Total	1	20

Table 11: ANOVA Number of carriers

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	108.822	3	36.274	2.916	.039
Within Groups	1007.531	81	12.439		
Total	1116.353	84			

Means Plots

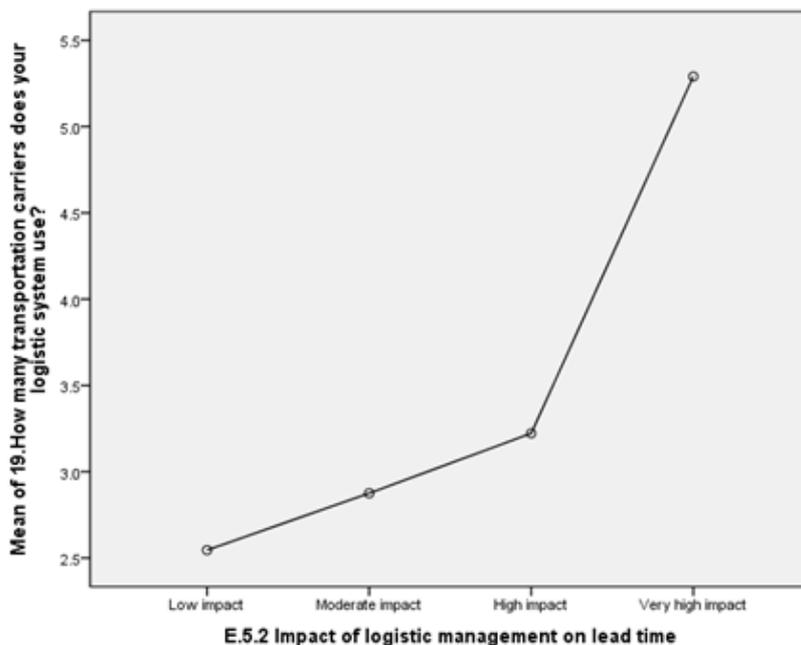


Fig.1: Mean plot for Lead time and number of transportation carriers

From table 11 as p value is less than .05, H2b is accepted means there is significant impact of number of carriers of logistic system on lead time. Fig.1 also clearly depicts that as number of carriers of logistic system increases its impact on lead time also increases so retailers should go for maximum number of carriers.

- 3) **H0c: There is no association between extent of accuracy of information available from logistic network and delivery of the correct quantity as ordered.**
- H1c: There is association between extent of accuracy of information available from logistic network and delivery of the correct quantity as ordered.**

Table 12: Cross tabulation for accuracy of information from logistic network and ability to deliver of the correct quantity as ordered

			What is the extent of accuracy of information available from logistic network?			Total
			Below 80%	80-89%	90 -100%	
How often the logistic system is able to deliver the correct quantity as ordered?	Below 80%	Count	17	5	5	27
		%	63.0%	18.5%	18.5%	100.0%
	80 - 89%	Count	1	7	14	22
		%	4.5%	31.8%	63.6%	100.0%
	90 - 100%	Count	3	15	18	36
		%	8.3%	41.7%	50.0%	100.0%
Total		Count	21	27	37	85
		%	24.7%	31.8%	43.5%	100.0%

Table 13: Chi-Square test for accuracy of information from logistic network and ability to deliver of the correct quantity as ordered

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.393 ^a	4	.000
Likelihood Ratio	31.744	4	.000
Linear-by-Linear Association	15.766	1	.000
N of Valid Cases	85		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.44

From above Chi-square and Correlation analysis, as p value is <.05, means there is association between extent of accuracy of information from logistic network and Fill rate. More is the % of extent of accuracy of information more is frequency of getting correct fill rate therefore H2c is accepted.

4) **H0d: There is no association between extent of accuracy of information available from logistic network and frequency of deliveries in the right condition.**

H1d: There is association between extent of accuracy of information available from logistic network and frequency of deliveries in the right condition.

Table 14: Cross tabulation for extent of accuracy of information available from logistic network and frequency of deliveries in the right condition.

			What is the extent of accuracy of information available from logistic network?			Total
			Below 80%	80-89%	90-100%	
How often are the deliveries in the right condition?	Below 80%	Count	14	4	2	20
		% ?	70.0%	20.0%	10.0%	100.0%
	80-89%	Count	4	12	12	28
		% ?	14.3%	42.9%	42.9%	100.0%
	90-100%	Count	3	11	23	37
		% ?	8.1%	29.7%	62.2%	100.0%
Total		Count	21	27	37	85
		% ?	24.7%	31.8%	43.5%	100.0%

Table 15: Chi-Square test for extent of accuracy of information available from logistic network and frequency of deliveries in the right condition.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.088 ^a	4	.000
Likelihood Ratio	30.258	4	.000
Linear-by-Linear Association	23.639	1	.000
N of Valid Cases	85		

a. 1 cells (11.1%) have expected count less than 5. The minimum expected count is 4.94.

From above Chi square and Correlation analysis, as p value is<.05,means there is association between extent of accuracy of

HYPOTHESIS 2:

H0- There is no association between logistic management and supply chain responsiveness.

H2-There is association between logistic management and supply chain responsiveness

This hypothesis consists of following sub hypotheses consisting of extent of accuracy of information from logistic network, lead time as independent variables and impact on

information from logistic network and perfect order fulfilment. More is the % of extent of accuracy of information more is the frequency for getting perfect order fulfilment therefore H1d-is accepted

emergency situation availability of goods and impact on time delivery to customer as dependent variables.

1) H0a: There is no association between extent of accuracy of information from logistic network and emergency availability of goods.

H2a: There is association between extent of accuracy of information from logistic network and emergency availability of goods.

Table 16: Cross tabulation for extent of accuracy of information from logistic network and emergency availability of goods.

			What is the extent of accuracy of information available from logistic network?			Total
			Below 80%	80-89%	90-100%	
F.4.2 Impact of logistic management on Emergency situations (rise in demand)	Low impact	Count	11	6	6	23
		%	47.8%	26.1%	26.1%	100.0%
	Moderate impact	Count	2	5	5	12
		%	16.7%	41.7%	41.7%	100.0%
	High impact	Count	5	11	11	27
		%	18.5 %	40.7%	40.7%	100.0%
	Very high impact	Count	3	5	15	23
		%	13.0%	21.7%	65.2%	100.0%
	Total	Count	21	27	37	85
		%	24.7%	31.8%	43.5%	100.0%

Table 17: Chi-Square test for extent of accuracy of information from logistic network and emergency availability of goods.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.142 ^a	6	.041
Likelihood Ratio	12.366	6	.054
Linear-by-Linear Association	8.884	1	.003
N of Valid Cases	85		

a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 2.96.

From above analysis, as p value is <.05, means there is association between Extent of accuracy of information from logistic network and emergency situation availability, More, is % of accuracy of information more the impact on emergency situation availability of goods so H_{0a} is accepted.

2) **H_{0b}: There is no association between extent of accuracy of information from logistic network and on time delivery to customer.**

H_{2b}: There is association between extent of accuracy of information from logistic network and on time delivery to customer..

Table 18: Crosstabulation for extent of accuracy of information from logistic network and on time delivery to customer.

			What is the extent of accuracy of information available from logistic network?			Total
			Below 80%	80 - 89%	90 -100%	
Impact of logistic management on On time delivery to customer	Low impact	Count	8	5	7	20
		%	40.0%	25.0%	35.0%	100.0%
	Moderate impact	Count	5	8	8	21
		%	23.8%	38.1%	38.1%	100.0%
	High impact	Count	5	4	7	16
		%	31.2%	25.0%	43.8%	100.0%
	Very high impact	Count	3	10	15	28
		%	10.7%	35.7%	53.6%	100.0%
Total		Count	21	27	37	85
		%	24.7%	31.8%	43.5%	100.0%

Table 19: Chi-Square test for extent of accuracy of information from logistic network and on time delivery to customer.

	Value	df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	6.443 ^a	6	.375
Likelihood Ratio	6.729	6	.347
Linear-by-Linear Association	3.895	1	.048
N of Valid Cases	85		

a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 3.95.

From above analysis as p value is < .05, means there is association between extent of accuracy of information from logistic network and on time delivery to customer. More is the extent of accuracy of information more is the impact on time delivery to customer so H2a is accepted.

**3) H0c: Lead time is having no significant impact on emergency situation availability of goods.
H2c: Lead time is having significant impact on emergency situation availability of goods.**

Table 20: Cross tabulation for Lead time and emergency situation availability of goods.

			What is the typical lead time taken by logistic system for delivery?		Total
			1-2 days	More than 3 days	
Impact of logistic management on Emergency situations (rise in demand)	Low impact	Count	10	13	23
		%	43.5%	56.5%	100.0%
	Moderate impact	Count	3	9	12
		%	25.0%	75.0%	100.0%
	High impact	Count	20	7	27
		%	74.1%	25.9%	100.0%
	Very high impact	Count	19	4	23
		%	82.6%	17.4%	100.0%
Total		Count	52	33	85
		%	61.2%	38.8%	100.0%

Table 21: Chi-Square test for Lead time and emergency situation availability of goods.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.985 ^a	3	.001
Likelihood Ratio	16.407	3	.001
Linear-by-Linear Association	11.204	1	.001
N of Valid Cases	85		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 4.66.

From above analysis, as p value is <.05, accepted means there is a significant

impact of lead time on emergency availability. Less is the lead time more is very high impact on emergency availability so H6a is accepted.

DISCUSSION FROM DATA ANALYSIS:

1) Rating to Logistic System

Most of the retailers use 3PL/4PL system for logistic management. 60% of organized retailers said that their logistic system is excellent, 22.4% said that their logistic system needs improvement, 12.9% said that logistic system needs some improvement and only 4.7% said that logistic system requires strong improvement

2) Fill Rate of Retail System

It is found that 42.4% of organized retailer's logistic system has 90-100% ability to deliver the correct quantity as ordered (Fill Rate), 25.9% has 80-89% and 31.8% has below 80% fill rate. It shows that according to retailer's perspective maximum retailers (around 70%) can get the quantity received what is being ordered exactly but others (approximately 30%) face the problem of not achieving exact fill rate. This is due to inaccurate communication or may be due to pilferage/accidents/breakage etc.

3) Perfect Order Fulfilment

It is found that 43.5% organized retailers have 90-100% of frequency of getting deliveries in right condition (Perfect order fulfilment) while 32.9% has 80-90% frequency and 23.5% retailers have below 80% perfect order fulfilment. The retailers who are getting below 80%, they are facing problems of pilferage/breakage/accidents in transit from warehouse or from factory to retail outlet.

4) Impact of Lead time of Logistic System on Supply Chain Efficiency

It is found that retailers having less lead time i.e. 1-2 days are having higher fill rate (No. of orders received/no of orders given). This may be due to due to rapid delivery there is less

chances of breakage, pilferage or theft. The retailers having lead time more than 3 days are found to have less fill rate.

5) Impact of Lead time of Logistic System on Supply Chain Responsiveness

Lead time also affects supply chain responsiveness by impacting emergency situation availability of goods to customer. If lead time of supply system is managed accurately and its minimum extent, it is found that more it is affecting impacting emergency situation availability of goods to customer. If the customer gets the product on time, the supply chain is considered to be responsive.

6) Impact of Number of Carriers of Logistic System on Supply Chain Efficiency

Number of carriers is a significant factor. It is found that as the number of carriers increases supply chain efficiency also increases because it directly affects the impact in lead time irrespective of its cost. It is found that the retailers having a greater number of carriers are having very high impact on lead time.

7) Impact of Accuracy of Information from Logistic Network on Supply Chain Efficiency.

Accuracy of information from logistic network is also impacting supply chain efficiency by impacting fill rate and perfect order fulfilment (no. of orders received in good condition/total no of orders). More is the accuracy of information from logistic network more are the chances of getting the goods in right quantity and in correct condition.

8) Impact of Accuracy of Information from Logistic Network on Supply Chain Responsiveness.

It is found that accuracy of information from logistic network affects supply chain responsiveness by affecting emergency situation availability of goods and on time delivery to customer. Retailers having more accuracy of information available more is the supply chain responsiveness in terms of impact on emergency situation availability of goods and on time delivery to customer.

Thus, from above results it can be concluded that logistics management practices have a significant impact on supply chain efficiency and responsiveness so Hypothesis H1(There is association between logistics management and supply chain efficiency) and H2 (There is association between logistics management and supply chain responsiveness) are accepted.

LIMITATIONS OF THE STUDY:

The exploration is being completed in city of Mumbai and Navi Mumbai so results can't be summed up. The investigation covers store network practices of general store bunch in FMCG class. For inside and out examination the determination was made however further investigation can be carried on different arrangements of retail industry like hypermarkets, departmental stores and so forth and even in different classes moreover.

FUTURE SCOPE OF RESEARCH:

Efficiency and responsiveness are two goals of supply chain management, Efficiency is on one hand how well the assets in the Supply chain are used and then again Responsiveness is the capacity of the production network to react intentionally and inside a proper time-scale to client demands or changes in the commercial center, yet to accomplish both simultaneously is troublesome. Lead time is a noteworthy factor since it straightforwardly influences production network efficiency and

responsiveness as far as fill rate, accessibility of merchandise, on time conveyance of products. In this way, it is prescribed to retailers that lead time ought to be as least as could be allowed (1-2 days). As needs be, they should choose the provider or warehousing arrangement or method of transportation. Ideally retailers ought to re-appropriate the capacity of calculated to outsider or forward gathering strategic suppliers so they can focus on their centre abilities. Utilization of 3PL/4PL speeds up in conveyance. Degree of exactness of data in store network likewise builds which prompts expanded effectiveness and responsiveness Organized retailers ought to consistently go for most extreme number of carriers since it expands the effectiveness as far as lead time decrease, expedient conveyance and builds responsiveness as far as accessibility of products when requested. Hence, for production network specialists these methodologies of strategic administration will help in accomplishing logistic network effectiveness and responsiveness. Further research can be carried out in different cities and on different retail formats as well as on different sectors.

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RESEARCH

A Study On Strategies And Effect Of Green HRM practices

Dr. S. Lakshmi*

ABSTRACT

An attempt is made to study how the various enterprises have implemented by devising the strategies of Green HRM policies. Green HRM practices include environmentally-inclined HR practices, framing procedures and culture for environmental sustainability within the organization, preservation of knowledge capital. In the long run they have found, it offers them competitive advantage, lower the costs and yields high return of investment through various review of related studies.

INTRODUCTION:

Green HRM is a mix of ecology management and personnel management. Green management techniques involves awareness on environmental activities thus paving the way for the overall development of the employees in the organization.

Environment-centric activities are taken prime seat in driving the activities of the business. Employees who want to initiate and create environment friendly and environment oriented activities are motivated and encouraged to carry out the day to day tasks of the organisations.

Selecting suitable personnel with right mix of skill and knowledge of sustainable development who also have a good knowledge like effective utilization of scarce resources, and having a sustainable world. Green HRM practices are created and implemented in the areas of selection,

personnel development, performance appraisal etc.

HR practices should be redefined to include wherever possible green initiatives and make into a habitual way of doing things which is in place with the strategic policies. Corporate Social Responsibility(CSR) contains embedded green initiatives in HR practices. Most of the firms practicing green initiatives in the strategic policy making and the HR functional department should take the lead. The global organizations are preferring for green initiative implementation for their organisation instead of original work places.

REVIEW OF LITERATURE:

Rani & Mishra (2014) observed Green HR practices lead to increased efficiencies, economical benefits and resulted in satisfied internal customers i.e employees helps firms to operate in an sustainable manner. Some of the green initiatives are paperless filing,

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online training and developmental activities, virtual conferences and interviews, job sharing, reuse-recycle-reduce strategy, telecommuting and creating more energy efficient office spaces. Businesses are using green proposals into their everyday work environment to lead a sustainable future ahead.

Jyothi (2019) found Environmentally inclined HR strategies and the knowledge capital are two core areas firms can concentrate with respect to Green Policies. They detailed a model of activities of the green human resources practices which includes sustainable green initiatives at every stage.

Human resource practices from selection to till last stage of employee leaving the firm, depicting the role that HR processes plays in revolutionizing green HR policy into practice. Employee involvement and engagement can be kick started within the firms to find more entrepreneurs who are environmentally inclined known as eco-intrapreneurs (Entrepreneurs within the firm). It will structure the investment, personnel and scarce resources in a way which contributes products or services of value addition which was not existing previously and serves as competitive advantage in the market place. Employee involvement (EI) teams can cut waste in every work processes they do as they have complete knowledge about it.

The water conservation, energy conservation, bio degradable paper and paper board laminates, carbon foot print reduction and minimizing the harmful effluents while manufacturing paper, paper boards by ITC PSPD, Paper Board and Specialty paper division, Bhadrachalam unit in Telangana

state, India has set an example in the entire Asia for environmental sustainability.

Recycling is the way by which chemically all then scrap items are turned into into reusable and acceptable products. It eliminates the use of resources such as materials, sub-components for development of new products otherwise recycled scrap parts are used. This innovative idea reduces the energy and eliminates the waste, thereby making the surrounding less polluted and making the planet earth more sustainable.

Sudin (2011) emphasized strategic HR practices of Corporate Environmental Citizenship (CEC) depends on green intellectual capital and system of environmental management.

Road & Kingdom (2013) found GHRM promises environmental performance is correlated to the increased revenue generation, the so-called "green pays" argument (Crotty and Rodgers 2011; Ambec and Lanoie 2008). The green HR practices aids in employee welfare in the work environment by elevating the surrounding place and requirements of employees are met. So, GHRM has potential to contribute positively to the workforce welfare and resulted in greater organizational performance.

Enterprises are one of the root cause of environmental hazard in the society and play a key role in solving EM problems. Because of that there are huge number of ecology concerned initiatives being kick started by organizations and environmentalists to find solutions to the EM issues. The paper has identified green HR practices in the key areas of the Ability-Motivation-Opportunity, AMO

model-like skill enhancement, motivation and role of employees in every green initiative at the workplace.

Cherain & Jacob (2012) The green initiative of firms is important to boost the morale of the work force and offers numerous advantages to both the company and the workforce.

Environment Management system has various advantages by introduction of green initiatives and they are:

- Increase in employee retention rate
- Increase in public image
- Better employee engagement
- Improvement in productivity and sustainability
- Environmental impact of the company is lessened
- Serves as a differential advantage to the company

Employees will be empowered to follow certain procedures of environmental rules as a outcome of HR policies result in best ways for finding ways in reduction of waste and contributes for lean approach. This contributes in offering value addition of greener products and services to the customers from waste identification, its reduction and elimination. This will definitely result in improving consumer satisfaction and finally achieving customer delight.

Dao, Langella et. al., (2011) The combination of workforce, all the entities of the supply chain, and information systems resources help the firms to develop sustainability capabilities, in turn result in delivering values to the stakeholders and provide competitive edge in the market place.

Jackson & Seo (2010) Corporate decisions

with respect to sustainable workplace is clear in n vision, mission and policy statements, “environmental” job roles, maintaining good relation with allied partners of the eco-groups, sales - marketing strategies, knowledge investment, new accounting methods, product development, design stages and the manufacturing procedures.

Jabbour, (2011) Studies describe HR practices are not tuned to sustainable management system. The crux of the employees involvement is emphasized in the previous studies mainly focused on enhancing HR policies and procedures but least importance is given to sustainability management at the work place. In this study, the important elements of teams, culture, and learning is having high degree of positive correlation with environment practices followed in the work place, specifically by addressing ecological issues in the organizational climate.

The main things practiced are, the first one is process of converting the standard human resource practices to transform in to a environmental management control. The second way is how the involvement of ecological problems in traditional manner result in superior performance of team selection and team work, organizational climate, and growth curve result in declining trend.

On the other hand, firms are aligning HR components to all the elements of sustainable management to result in a very successful organizational sustainable development.

Chinchwad ,P et.al., (2011) studied that green HRM and sustainability can be achieved very well through Evaluate, Eliminate, Illuminate

and Implement strategies.

Krithika et. al., (2019) explained green HRM practices is a essential thing for corporate social responsibility, reducing the scarce resources usage and reducing the overall operational cost. Green HRM practices retains effective employee thus reducing employee turnover ratio and also reduces the replacement cost. Sustainable wealth of the organization and employee empowerment can be achieved.

Arulrajah., Opatha & Nawaratne (2016) explained green HR practices will limit the ill effects and improves the positive factors of the organization performance. To improve organizational performance, soft aspect like employee involvement is the main factor. To implement, follow and devise sustainably inclined innovative behavior of workforce with greening of all tasks they encounter are very critical for green HR practices implementation.

Chowdhury. et. al., (2017) stated that green HR strategies helps in maintaining environment management because it concentrates on effective utilization of important resources, waste reduction. That is the reason why there is a high degree of association exists among social responsibility, green HR practices and Environmental Management. Social Responsibility initiative not found in the garments industry of Bangladesh though firms are trying to improve their performance in CSR since it raises the brand value of the company. GHRM is the method by which organizational strategies aids in initiating Social Responsibility of the organizations without foregoing profit. So, green HR

practices are environment friendly practices eliminates the pollution, maximum utilization of natural resources with revenue maximization by eliminating scrap and unnecessary time .

FINDINGS:

All the primary and secondary sectors of the economy which focuses on extraction of raw materials and manufacturing of finished goods can follow green HR strategies for environmental management and profit maximization. Green enterprises yield a lot of benefit in the form of cost reduction, differential advantage and turns to be a CSR (corporate social responsibility) initiative in the future.

SUGGESTIONS:

All the enterprises need to follow Green HRM practices at every level starting at strategic level to the operational level. At the strategic level top-executives need to frame environmental policies and procedures, resources suitable for implementing it at every process of the organisational functioning system. Employees need to be trained for green HRM practices understanding and its beneficiaries. It will result in long term positive impact on growth of the firm and its operational profitability.

CONCLUSION:

Green HRM practice occupies a very important role in running of the business, so enterprises should adopt greening the processes for environmental sustainability and organisational development. All the industries contribute a major part in environmental management so employees crucial part effects customers and other stake holders, so successful implementation of

sustainable management in the form of effective resources utilization is possible greatly and contributes economic growth to various industries.

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RESEARCH

Green marketing as a sustainable strategy: Study on understanding factors influencing consumer buying behavior on green products

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ABSTRACT

Across the globe it has been noticed that there is a rise in focus by both consumers and companies on sustainable consumption and environmental issues. This focus is not confined to developed nations alone but also in developing and emerging economies. We are in buyer's market where a customer has tremendous options for every product, he/she needs in daily life. Due to reasons like consumer's becoming more demanding while buying a product, consumer's strong knowledge of environmental protection supported by environmental laws, it has become a challenge for companies to sustain. Also, due to environmental issues, and growing environmental protection awareness programs, it becomes vital for the organizations to understand the need to provide green products. This research is an attempt to understand the internal factors (attitude, perception, green mindset, lifestyle, etc.) as well as external factors (CSR image of companies, advertising, environmental concern, competition, etc.) having impact on purchase decision making. This research aims to use convenient sampling with a sample size over 200, and use of SPSS for the analysis of data in order to understand the impact of external and internal factors on consumers to go green along with the aim to understand consumers understanding of 'green products' in the context of products having less harmful effect, energy saving, reusable, recyclable, having no negative impact on health as green products or any other reasons which they consider as green. This knowledge of consumers on green and preference for green products will help companies design green products and devise marketing strategies to promote products, without affecting environment and consumers and thus sustain and grow profitably.

KEYWORDS: Green Consumers, Green Preference, Green Product, Factors, Green Marketing.

INTRODUCTION:

In today's competitive world with lot of importance on providing eco-friendly products and laws supporting environmental protection, many companies are working hard in order to offer green products to society. Offering green products which are less in energy and water consumption, non-hazardous or less in harmful emissions, reusable/recyclable, safe and healthy, and or

for the long-term well-being of the customers and society have become a source of competitive advantage. Several companies are now marketing their products to be 'safe', 'eco-friendly', and 'less in conserving energy'. Few companies like Samsung (refrigerator) and Godrej consumer products are using Star Label to communicate their products on low in energy consumption (eco-friendly) and save on electricity bills as well. NDTV, a

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major well known media promotes green values through its Greenathon campaign. Dabur India Ltd. is known for offering herbal and natural products. Titan-Tanishq, either due to laws or due to interest on preserving environment, are providing, eco-friendly paper carry bags. Idea cellular has communicated in its advertising that saving trees was its Corporate Social Responsibility. Food products have been labeled as 'Organic', jute/cloth carry bags instead of plastic carry bags have gained attention, Vision and Mission of Berger paints is based on 'green' concept, Asian paints has removed the use of lead and heavy metals from its paints. Asian paints have also reduced use of VOC (Volatile Organic Compound) to comply with international standards and has launched Ace Exterior Emulsion (White) with low on VOCs. Wipro InfoTech is India's first company to launch computer peripherals which are eco-friendly. The success of these companies makes it relevant of other business to understand the factors contributing to going green.

LITERATURE REVIEW:

1. A.N. Sarkar (2012) in his research titled Green Supply Chain Management: A Potent Tool for Sustainable Green Marketing states that Green Supply Chain is about effort to manufacture and push green products in the potential market where consumer consciousness and lifestyle in green has become very needful. Consumers preference for green products have raised as it is free of toxins, having minimum percentage or level of pollution-linked contaminants and also having minimal environmental impact. The most important attributes leading green supply chains include, asset efficiency and waste reduction, an emphasis on life cycle costing, and service innovation as well as

recycling. The Green Supply Chain Management is about green distribution, green purchasing, green materials management, green manufacturing and reverse logistics in an integrated and systemic gestalt. The different emerging concepts and operational strategies suggested in the article should be considered for implementation of green supply chain, aiming at both product branding and at corporate level.

2. According to Anirban Sarkar, (2012), in his research titled Green Marketing and Sustainable development- Challenges and Opportunities found that Green Marketing is a new concept, need for standardization, avoiding green myopia, patience and perseverance, are the challenges in marketing. These challenges can be met with an innovative marketing mix supported by golden rules of green marketing.

3. Priya Shah (2013) in her research titled Green Consumerism states that green consumerism creates balance between business profit motive and expectations of consumers within the limit of environmental protection. The study also points that consumers have become more of green conscious than brand conscious and thus a potential market for going green.

4. Vishnu Nath et al (2013), in their paper titled Consumer Adoption of Green Products: Modeling the Enablers, stated that they identified few enablers or factors from extensive review of literature. These factors were further shared with a panel of 16 experts: eight academicians, four researchers, and four environmental NGO representatives to discuss on their relationship. These enablers were: Environmental awareness of the consumer, Green advertisements, Peer

groups, Eco labelling, Cultural values, Tax credits to the consumer, Legal enforcement, High or increasing level of education, Perceived consumer effectiveness, and Environmental attitudes of the consumer. The results said that increased level of education and awareness among people/consumers was very important for any organization to go green. These knowledgeable consumers will spread and influence the rest on green value. Green advertisements are important in communicating to various stakeholders about a firm's eco-friendly business practices like eco-labeling, energy efficiency and to create awareness on green products leading to green purchases. Legal enforcement will make it mandatory for buying green, supported by lucrative tax benefit. Peer groups and cultural values are interrelated, tax advantage on buying green acts as incentive to the customer, perceived effectiveness and attitudes act as predictors of environmental behavior.

5. Eric S.W. Chan (2013), in his research titled Gap analysis of green hotel marketing tries to understand the gap between the managers knowledge on green and their understanding of their customer's expectation and perception of going green. In the attempt to understand the gap, it was found that customers were willing to pay premium for eco-facilities, or even if a part of what they pay go to green activities. The research suggests that hotel managers should understand the expectation and perception of their customers through research. The study also brought to light female managers and female customers were more positive on green hotel products and services. This category can serve as pioneers in developing as well as in accepting the green products and services of hotels. The study suggests that adopting to internationally

recognized eco-labels, training the employees in the context of green, collaborating with other hotels and consultancy in going green will help build brand image and boost business.

6. Geertje Schuitema and Judith M. De Groot (2014), in their research titled Green consumerism: The influence of product attribute and values on purchase intentions, stated that the labels with carbon footprint increased sales on low priced products, green product like shampoos were preferred by consumers, while the green products with high price and from an unknown brand was not preferred. Green consumerism is a social dilemma as the relationship between societal (or environmental) and interests are at odds. The study suggested that if an organization aims to promote green consumerism than consumerism in general, then it becomes very important for the marketing strategies to activate biospherics value, and communicate greener alternative to fulfill one's egoistic motives.

7. S. K. Dubey and Rajeev Kumar Malik, (2014), in their paper titled Attitude of students towards green marketing: A case study of Banaras Hindu University, found that overall attitude of the respondents green marketing practices was positive, both men and women almost had same positive attitude towards green marketing practices. Since the youth had more positive attitude towards green practices, it is very important as a major population were youth who constitute the future. It was concluded that future in India with green marketing practices was positive.

8. Vishal Kumar Laheri, Hamendra Dangi and Anupama Vohra (2014) in their research titled Green marketing Green Marketing:

Development of Construct and Its Evolution suggested a model showing the awareness of green products depending on education level, its cultural values and the environmental concern. The model developed suggested that awareness depends upon the level of education, its cultural values and their concern for the environment. The study identified enablers (advertisement, eco certification, reference group, and tax benefits), and buying behavior of consumers towards green products. The model suggested that consumers found the price of green products to be higher than the non-green products acting as a barrier for its sale. The consumers also said that if they were given tax benefits by government on buying green products, they would switch to green products.

9. Utkal Khandelwal and Seemant Kumar Yadav, (2014) in their research on Green Marketing and Sustainable Development: Marketing Professionals Attitude Towards Green Marketing, have investigated on marketing professionals attitude towards green marketing and the dimensions underlying the attitudes. They have suggested that green marketing is a way to differentiate its firm and increase its productivity. Their research suggested that the factors like economical, Differentiation, Attention and execution has impact on implementing green marketing.

10. Dr. Shruti P Maheshwari, (2014), in her research titled Awareness of green marketing and its influence on buying behavior of consumers: Special reference to Madhya Pradesh, India , expressed that 60% of the respondents felt slightly difficult to identify environmental products (green products) and hence they were unaware. This research

suggested that marketing efforts are required to fill the gap between awareness of consumers of green products and marketing efforts undertaken by green marketers .

11. Kanwaljit Kaur (2015) in his research titled Green Marketing: A way towards sustainable development says that it is right time to adopt green in marketing mix by all the companies even if going green can be expensive, as it is worth in the long run since consumers are getting more aware of importance of buying green products and its long term benefits. The author suggests that even if marketers knows that customers are unwilling to pay premium, as marketers, they must enhance the product performance and, make consumers loyal and make customers accept to pay premium. The author also mentioned that green marketing should be pursued with much greater vigor with social and environmental cause attached. This would also give rise to preservation of environment and help in sustainable development. Going green would benefit an organisation as first mover advantage, help achieve competitive advantage, value creation and develop brand image. The study also brings to light various examples of companies both Indian and International, for example; SBI has used eco and power friendly equipments in its 10,000 ATMs resulting in saving of power and carbon emission, Nerolac has removed lead in its paints which was detrimental to human's central nervous system, Indian Oil has invested 7000 Cr in R&D for the formulation of biodegradable lubes, Wipro has successfully launched computer peripherals which are environment friendly, Philips launched power/ energy saving CFL bulbs, HCLs eco safe focuses on going green right from manufacturing till its consumption and recycling post usage, ITC

has introduced various eco friendly initiatives like watershed development, Social and farm forestry, and solid waste management

12. Prashant Kumar (2015), in his research titled Green marketing innovations in small Indian firms revealed that the innovations in green marketing has not considered marketing mix but the innovations made by the small firms were to sustain and achieve competitive advantage. The green marketing innovations can be grouped under six categories: Marketing compliance (environmental regulations), marketing strategic partnership, marketing environmental commitment, marketing green team, marketing benchmarking, and marketing ethical behaviour. These six categories helps managers to develop organisation wide market innovation as well as achieve competitive advantage.

13. Dr. Bilal Mohammad Eneizan et al (2016) in their research titled Prior research on green marketing and green marketing strategy: Critical analysis, suggested that the green marketing strategies like green price, green promotion, green physical evidence, green product, green distribution, green people and green process yield positive performance as outcome. The study also suggests to measure financial performance due to the green strategies as well government policy to impact on firm's performance. The study also says that firm's resources are extremely important as it determines resources and capabilities of a firm to successfully adopt green strategies. The study also opens up few challenges like green spinning, green selling, green harvesting, compliance marketing and entrepreneur marketing as few challenges or as hurdles to implementation of green

marketing strategies. In spite of these challenges, firms can still go green with the adoption of 7Ps to bring ecological balance, face competition, and to justify legal requirements.

14. Ainsworth Anthony Bailey, Aditya Mishra and Mojisola F. Tihamiyu, (2016), in their study titled GREEN consumption values and Indian consumers' response to marketing communications have tried to understand Indian consumers concern towards environment through their consumption of green of green products or purchase behaviour and their response to green marketing communication. The outcome of the study resulted positive as consumers trusted the brands communicating green in its products and hence positive attitude and perceptions towards such brands and its offerings. The study concluded on note that green advertising not just enhances awareness of green but also benefits companies image. Through advertisements, or green marketing communication respondents developed positive attitude impacting on green purchase behaviour.

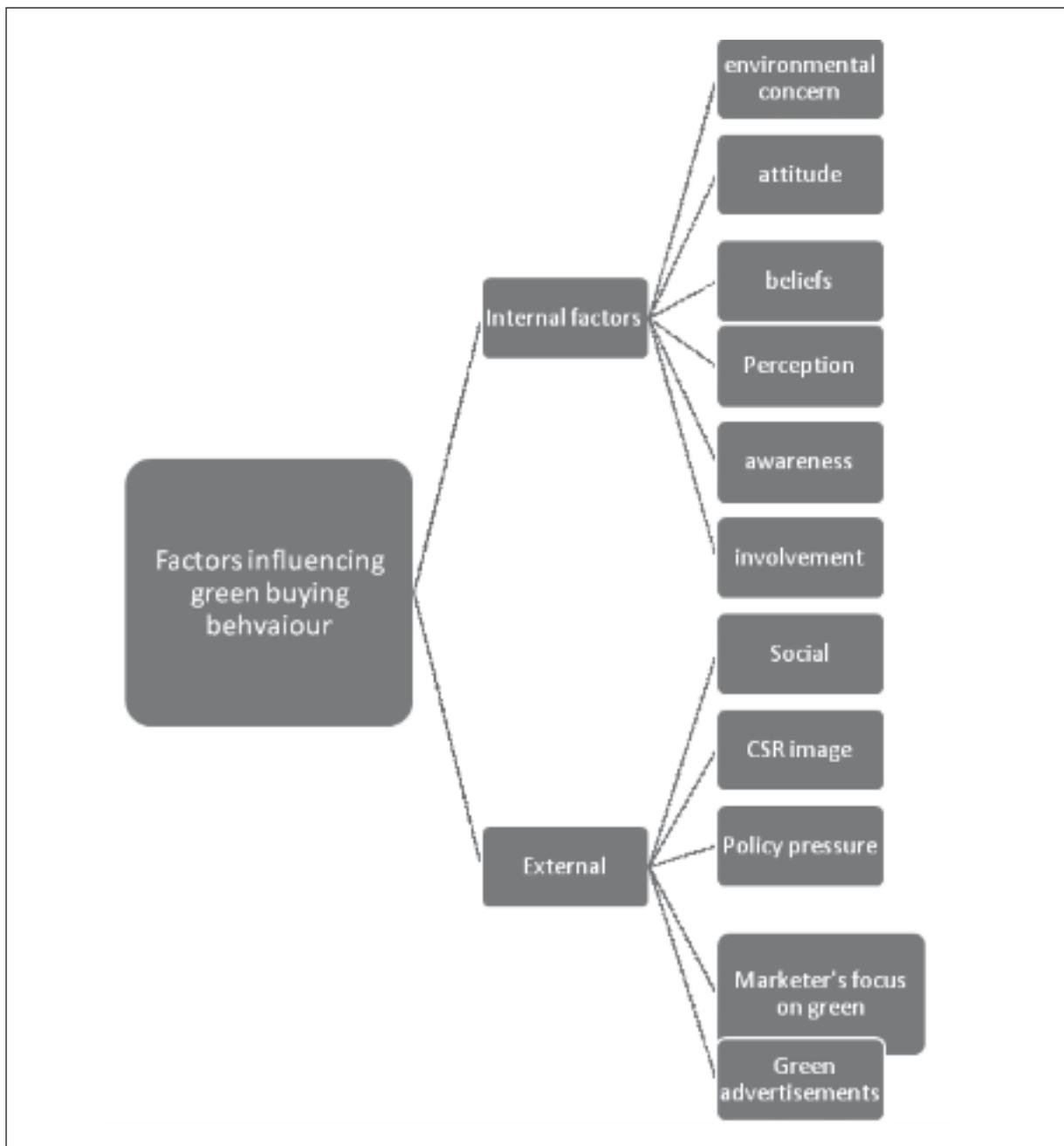
15. Sapna A. Narula and Anupriya Desore, (2016), in their research on Framing green consumer behaviour research: opportunities and challenges suggested that there is a need for the companies to collaborate with competitors on the green products while it is challenging to attract bigger size customers who in spite of being aware of green products may not be willing to pay premium to buy the green products. Trust, certification and cost may be barriers for the purchase of green products which can be overcome by companies with effective positioning strategies and communication of the same.

16. Yeonshin Kim et al (2016), in their research titled Closing the green gap: the impact of environmental commitment and advertising believability stated that they wanted to know the discrepancy in advertisements on green made and purchase gap. For this they developed a model with variables like environmental commitment, and message believability. Results found that when combined Environmental commitment and message believability, the relationship strengthened between message acceptance and purchase intention. The study also said that intrinsically motivated consumers prefer green products than extrinsically motivated consumers as they find it meaningless and buy just to impress others. Advertisements impacted more on intrinsically motivated consumers while few extrinsically motivated consumers as they believed it enhances social status.

17. Kyutae Park and Kyootai Lee (2016), in their research titled Is green product purchasing an innovative or conspicuous behavior? The experiment was conducted in South Korean among young college students considered the relationship between personality trait and product consumption if having any impact on green purchase

behavior resulted in understanding that consumer innovativeness alone did not influence purchasing behaviors across the two products in experiment conducted. The experiment took hybrid car and mineral water as green product and focused on understanding the preference of customers towards these products. The study revealed that even if hybrid cars were new, consumers did not perceive it to be innovative/novel. Also, innate innovativeness as a personality trait is an insufficient driver of green product purchase. The study also mentioned that the respondents with high levels of public self-consciousness, the green product purchase decreased. While the respondents with low levels of public self-consciousness, the decision to purchase increased as consumer innovativeness rose.

18. Menno D. T. De Jong , Karen M. Harkink and Susanne Barth (2018), in their research titled Making Green Stuff? Effects of corporate green washing on consumers stated that green washing has no competitive advantage (purchase interest), poses a major perceived integrity threat and has only limited benefits (perceived environmental performance). Green washing does not affect consumer purchase intention.



Factors:

Internal: These are the factors which are due to the reasons like environmental concern, awareness, attitude, perception, involvement and beliefs.

External: These are the factors from awareness brought due to exposure to green

advertisements, due to marketer's competition saying superior and eco-friendly/organic, knowledge of policies, image of an organization towards environmental concern and protection of environment that influenced them for environmentally friendly consumption.

OBJECTIVES:

- To know if consumers are aware of green products
- To understand consumer's attitude towards green products and its relationship with green buying
- To study the perception of consumers green products and its consumption
- To observe if consumer's lifestyle has relationship with green consumption
- To understand if green advertisements have impact on green consumption
- To know if marketer's claim to be superior due to going green has impact on green consumption
- To observe if knowledge of environmental impact and concern has influence on buying behavior

RESEARCH METHODOLOGY:

Sampling: Convenient

Data Collection:

Primary: To understand the factors influencing consumer's questionnaire was framed with questions covering their knowledge on external factors as well as internal factors.

Secondary: ROL's have helped to frame the questionnaire too.

Sample Size: 365

HYPOTHESES:

Internal factors

H1: Consumers are not aware of green products

H2: Consumers attitude towards green products has no impact on buying green

H3: Perception and green products do not have any significant relationship

H4: Consumer;s lifestyle has no relationship with green consumption

External Factors:

H5: Social recognition on going green has no relationship with green consumption.

H6: Companies with good CSR image never influences a consumer to prefer its product

H7: Consumer's knowledge on government policies to encourage green has no significant relationship with consumers adopting to green consumption.

H8: Green advertisements has no impact on consumer preference to green product

ANALYSIS:

Statement 1: To understand the awareness of Green Products

H0: Consumers are not aware of green products

H1: Consumers are aware of green products

Table 1: ANOVA for Hypothesis 1

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
I am aware that it is environmentally responsible to buy green products.	Between Groups	26.052	4	6.513	3.054	.017
	Within Groups	767.811	360	2.133		
	Total	793.863	364			
I think there should be more retail stores selling green products.	Between Groups	34.066	4	8.517	4.108	.003
	Within Groups	746.301	360	2.073		
	Total	780.367	364			
I think the environment is getting worse.	Between Groups	27.150	4	6.788	4.133	.003
	Within Groups	591.250	360	1.642		
	Total	618.400	364			
I think it is important to protect the environment and prevent environment damage.	Between Groups	13.521	4	3.380	2.793	.026
	Within Groups	435.728	360	1.210		
	Total	449.249	364			
I prefer using green products over conventional products and their product qualities are similar.	Between Groups	40.132	4	10.033	6.695	.000
	Within Groups	539.457	360	1.498		
	Total	579.589	364			
I think green products can prevent environmental damage.	Between Groups	24.399	4	6.100	3.227	.013
	Within Groups	680.395	360	1.890		
	Total	704.795	364			

At 95% Confidence Level, and 5 % Standard error rate, We can observe that Average Sig value is 0.0103, As the Significance value is < 0.05 Critical value, we accept the Alternative Hypothesis and reject the Null Hypothesis.

Consumers are aware of green products is Accepted.

Statement 2: Understanding relationship between Consumers attitude and green products.

H0: Consumers attitude towards green products has no impact on buying green
H2: Consumers attitude towards green products has significant impact on buying green

Table 2: ANOVA for Hypothesis 2

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
I am aware that it is environmentally responsible to buy green products.	Between Groups	26.052	4	6.513	3.054	.017
	Within Groups	767.811	360	2.133		
	Total	793.863	364			
I think there should be more retail stores selling green products.	Between Groups	34.066	4	8.517	4.108	.003
	Within Groups	746.301	360	2.073		
	Total	780.367	364			
I think the environment is getting worse.	Between Groups	27.150	4	6.788	4.133	.003
	Within Groups	591.250	360	1.642		
	Total	618.400	364			
I think it is important to protect the environment and prevent environment damage.	Between Groups	13.521	4	3.380	2.793	.026
	Within Groups	435.728	360	1.210		
	Total	449.249	364			
I prefer using green products over conventional products and their product qualities are similar.	Between Groups	40.132	4	10.033	6.695	.000
	Within Groups	539.457	360	1.498		
	Total	579.589	364			
I think green products can prevent environmental damage.	Between Groups	24.399	4	6.100	3.227	.013
	Within Groups	680.395	360	1.890		
	Total	704.795	364			

At 95% Confidence Level, and 5 % Standard error rate, We can observe that Average Sig value is 0.008 As the Significance value is < 0.05 Critical value, we accept the Alternative Hypothesis and reject the Null Hypothesis.

Consumers attitude towards green products has significant impact on buying green.

Statement 3: Understanding relationship between Perception and Green Products.

H0: There exists no significant relationship between Perception and green products.

H3: There exists significant relationship between Perception and green products.

Table 3: ANOVA for Hypothesis 3

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Green products are widely accessible and available in the market	Between Groups	10.001	4	2.500	2.466	.045
	Within Groups	364.974	360	1.014		
	Total	374.975	364			
I find green products relevant to my lifestyle	Between Groups	27.922	4	6.980	5.976	.000
	Within Groups	420.544	360	1.168		
	Total	448.466	364			
I think there should be more retail stores selling green products.	Between Groups	39.234	4	9.808	4.764	.001
	Within Groups	741.133	360	2.059		
	Total	780.367	364			
I think the environment is getting worse.	Between Groups	19.614	4	4.903	2.948	.020
	Within Groups	598.786	360	1.663		
	Total	618.400	364			
I think it is important to protect the environment and prevent environment damage.	Between Groups	27.176	4	6.794	5.795	.000
	Within Groups	422.073	360	1.172		
	Total	449.249	364			
I prefer using green products over conventional products and their product qualities are similar.	Between Groups	43.420	4	10.855	7.288	.000
	Within Groups	536.169	360	1.489		
	Total	579.589	364			
I think green products can prevent environmental damage	Between Groups	78.843	4	19.711	11.336	.000
	Within Groups	625.951	360	1.739		
	Total	704.795	364			
I am ready to pay premium price for environmentally safe products.	Between Groups	8.813	4	2.203	1.592	.176
	Within Groups	498.376	360	1.384		
	Total	507.189	364			
I find the price of green products are economical and good value for money	Between Groups	18.210	4	4.553	3.797	.005
	Within Groups	431.664	360	1.199		
	Total	449.874	364			
Using green products improves the way other people perceive me	Between Groups	28.707	4	7.177	5.204	.000
	Within Groups	496.499	360	1.379		
	Total	525.205	364			
Going green, makes me be accepted in a social set up	Between Groups	20.191	4	5.048	4.064	.003
	Within Groups	447.140	360	1.242		
	Total	467.332	364			
Green consumption is about self-satisfaction	Between Groups	40.493	4	10.123	5.834	.000
	Within Groups	624.723	360	1.735		
	Total	665.216	364			

Green consumption makes me feel associated to social group	Between Groups	15.988	4	3.997	2.811	.025
	Within Groups	511.804	360	1.422		
	Total	527.792	364			
Buying green is a feel a good factor	Between Groups	55.538	4	13.884	7.511	.000
	Within Groups	665.460	360	1.848		
	Total	720.997	364			

At 95% Confidence Level, and 5 % Standard error rate, We can observe that Average Sig value is 0.019 As the Significance value is < 0.05 Critical value, we accept the Alternative Hypothesis and reject the Null Hypothesis.

There exists significant relationship between Perception and green products.

Statement 4: Understanding relationship between Consumers lifestyle and green consumption.

H0: There exists no significant relationship between Consumers lifestyle and green consumption.

H4: There exists significant relationship between Consumers lifestyle and green consumption.

Table 4: ANOVA for Hypothesis 4

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Green products are widely accessible and available in the market	Between Groups	12.404	4	3.101	3.079	.016
	Within Groups	362.571	360	1.007		
	Total	374.975	364			
I find green products relevant to my lifestyle	Between Groups	8.265	4	2.066	1.690	.152
	Within Groups	440.201	360	1.223		
	Total	448.466	364			
I think there should be more retail stores selling green products.	Between Groups	35.195	4	8.799	4.251	.002
	Within Groups	745.172	360	2.070		
	Total	780.367	364			
I think the environment is getting worse.	Between Groups	6.503	4	1.626	.956	.431
	Within Groups	611.897	360	1.700		
	Total	618.400	364			
I think it is important to protect the environment and prevent environment damage.	Between Groups	7.691	4	1.923	1.568	.182
	Within Groups	441.558	360	1.227		
	Total	449.249	364			
I prefer using green products over conventional products and their product qualities are similar.	Between Groups	61.787	4	15.447	10.739	.000
	Within Groups	517.802	360	1.438		
	Total	579.589	364			
I think green products can prevent environmental damage.	Between Groups	56.837	4	14.209	7.895	.000
	Within Groups	647.957	360	1.800		
	Total	704.795	364			

I am ready to pay premium price for environmentally safe products.	Between Groups	9.353	4	2.338	1.691	.151
	Within Groups	497.836	360	1.383		
	Total	507.189	364			
I find the price of green products are economical and good value for money	Between Groups	11.024	4	2.756	2.261	.062
	Within Groups	438.849	360	1.219		
	Total	449.874	364			
Using green products improves the way other people perceive me	Between Groups	34.093	4	8.523	6.248	.000
	Within Groups	491.113	360	1.364		
	Total	525.205	364			
Going green, makes me be accepted in a social set up	Between Groups	13.267	4	3.317	2.630	.034
	Within Groups	454.065	360	1.261		
	Total	467.332	364			
Green consumption makes me feel associated to social group	Between Groups	29.149	4	7.287	5.261	.000
	Within Groups	498.643	360	1.385		
	Total	527.792	364			
Buying green is a feel a good factor	Between Groups	84.959	4	21.240	12.022	.000
	Within Groups	636.038	360	1.767		
	Total	720.997	364			
Green products that I buy are environmentally superior and have low environmental impact	Between Groups	52.438	4	13.110	9.376	.000
	Within Groups	503.353	360	1.398		
	Total	555.792	364			
Green advertisements emphasizes on environmental friendliness of a product	Between Groups	23.828	4	5.957	3.621	.007
	Within Groups	592.161	360	1.645		
	Total	615.989	364			

At 95% Confidence Level, and 5 % Standard error rate, We can observe that Average Sig value is 0.0648 As the Significance value is < 0.05 Critical value, we accept the Alternative Hypothesis and reject the Null Hypothesis.

There exists significant relationship between Consumers lifestyle and green consumption.

Statement 5: Understanding relationship between “social recognition on going green” and green consumption.

H0: There exists no significant relationship between “social recognition on going green” and green consumption.

H5: There exists significant relationship between “social recognition on going green” and green consumption.

Table 5: ANOVA for Hypothesis 5

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Green products are widely accessible and available in the market	Between Groups	6.274	4	1.569	1.532	.192
	Within Groups	368.701	360	1.024		
	Total	374.975	364			
Consuming green products makes me feel different from everyone else	Between Groups	14.450	4	3.613	2.552	.039
	Within Groups	509.687	360	1.416		
	Total	524.137	364			
I find green products relevant to my lifestyle	Between Groups	26.906	4	6.727	5.744	.000
	Within Groups	421.560	360	1.171		
	Total	448.466	364			
I often see/ read/hear advertisements of green products on media.	Between Groups	8.861	4	2.215	1.802	.128
	Within Groups	442.443	360	1.229		
	Total	451.304	364			
I am very likely to buy green products in the future.	Between Groups	45.856	4	11.464	6.214	.000
	Within Groups	664.155	360	1.845		
	Total	710.011	364			
I will advise other to buy and use green products	Between Groups	50.485	4	12.621	7.314	.000
	Within Groups	621.203	360	1.726		
	Total	671.688	364			
No of times green purchases done in the last 6 months?	Between Groups	3.972	4	.993	2.143	.075
	Within Groups	166.811	360	.463		
	Total	170.784	364			
Using green products improves the way other people perceive me	Between Groups	33.773	4	8.443	6.185	.000
	Within Groups	491.433	360	1.365		
	Total	525.205	364			
Going green, makes me be accepted in a social set up	Between Groups	24.324	4	6.081	4.941	.001
	Within Groups	443.008	360	1.231		
	Total	467.332	364			
Green consumption is about self-satisfaction	Between Groups	43.742	4	10.936	6.335	.000
	Within Groups	621.474	360	1.726		
	Total	665.216	364			
Green consumption makes me feel associated to social group	Between Groups	31.186	4	7.797	5.652	.000
	Within Groups	496.605	360	1.379		
	Total	527.792	364			
Buying green is a feel a good	Between Groups	86.981	4	21.745	12.347	.000
Companies that have adopted to having less impact on environment influences me to buy their products/offering	Between Groups	50.429	4	12.607	8.596	.000
	Within Groups	528.020	360	1.467		
	Total	578.449	364			
Will buy from an organisation caring for environment	Between Groups	80.535	4	20.134	12.465	.000
	Within Groups	581.476	360	1.615		
	Total	662.011	364			

At 95% Confidence Level, and 5 % Standard error rate, We can observe that Average Sig value is 0.031. As the Significance value is < 0.05 Critical value, we accept the Alternative Hypothesis and reject the Null Hypothesis.

There exists significant relationship between “social recognition on going green” and green consumption.

Statement 6: Understanding impact of CSR Image of Company on Consumers preferences on buying its product.

H0 :There exists no significant impact of CSR Image of Company on Consumers preferences on Buying its product.

H6: There exists significant impact of CSR Image of Company on Consumers preferences on buying its product.

Table 6: ANOVA for Hypothesis 6

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Green products are widely accessible and available in the market	Between Groups	7.277	4	1.819	1.781	.132
	Within Groups	367.699	360	1.021		
	Total	374.975	364			
Consuming green products makes me feel different from everyone else	Between Groups	10.131	4	2.533	1.774	.133
	Within Groups	514.006	360	1.428		
	Total	524.137	364			
I find green products relevant to my lifestyle	Between Groups	14.347	4	3.587	2.974	.019
	Within Groups	434.119	360	1.206		
	Total	448.466	364			
I often see/ read/hear advertisements of green products on media.	Between Groups	8.136	4	2.034	1.652	.161
	Within Groups	443.168	360	1.231		
	Total	451.304	364			
I am very likely to buy green products in the future.	Between Groups	10.171	4	2.543	1.308	.267
	Within Groups	699.840	360	1.944		
	Total	710.011	364			
I will advise other to buy and use green products	Between Groups	13.933	4	3.483	1.906	.109
	Within Groups	657.755	360	1.827		
	Total	671.688	364			
No of times green purchases done in the last 6 months?	Between Groups	1.149	4	.287	.610	.656
	Within Groups	169.634	360	.471		
	Total	170.784	364			
Using green products improves the way other people perceive me	Between Groups	12.970	4	3.242	2.279	.060
	Within Groups	512.236	360	1.423		
	Total	525.205	364			
Going green, makes me be accepted in a social set up	Between Groups	19.992	4	4.998	4.022	.003
	Within Groups	447.340	360	1.243		
	Total	467.332	364			

Green consumption is about self-satisfaction	Between Groups	25.751	4	6.438	3.624	.007
	Within Groups	639.465	360	1.776		
	Total	665.216	364			
Green consumption makes me feel associated to social group	Between Groups	10.635	4	2.659	1.851	.119
	Within Groups	517.156	360	1.437		
	Total	527.792	364			
Buying green is a feel a good	Between Groups	12.191	4	3.048	1.548	.188
Companies that have adopted to having less impact on environment influences me to buy their products/offering	Between Groups	18.087	4	4.522	2.905	.022
	Within Groups	560.363	360	1.557		
	Total	578.449	364			
Will buy from an organisation caring for environment	Between Groups	26.309	4	6.577	3.725	.006
	Within Groups	635.702	360	1.766		
	Total	662.011	364			

At 95% Confidence Level, and 5 % Standard error rate, we can observe that Average Sig value is 0.1344. As the Significance value is < 0.05 Critical value, we accept the Alternative Hypothesis and reject the Null Hypothesis.

There exists significant impact of CSR Image of Company on Consumers preferences on buying its product.

Statement 7: Understanding Impact of Governments Motivation on Green consumption.

H0: Consumer's knowledge on government policies to encourage green has no significant relationship with consumers adapting to green consumption.

H7: Consumer's knowledge on government policies to encourage green has significant relationship with consumers adapting to green consumption.

Table 7: ANOVA for Hypothesis 7

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
I think the environment is getting worse.	Between Groups	6.503	4	1.626	.956	.431
	Within Groups	611.897	360	1.700		
	Total	618.400	364			
Government is encouraging awareness on environmental protection	Between Groups	12.496	4	3.124	1.888	.112
	Within Groups	595.630	360	1.655		
	Total	608.126	364			
Government has made legislation to protect environment.	Between Groups	27.009	4	6.752	4.731	.001
	Within Groups	513.747	360	1.427		
	Total	540.756	364			
Government should be supported by citizens to adopt buying green products	Between Groups	38.677	4	9.669	4.792	.001
	Within Groups	726.392	360	2.018		
	Total	765.068	364			

Governments role is important in framing legislation to protect environment	Between Groups	12.553	4	3.138	1.532	.192
	Within Groups	737.431	360	2.048		
	Total	749.984	364			
Governments legislation has made the companies to go green	Between Groups	19.515	4	4.879	3.156	.014
	Within Groups	556.584	360	1.546		
	Total	576.099	364			

At 95% Confidence Level, and 5 % Standard error rate, we can observe that Average Sig value is 0.1255. As the Significance value is > 0.05 Critical value, we accept the Null Hypothesis and reject the Alternate Hypothesis.

Consumer's knowledge on government policies to encourage green has no significant relationship with consumers

adapting to green consumption is accepted.

Statement 8: Understanding Impact of Green advertisements on consumer preference to green product.

H0: Green advertisements have no impact on consumer preference to green product.

H8: Green advertisements have significant impact on consumer preference to green product.

Table 8: ANOVA for Hypothesis 8

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Advertisements on less energy consumption influences in buying green products	Between Groups	70.985	4	17.746	13.260	.000
	Within Groups	481.793	360	1.338		
	Total	552.778	364			
Green advertisements emphasizes on environmental friendliness of a product	Between Groups	66.176	4	16.544	10.832	.000
	Within Groups	549.813	360	1.527		
	Total	615.989	364			
Frequency of green advertisements, and exposure to such advertisements enhances green consumption	Between Groups	79.099	4	19.775	13.534	.000
	Within Groups	526.013	360	1.461		
	Total	605.112	364			
Advertisements influences to go green	Between Groups	42.321	4	10.580	6.617	.000
	Within Groups	575.613	360	1.599		
	Total	617.934	364			
Company spending more on green innovation should be preferred more	Between Groups	101.531	4	25.383	16.242	.000
	Within Groups	562.606	360	1.563		
	Total	664.137	364			

At 95% Confidence Level, and 5 % Standard error rate, we can observe that Average Sig value is 0.00 As the Significance value is < 0.05 Critical value, we accept the Alternative Hypothesis and reject the Null Hypothesis.

Green advertisements have significant impact on consumer preference to green product is accepted.

FINDINGS, SUGGESTIONS AND CONCLUSION:

H1 to H6 are rejected (null hypotheses are rejected)i.e.,

- Consumers are aware of green products is accepted
- Consumers attitude towards green products has significant impact on buying green
- There exists significant relationship between Perception and green products
- There exists significant relationship between Consumers lifestyle and green consumption
- There exists significant relationship between “social recognition on going green” and green consumption
- There exists significant impact of CSR Image of Company on Consumers preferences on buying its product
- Consumer's knowledge on government policies to encourage green has no significant relationship with consumers adapting to green consumption is accepted
- Green advertisements have significant impact on consumer preference to green product is accepted

From above findings, it can be concluded that respondents are aware of green products. Consumers attitude and perception towards green is positive and hence the green consumption. Respondents feel that they will be looked high by society if they buy green. Companies making green products are well accepted and hence it can enhance their business. Consumers knowledge on government policies has got nothing to do with green consumption. It is like consumers preferring to buy green products will anyway buy it. Green advertisements should be increased so that along with existing

consumers, many others can be made to accept green products and increase consumption.

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RESEARCH

Learners' Perceptions towards Academic Growth with respect to Virtual Teaching in Classroom

S. Venkata Siva Kumar* & Mubeen Sultana*

ABSTRACT

The technological development has changed the productivity of many industries by replacing hard work with smart work with effective use of various technical platforms. As the way, there is an enormous change that occurred in classroom teaching in the past decade. The classroom boards are being replaced by virtual boards to impart the subject concepts for better understanding of learners with an open fact that “a visual understanding will make the viewers not only to understand but to store in their memory than the normal classroom teaching with chalk and board practice”. By making this as a sense, the researcher initiated a research study to identify the learners (students) perceptions towards enhancing their academic knowledge through virtual teaching methodologies. The researcher surveyed the Management Students of select colleges in Hyderabad, T.S. to distinguish their opinions towards the benefits of both traditional classroom teaching and virtual teaching through many sources like ppt, online videos, subject contests etc. in improving their subject knowledge and skills practically.

KEYWORDS: Classroom, Virtual Teaching Methods, Academic Knowledge.

1. INTRODUCTION:

The present competitive scenario in the world makes every country to focus on the development of education through amending the education system with necessary changes. In this pursuit, the Indian Educational System has challenges with many new choices, challenges and opportunities for implementing modernized, and advanced methods for attaining qualitative method in education and providing the same to every level of learners' ladder. According to the report given by NKC (National Knowledge Commission), and observed that the NKC has avowed with a commitment to build

excellence in the education system to meet the knowledge challenges of the 21st century and upsurge India's competitive advantage in knowledge areas (NKC report, 2009).

“India, being a developing nation, is facing grave problems like poverty, illiteracy, malnutrition, environment degradation, regional disparities etc. Under these circumstances, a sound system of education alone can provide solutions to these issues.”

The present running days are all influenced by the rapidly growing facets of information technology in every field of knowledge.

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Primarily, there is a massive growth in the education system with the implementation of computer-based teaching methodologies, internet sources. And the most of higher educational institutions have aware of implementing internet platforms, and virtual sources in knowledge sharing between teachers and students will make the students understand the hidden concept of every topic/concept and can easily understand its implementation practically in real-life situations.

2. REVIEW OF LITERATURE:

H. F. Thomas et al. (2005), thought about understudies' results of homeroom based and web-based course of development wellbeing. Results found that exhibition crosswise over four assessments of understudies on the web-based course, an explicit reference to application-type assessment things might be altogether higher than the execution of understudies on class-based course.

Chen et al. (2007), contemplated the viability and understudy discernments in an MBA Accounting Course in two distinct situations: blended learning and customary study hall and found that there were exchange offs in the procedures for the two conveyance strategies inspected. That is, the conventional study halls will keep on offering benefits that ostensibly can't wholly in some other way. Be that as it may, holes in process viability will keep as innovation ends up friendlier for both educator and understudies.

Magda Abdelaziz et al. (2011), found that e-learning has its very own points of interest on understudy learning results through explores on correlation investigate about contrasts between e-learning and customary study hall.

Fei Li et al. (2014), discussed the relation of classroom teaching and e-learning with the behavioural engagement of students in two types of instructive environments. From the results of their study, found that the classroom learning and engagement of active learning has no differences and also found that occurs dissimilarities into a higher level of innovative learning and critical thinking. The findings of the study reveal that there is no significant difference between the traditional classroom and e-learning to each other. But, most of the students are opining that e-learning platforms facilitate a higher level of education outputs when compared with conventional classroom teaching.

3. SCOPE, LIMITATIONS & SIGNIFICANCE OF THE STUDY:

The present study is only an initial step of this research concept. The number of students with the experience of both classroom teaching and virtual teaching is enormous in number and which cannot be generalised with a small selected sample of learners. Hence, the current research restricts to BBA & MBA students of Business Management Program. As the BBA course is for 3 years, and MBA course is for 2 years, due to unequal course durations which might be a problem at the time of analysis, the researcher took the 1st year and second-year students together as juniors and the 3rd year students as seniors in BBA, whereas the 1st years as juniors and 2nd years considered as seniors of MBA.

The current topic will yield the actual perceptions of BBA & MBA students towards their experience with both classroom and practical teaching methodologies in their regular academic life and it measures the students' (learners) perceptions towards the

role of practical teaching methodologies in improving their theoretical knowledge.

4. RESEARCH OBJECTIVES:

- To identify the learners' level of awareness on virtual teaching methodologies.
- To measure and interpret the differences in the learners' perceptions towards classroom teaching versus virtual teaching methodologies to their level of seniority and course of study.

5. HYPOTHESIS:

Null Hypothesis (H01): There is no significant relationship between the perceptions towards awareness and benefits of classroom teaching and virtual teaching methodologies to learners' year of education/seniority level.

Null Hypothesis (H02): There is no significant relationship between the perceptions towards the benefits of classroom teaching and virtual teaching methodologies to learners' course.

6. RESEARCH METHODOLOGY:

The study initiated from the need of comparing learners' perceptions towards academic enhancement based on their year of study and curriculum. We use the chi-square test for identifying the significant differences among the learners and their opinions towards classroom teaching and virtual teaching methodologies.

6.1. Research Design & Sample Size:

Here, the selection of sampling design with sampling methodology, selection of sample respondents by confining the population size has done as below:

The sample units or respondents for the study are the learners/students pursuing BBA & MBA students from select Degree & PG colleges offering both BBA & MBA courses under a single roof. Though the colleges offering both the courses in Hyderabad city are large in number, with the extensive use of quota sampling method the researcher classified the colleges into minority and non-minority cases and then selected the minority colleges providing both the courses in the same campus. With this regard, the population is found to be sufficient enough in choosing a sample of 180 (n) students (BBA & MBA) for the present study.

6.2. Statistical Tools:

To compare and interpret the differences in the perceptions of learners towards their academic enhancement with classroom and virtual teaching methodologies, the Pearson Chi-square test has been applied to explore the results to learners' level of education / seniority level (junior/senior). On the other hand, the significant differences among the perceptions of learners' w.r.t. their course (BBA/MBA) towards classroom teaching versus virtual teaching have been analysed using ANOVA One Way Classification.

7. DATA ANALYSIS:

Testing of Null Hypothesis (H01):

The analysis of primary data collected through the well-structured questionnaire is performed using Pearson Chi-square test with crosstabulation to measure the significant relationship between the learners' perceptions on awareness of classroom and virtual teaching methodologies and their benefits to their seniority level (junior/senior).

Table 1: Pearson Chi-square Test

Course/ Statement	Statement	Options	Seniority Level		Total	p-value Pearson Chi-Square	Null Hypothesis (H ₀₁)
			Junior	Senior			
Q1	Are you aware of Virtual Teaching Methods?	Yes	75	53	128	0.555	Accepted H _{01(a)}
		No	6	2	8		
		To Some Extent	24	20	44		
		Total	105	75	180		
Q2	Are you aware of differences b/w classroom and virtual teaching methods?	Yes	90	62	152	0.032	Rejected H _{01(b)}
		No	1	3	4		
		To Some Extent	14	10	24		
		Total	105	75	180		
Q3	Did you benefit through virtual teaching methods?	Yes	45	39	84	0.213	Accepted H _{01(c)}
		No	15	5	20		
		To Some Extent	45	31	76		
		Total	105	75	180		
Q4	Which makes you understand academic knowledge easier?	Classroom Teaching Methods	46	28	74	0.584	Accepted H _{01(d)}
		Virtual Teaching Methods	55	45	100		
		Others	4	2	6		
		Total	105	75	180		

Source: Questionnaire

Interpretation: From the results of the above analysis, found that the p-value of Chi-square is more significant than 0.05 (α) for three statements Q1 (0.555), Q3 (0.213), and Q4 (0.584), whereas the p-value for the statement Q2 (0.032) is found to be less than the α value (0.05). It means, there is a significant difference among the perceptions of junior and senior students (learners) towards their level of awareness and perceptions of classroom teaching and virtual teaching methods for enhancing their academic knowledge. Also, observed that the junior and

senior students of both BBA and MBA opine similarly towards their level of awareness and perceptions on classroom and virtual teaching methodologies. From the table-1, the researcher found that the majority of the learners know the benefits of virtual teaching methodologies and its differences with classroom teaching. Also, the significant number of students both from juniors and seniors as well responded positively and preferring virtual teaching methodologies for enhancing their academic knowledge.

Testing of Null Hypothesis (H₀):

ANOVA One Way classification has been applied to check the significant differences

among the learners' perceptions towards classroom teaching Vs virtual teaching methodologies.

Table 2: Anova One-way Classification

Statement		Groups	Sum of Squares	df	Mean Square	F	Sig.	Null Hypothesis (H ₀)
Q5	Virtual Teaching Methods	Between Groups	1.779	1	1.779	2.081	0.151	Accepted (H ₀)
		Within Groups	152.132	178	0.855			
		Total	153.911	179				
Q6	Classroom teaching restricts the scope of learning	Between Groups	2.861	1	2.861	3.196	0.075	Accepted (H ₀)
		Within Groups	159.339	178	0.895			
		Total	162.200	179				
Q7	Virtual Teaching as a tool for practical learning	Between Groups	1.084	1	1.084	1.524	0.219	Accepted (H ₀)
		Within Groups	126.561	178	0.711			
		Total	127.644	179				
Q8	Lecture method through PPTs/videos/online sources	Between Groups	1.188	1	1.188	1.378	0.242	Accepted (H ₀)
		Within Groups	153.362	178	0.862			
		Total	154.550	179				
Q9	Lecture method through Chalk and Talk	Between Groups	4.002	1	4.002	4.636	0.033	Rejected (H ₀)
		Within Groups	153.659	178	0.863			
		Total	157.661	179				
Q10	Implementation of Digital Platforms in Learning Process	Between Groups	8.860	1	8.860	14.644	0.000	Rejected (H ₀)
		Within Groups	107.690	178	0.605			
		Total	116.550	179				
Q11	Virtual Applications for teacher-student communication	Between Groups	0.001	1	0.001	.001	0.973	Accepted (H ₀)
		Within Groups	165.577	178	0.930			
		Total	165.578	179				
Q12	Creating a competitive environment among learners through digital platforms	Between Groups	7.115	1	7.115	8.644	0.004	Rejected (H ₀)
		Within Groups	146.529	178	0.823			
		Total	153.644	179				
Q13	Visual Presentation is better than oral presentation	Between Groups	3.810	1	3.810	5.231	0.023	Rejected (H ₀)
		Within Groups	129.635	178	0.728			
		Total	133.444	179				
Q14	Delivering subject through virtual mode	Between Groups	6.688	1	6.688	10.604	0.001	Rejected (H ₀)
		Within Groups	112.262	178	0.631			
		Total	118.950	179				

Source: Questionnaire

Interpretation: From the table-2, it was found that there is no significant difference among the BBA & MBA learners' perceptions towards classroom teaching Vs virtual teaching for the statements Q5, Q6, Q7, Q8, Q11 and there is a significant difference among the opinions of learners towards classroom teaching Vs virtual teaching

methodologies for enhancing their academic knowledge for the statements Q9, Q10, Q12, Q13, Q14.

Here, both BBA and MBA students are opining and say that the virtual teaching methods like PPTs, online videos and other internet-related platforms like google

classroom for explaining the subject concepts with more clarity will enhance their academic proficiency, and the classroom teaching will restrict them only to the classroom with theoretical knowledge alone.

CONCLUSION:

The findings drawn from the results of primary data analysis represents that both BBA and MBA students are aware of the benefits and differences in outcomes through classroom and virtual teaching methodologies. The characteristic finding of the study is that the learners from the MBA course are having more awareness on the benefits that can attain through virtual learning through technical teaching methodologies like PPTs, online-based quiz contests, internet-based platforms like Google classroom etc. when compared to BBA students. As the BBA students are in graduation stage with less knowledge on practical learning of academic knowledge through E-Learning and computer-based sources, their perceptions are differing with the learners from MBA towards classroom teaching Vs virtual teaching methodologies. Thus, the researcher suggests that the colleges offering BBA courses can create more awareness on computer-based virtual teaching methodologies for making them understand to learn the academic concepts quickly than the theoretical explanations with traditional classroom teaching using chalk and talk methods.

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RESEARCH

Impact of Interest Rates on Bankruptcies

Pooja Grover Shandilya*, Yogesh Hitashi* & Neha Doshi*

ABSTRACT

The current times are very challenging for India and the rest of the world, all have faced many bankruptcies. The current paper has made an attempt to study the Context of the reason of these bankruptcies. The base point is the Cost of Capital Theory, with capital and interest cost being one of the most essential ingredients of inputs in any business, it very vital to keep these cost at most competitive level. Two business one which has a higher interest cost cannot compete with a company which has lower interest cost. Maintaining any Country's Interest cost which is comparable to most of the economies of the world is very important. In the Current Paper we have compared the impact of lowering the interest rate on the decreasing the level of bankruptcies. The countries considered for the study are India, United States, Japan, Russia, Australia, and United Kingdom. The variable of the study being Interest Rates and number of Bankruptcies reported. The time period of comparison is 25 years from 1995 – 2019, the methodology used in the mentioned paper has been Granger Causality and Linear Regression Analysis. The lowering of Interest rates helped ease the 2008 crisis in the United States, UK and Australia. There has been a visible lag effect of lowering interest rate but definitely a positive movement in lowering the bankruptcies.

KEYWORDS: Bankruptcies, Interest Rates, NPA, Corporate Insolvency Resolution Process.

BANKRUPTCY BACKGROUND:

Year 2019 had been tumultuous where in a number of business magnates were dragged from the zenith to insolvency. Indian Economic system has been really struggling to cope up with piled up bad debt worth more than 39 billion dollars moving the system in to Lilliputian Lehman crisis.

Where Indian government have come up with the stringent bankruptcies code in 2019, making amendments to 2016 insolvency law.

This explicitly pushes handsome power in the hands of creditors. The process has come full circle for many corporations making them collapse like a house of cards.

On the flipside Banks received 7.6 Billion in the windfall earnings in a sudden clearing of backlog cases. Just to add on to the information it is IBC (Insolvency and Bankruptcy Code) that comes to slight rescue of the stressed corporations to help them by providing time bound and market linked

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resolution, even then if the resolution does not materialise, the corporation is then moved to liquidation.

As per the latest amendment made to the regulation of bankruptcy board, it has stalled a secured creditor from selling assets of company undergoing liquidation process to a person who is barred from insolvency plan. Alongside, creditor who is secured will have to share the costs incurred on liquidation and resolution within the 90 days of commencement of the process.

All these steps by government, would move the stressed corporates to action by merging, amalgamating or demerging, to ultimately come up with resolution plans to maximise value.

Moreover the new law also extends in binding all the interest bearers including the central government, to whom debts are owned.

There is no contradiction to the fact that Bankruptcies law in an economy insures the corporates who cannot repay their debts, but at the same time it has a cost attached to it reduce the level of losses. SARFESI Act which was passed in 2002 also aimed in strengthening the rights of creditors, helping banks to recover directly from the creditors.

DEFINITION OF BANKRUPTCY:

The Insolvency and Bankruptcy Code, 2015 was introduced in the Lok Sabha on 21 December 2015 by Finance Minister, Arun Jaitley. The Code was referred to a Joint Committee of Parliament on 23 December 2015, and recommended by the Committee on 28 April 2016.

The Code outlines separate insolvency

resolution processes for individuals, companies and partnership firms. The process may be initiated by either the debtor or the creditors. A maximum time limit, for completion of the insolvency resolution process, has been set for corporates and individuals. For companies, the process will have to be completed in 180 days, which may be extended by 90 days, if a majority of the creditors agree. For start-ups (other than partnership firms), small companies and other companies (with asset less than Rs. 1 crore), resolution process would be completed within 90 days of initiation of request which may be extended by 45 days.

The Insolvency and Bankruptcy Code (Amendment) Act, 2019 has increased the mandatory upper Time limit of 330 days including time spent in legal process to complete resolution process.

The following are the Parties which are involved in the Insolvency Process:

Insolvency regulator:

The Code establishes the Insolvency and Bankruptcy Board of India, to oversee the insolvency proceedings in the country and regulate the entities registered under it. The Board will have 10 members, including representatives from the Ministries of Finance and Law, and the Reserve Bank of India.

Insolvency professionals:

The insolvency process will be managed by licensed professionals. These professionals will also control the assets of the debtor during the insolvency process.

Bankruptcy and Insolvency Adjudicator:

The Code proposes two separate tribunals to

oversee the process of insolvency resolution, for individuals and companies: (i) the National Company Law Tribunal for Companies and Limited Liability Partnership firms; and (ii) the Debt Recovery Tribunal for individuals and partnerships.

(Source: <https://www.ibbi.gov.in/>)

Current Status Analysis of India :

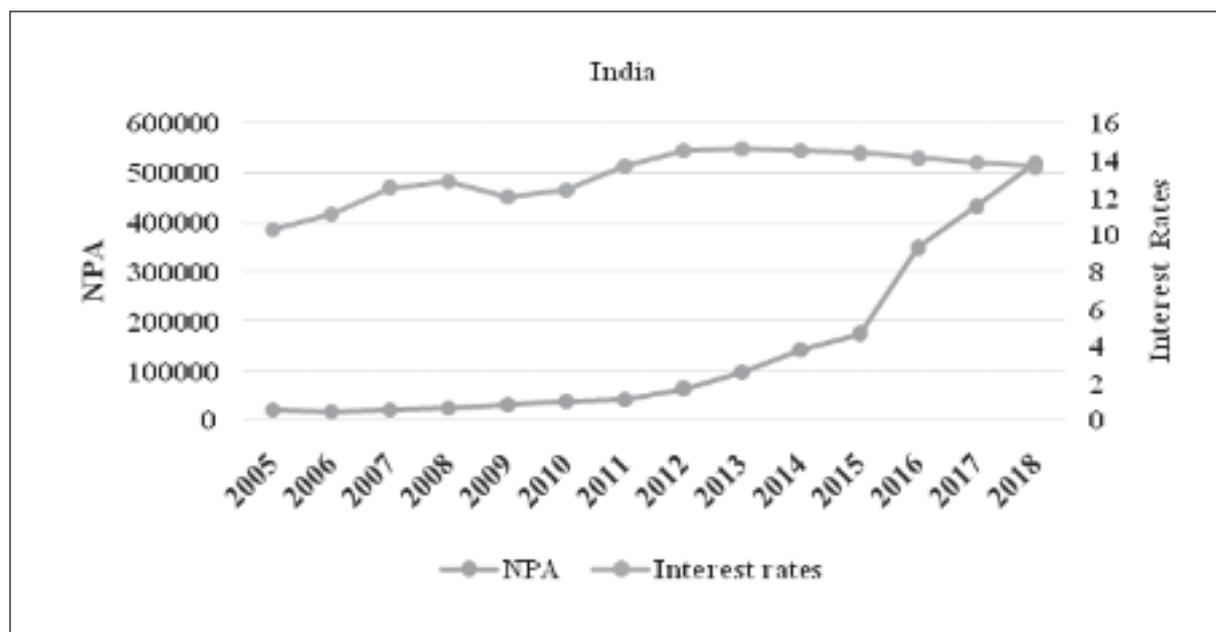
Level of NPA and the Interest rates in India

The Bank rate for most organization increased to 13.67 % in the year 2011 where in the NPA level has increased from Rs. 21754 crs in the 2005 to Rs. 1, 75, 841 crs in the year 2015. The level of NPA has now where lowered and the situation is worsening where in the in the year 2018 the level of NPA has reached a staggering level of Rs.5,20,837 crs. The interest rates for the companies bowering has

remained sticky leading to the worsening of the situation.

Table: I NPA level and Interest rates in India

Year	NPA	Interest rates
2005	21754.1681	10.25
2006	18543.4625	11.0833
2007	20280.6225	12.5000
2008	24730.01	12.8500
2009	31564.1784	12.0000
2010	39126.6224	12.3750
2011	41799.1641	13.6667
2012	65204.8739	14.5000
2013	98693.8637	14.5833
2014	142656.013	14.4750
2015	175841.06	14.3667
2016	349814.437	14.0958
2017	433120.604	13.8250
2018	520837.643	13.6200



Graph 1: The representation of interrelationship between Interest rates and Non-Performing Assets (NPA) in India

Source: <https://dbie.rbi.org.in/>

An insight into the Cost of Capital Theory would reveal that as the interest rates rise, the total cost of operations for a Company increases. This is visible from the fact that interest rates increase has led to the increase in the level of bankruptcies.

REVIEW OF LITERATURE:

Empirically it has been stated that with a rise of the interest rate, there is an increase in the default rate (Joshua Goodman and Adam Leviton). This default is highly visible in the mortgage market of the home loans, the same impact can be expanded was studied by Model for analysing credit risk in the enterprise sector". Economic Bulletin 3/01, pp. 99-106 Gjedrem, Svein (2003).

The credit risk becomes steep and with rise in in even one basis point the percent rise in the bankruptcy can be much higher. In the study what influences the number of bankruptcies? Dag Henning Jacobsen, economist in the Financial Markets Department, and The a Birkel and Kloster, assistant director in the Financial Markets, have very visibility given a higher probability of the of the any company going bankrupt with higher interest cost which finally escalates the debt of the company. Maintaining a justifiable level of interest rate which promotes progress and growth in economy is mandatory. Even credit constraint consumer are unable to make purchases (Kabir Das and Brenden J. Mason), they are forced to borrow at even higher rates finally lowering their total consumption. This also leads to higher defaults rates of consumer credits. In the stock markets also unprecedented rise of prices, Inflation people borrow to invest in the markets this leads Bankruptcy. The Default Premia and the Stock Market Author(s): Sushil B. Wadhvani that post the unprecedented rise in the prices

the stock market collapses, as bubble of the prices and increased demand eventually leads to higher cost of borrowing finally not justifying the return.

Through all the above it is can be stated that maintaining a competitive rate of interest rate in a society is very important.

RESEARCH METHODOLOGY:

The current study has a focus on the level of bankruptcies which have been reported in India which have been reported. Comparing the Global context an attempt has been made to study the variable which would help bring down the level of bankruptcies.

Interest rate is one of major parameter which has been used world over by major economies in their times of financial turmoil. A change in the interest rates has vastly helped these economies overcome the critical situation.

This study focuses on the 25 year time horizon 1995- 2019 and the Challenging time periods of these Economies to study the interrelationship between the Bankruptcies and Interest rate. The study has used various statistical tools to further reinforce whether lowering the interest rates did lead to lowering the Bankruptcies, even post a lag effect.

The Under said study focuses on the following Economies:

1. United States
2. Japan
3. Canada
4. United Kingdom
5. Australia

The variables of the Study:

- Interest Rate
- No. of Bankruptcies

- The time period of the comparison 25 years : 1995-2019 (Depending upon the data availability and challenging times faced by the economy)

Statistical Tools used in the Study

Regression Analysis:

In regression analysis, following concepts are majorly taken into consideration:

R squared: This metric gives us the amount of variation explained by the independent variables. Higher the R squared, better the model.

Coefficient of Interest rates: This metric gives us the amount of change in bankruptcies with respect to 1% change in the interest rates.

P-value of ANOVA table: The ANOVA table is used to understand where the bankruptcies are independent of the interest rates. P-value less than 5% indicates that the bankruptcies are independent and vice versa.

Granger Causality Test:

The Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another.

Causality is closely related to the idea of cause-and-effect, although it isn't exactly the same. A variable X is causal to variable Y if X is the cause of Y or Y is the cause of X.

The null hypothesis for the test is that lagged x-values do not explain the variation in y. In other words, it assumes that x(t) doesn't Granger-cause y(t).

1. United States:

When studying the variables of United States the data from 1999- 2019 (Table 1.1) shows that there was a rise in the level of bankruptcies increased from a number of 22867 in 2007 to level of 32884 in the year 2008. Which was a 45% increase. The highest level being 59997 this was 1.67 times higher than what the economy faced in 2007. During this time frame there was a corrective measure taken by the Government to lower the interest rate from 5% to 2% in the year 2008. To further get in a proactive change the interest rates were lowered to close to 0 % in the year 2009 and remained at that level up to 2015. The quantitative easing helped the American economy to stabilize the level of bankruptcies.

Table 1.1 Level of Interest Rate and Bankruptcy in United States

Year	Interest Rates	Bankruptcy	Year	Interest Rates	Bankruptcy
1999	7.994	41013.5	2010	3.250	59978.75
2000	9.233	36888	2011	3.250	52505.75
2001	6.992	36772.25	2012	3.250	45160.5
2002	4.675	39559	2013	3.250	37145
2003	4.123	37363.25	2014	3.250	30828.75
2004	4.340	35594.5	2015	3.260	25786
2005	6.189	33224.25	2016	3.512	24804
2006	7.958	33046.75	2017	4.097	23564.25
2007	8.050	22867.25	2018	4.904	22652.75
2008	5.088	32884	2019	4.75	22445.5
2009	3.250	51591.25			

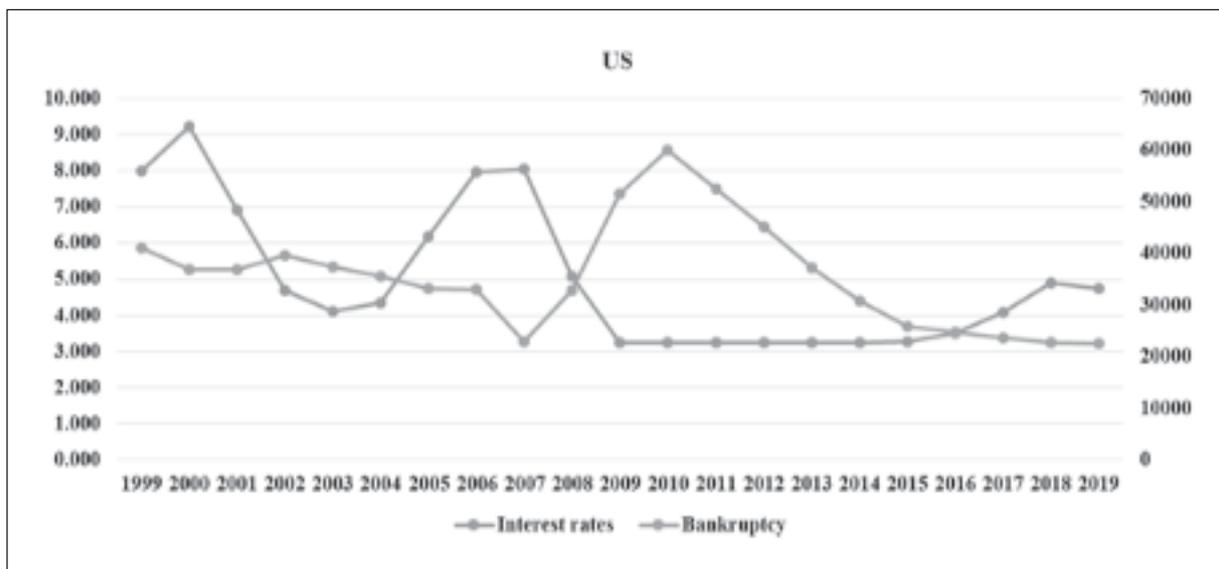
Table 1.2: Statistical Inference:

R ² value	5.02%
P-value from regression analysis	0.3289
P-value from Granger causality test	0.0196
Lag effect	2 years

#As per the test conducted the lag effect is for 2 years

Table 1.3: Summary output of the regression analysis

SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.224026387								
R Square	0.050187822								
Adjusted R Square	0.000197707								
Standard Error	10447.43793								
Observations	21								
ANOVA									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	109580635.5	1.1E+08	1.003955	0.328946304				
Residual	19	2073830228	1.09E+08						
Total	20	2183410864							
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	41494.50894	6394.572868	6.48902	3.23E-06	28110.51411	54878.50377	28110.51411	54878.50377	
Interest rates	-1201.88767	1199.518008	-1.00198	0.328946	-3712.507714	1308.732374	-3712.507714	1308.732374	



Graph 1.1.: The representation of interrelationship between Interest rates and Bankruptcies in United

Source: Trading Economics <https://tradingeconomics.com/>

Hence, we can say that interest rates are a causality for bankruptcy with a lag of order 2. This also means that it merely takes around 2 years for the US country to normalize its increasing bankruptcy, post the reduction in the interest rates.

2. Japan

When studying the variables of Japan the data reveals the fact that there was a rise in the level of bankruptcies (Table 2.1) from a number of 1088 in 2006 to level of 1334 in the year 2009. Which was a 22% increase. During this time

frame there a corrective measure taken by the Government to lower the interest rate from 1.91% in 2008 to 1.60% in the year 2010, although post this there was a decrease to 954 bankruptcy cases in 2012. To further get in a proactive change the interest rates were lowered to close to 0.99 % in the year 2017 and it can be cleared viewed that the decrease in the interest rates has got down the level of bankruptcies to a level of 683, although post that in the year 2019 this further increased to 723 cases.

Table 2.1 Level of Interest Rate and Bankruptcy in Japan

Year	Interest Rates	Bankruptcy	Year	Interest Rates	Bankruptcy
1999	2.161	1227.75	2010	1.598	1104.75
2000	2.067	1536.6	2011	1.501	1043.5
2001	1.969	1586.5	2012	1.408	1012.5
2002	1.865	1650.5	2013	1.304	954.25
2003	1.822	1421	2014	1.219	865
2004	1.767	1166	2015	1.143	749.5
2005	1.677	1040.75	2016	1.045	691.5
2006	1.667	1088.25	2017	0.994	863
2007	1.883	1171.75	2018	-0.1	679.25
2008	1.910	1297.5	2019	-0.1	723.25
2009	1.723	1334			

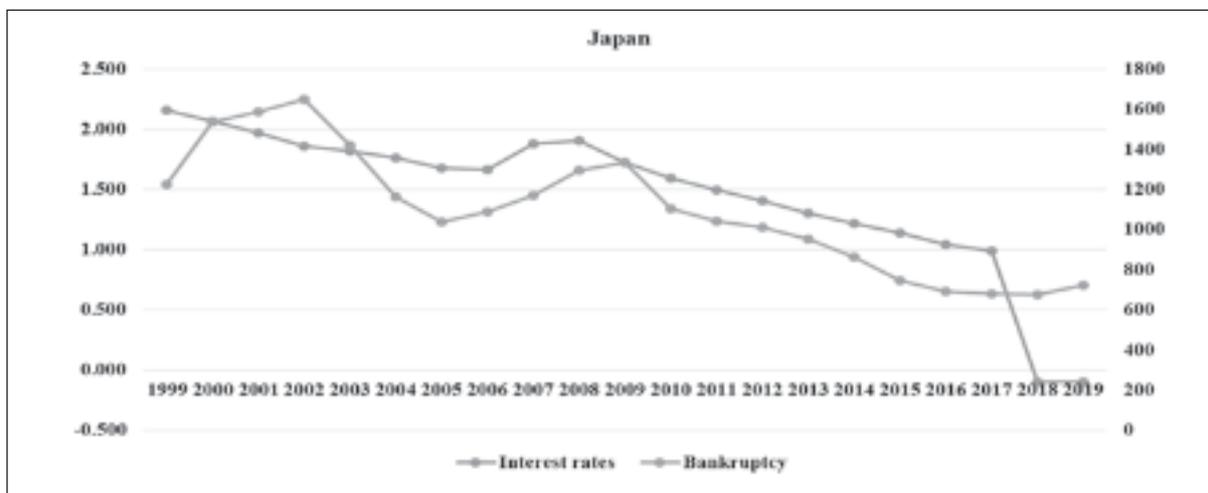
Table 2.2 Statistical Inference:

R ² value	62.25%
P-value from regression analysis	0.000051
P-value from Granger causality test	0.15
Lag effect	None

The null hypothesis got **rejected** in regression analysis and **accepted** in granger causality test. This means that there is no lag effect present and bankruptcies of Japan are **dependent** on the interest rates prevailing.

Table 2.3 Summary output of the regression analysis

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.790680029							
R Square	0.625174908							
Adjusted R Square	0.605447272							
Standard Error	189.8223233							
Observations	21							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	1141881.542	1141882	31.69031	1.98955E-05			
Residual	19	684617.7742	36032.51					
Total	20	1826499.317						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	529.8251981	108.8554387	4.887237	0.000107	301.9881465	757.6622497	301.9881465	757.6622497
Interest rates	389.9242577	69.26550618	5.629415	1.99E-05	244.9498872	534.8996283	244.9498872	534.8996283



Graph 2.1: The representation of interrelationship between Interest rates and Bankruptcies in Japan

Source: Trading Economics <https://tradingeconomics.com/>

3. Russia

When studying the variables of Russia the data reveals the fact that there was a rise in the level of bankruptcies (Table 3.1) which increased from a number of 1409 in 2007 to level of 3293 in the year 2010 which was a 1.3 times increase. During this time frame the measure taken by the Government was to increase the interest rate from 10.03% in 2007 to 15.31% in the year 2009. In the interim time frame the government of Russia had increased the interest rates which had

retracted and led to the increase in the bankruptcies.

Taking a clue of the impact of increase of interest rates from 10.03% 2007 to 15.31% in 2009 further aggravating the situation the government lowered the interest rates, in 2013 to 9.47 % this helped to control the number of bankruptcies. The bankruptcies in 2010 were as high as 3293 in 2010 this came down to 2953 in 2014.

Table 3.1 Level of Interest Rate and Bankruptcy in Russia

Year	Interest Rates	Bankruptcy	Year	Interest Rates	Bankruptcy
2005	10.68	-	2012	9.10	2348.75
2006	10.43	-	2013	9.47	2449.5
2007	10.03	1409.75	2014	11.14	2952.75
2008	12.23	1610.5	2015	15.72	3243.25
2009	15.31	2647.6667	2016	12.60	3072
2010	10.82	3293.75	2017	10.56	3248
2011	8.46	2545.25	2018	8.87	3323.75
			2019	8.68	2331

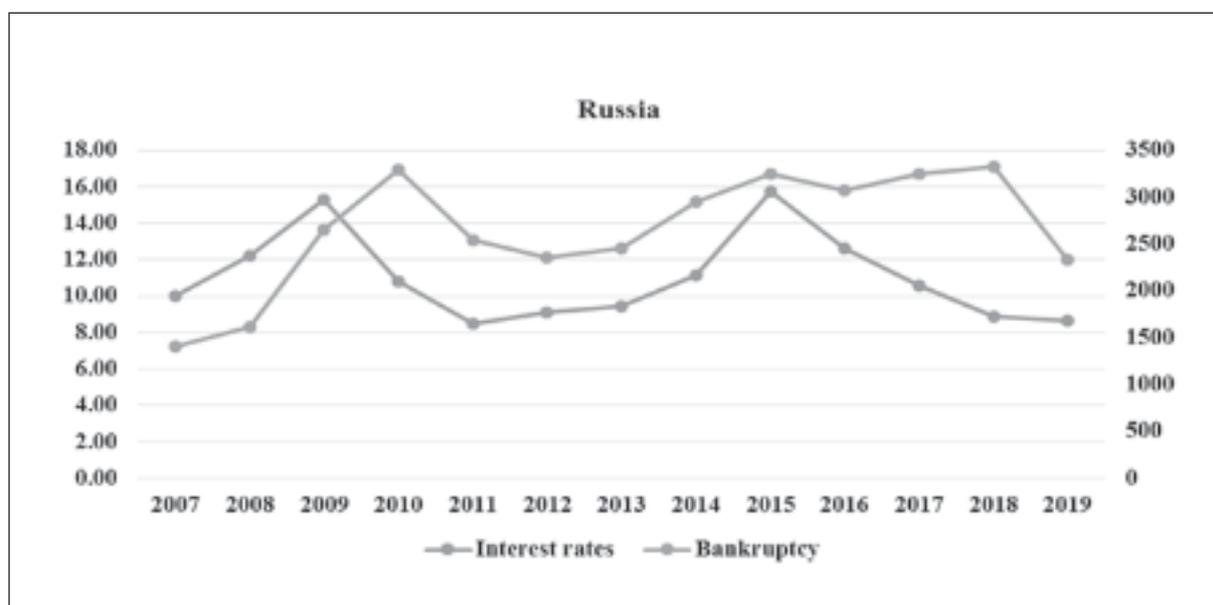
Table 3.2 Statistical Inference

R ² value	2.5%
P-value from regression analysis	0.62219
P-value from Granger causality test	0.868
Lag effect	none

The null hypothesis got accepted in regression analysis and in granger causality test.

Table 3.3: Summary output of the regression analysis

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.158732955							
R Square	0.025196151							
Adjusted R Sq	-0.072264234							
Standard Error	689.5205317							
Observations	12							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	11582.9968	11583	0.258474	0.622197309			
Residual	10	4482577.424	448257.7					
Total	11	4598400.423						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	2197.21542	966.6555877	2.273008	0.046333	43.37254873	4351.058292	43.37254873	4351.058292
Interest rates	43.02822184	84.63400969	0.508403	0.622197	-145.5481031	231.6045468	-145.5481031	231.6045468



Graph 3.1: The representation of interrelationship between Interest rates and Bankruptcies in Russia

Source: Trading Economics <https://tradingeconomics.com/>

4. Australia:

When studying the variables of Australia the data reveals the fact that there was a rise in the level of bankruptcies (Table 4.1) increased from a number of 480 in 2002 to level of 743 in the year 2009. During this time frame the government had increased the interest rate from 6.36% in 2002 to 8.196% in the year

2007. Further to the decrease in the interest rates in the world they lowered their interest rates to 6.17% in 2013. In the interim time frame the government of Australia had increased the interest rates which had retracted and led to the increase in the bankruptcies, they realized this and further lowered their interest rates.

Table 4.1: Level of Interest Rate and Bankruptcy in Australia

Year	Interest Rates	Bankruptcy	Year	Interest Rates	Bankruptcy
1999	6.657	282.25	2010	7.279	712.5
2000	7.717	386.4	2011	7.738	759
2001	6.842	522.5	2012	6.975	827
2002	6.363	480.5	2013	6.179	880.25
2003	6.613	524.25	2014	5.950	690.5
2004	7.050	476.25	2015	5.575	815.5
2005	7.258	537	2016	5.421	675.5
2006	7.613	543.25	2017	5.246	577.75
2007	8.196	556.25	2018	5.261	579
2008	8.908	685.5	2019	1	667
2009	6.021	743.75			

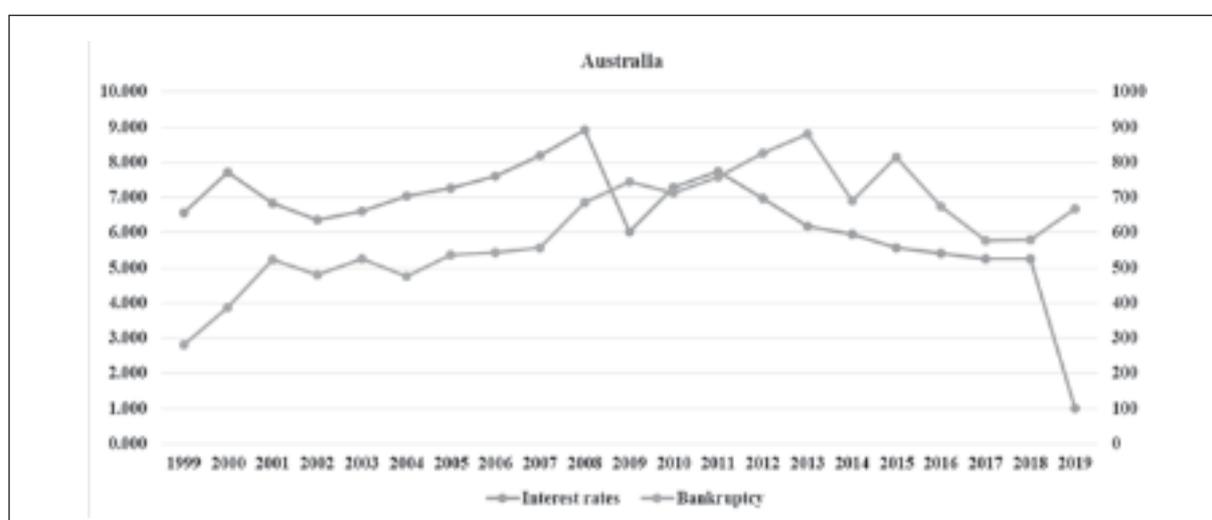
Table 4.2: Statistical Inference

R ² value	2.32%
P-value from regression analysis	0.5214
P-value from Granger causality test	0.0248
Lag effect	1 year

The null hypothesis got **accepted** in regression analysis and **rejected** in granger causality test. This means that there is **lag effect of order 1** present and interest rates of Australia are a causality for the prevailing bankruptcy.

Table 4.3: Summary Output of Regression Analysis

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.152359409							
R Square	0.02321339							
Adjusted R Square	-0.031052533							
Standard Error	158.4468406							
Observations	20							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	10469.95856	10469.96	0.427771	0.521354			
Residual	18	440661.0509	24475.61					
Total	19	451131.0095						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	769.2234704	241.7923536	3.181339	0.00517	261.2385858	1277.210355	261.2385858	1277.210355
Interest rates	23.2217593	35.50499329	0.65404	0.521354	97.81498223	51.37148364	97.81498223	51.37148364



Graph 4.1: The representation of interrelationship between Interest rates and Bankruptcies in Australia

Source: Trading Economics <https://tradingeconomics.com/>

5. United Kingdom

When studying the variables of United Kingdom the data reveals the fact that there was a rise in the level of bankruptcies (Table 5.1) increased from a number of 4649 in 2005 to level of 6346 in the year 2009 . Which was a 49 % increase. During this time frame there a

corrective measure taken by the Government to lower the interest rate from 4.64% in 2006 to 0.50% in the year 2010. Although this helped ease the bankruptcy level to 5008 in 2011. To further control these in global context the Government has lowered the interest rates to 0.25% in the year 2016.

Table 5.1: Level of Interest Rate and Bankruptcy in Australia

Year	Interest Rates	Bankruptcy	Year	Interest Rates	Bankruptcy
1999	5.344	3558.75	2010	0.500	5090
2000	5.964	3827	2011	0.500	5008.5
2001	5.122	4029.75	2012	0.500	5028.25
2002	4.000	4423	2013	0.500	4527.75
2003	3.696	4313.5	2014	0.500	4113.75
2004	4.380	3822.5	2015	0.500	3742
2005	4.649	3995.5	2016	0.25	3614.5
2006	4.638	4162.5	2017	0.50	3727
2007	5.509	4218.5	2018	0.500	3925.25
2008	4.675	4504.75	2019	0.75	4209.25
2009	0.645	6346.25			

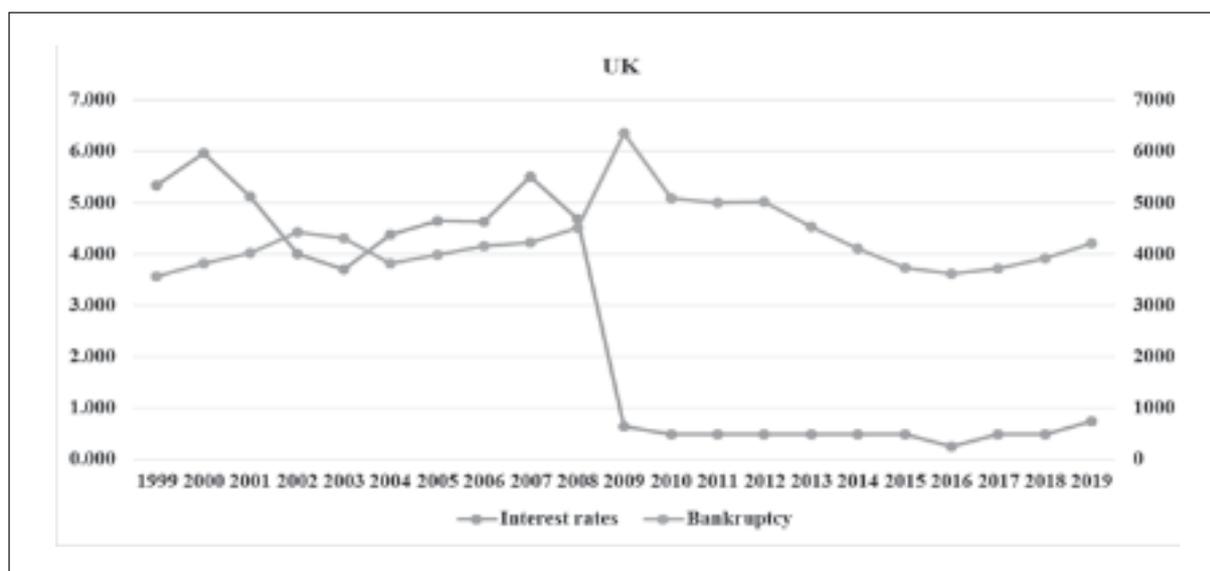
Table 5.2: Statistical Inference

R ² value	10.65%
P-value from regression analysis	0.14862
P-value from Granger causality test	0.0489
Lag effect	4 years

The null hypothesis got accepted in regression analysis and rejected in granger causality test. This means that there is lag effect of order 4 present and interest rates of United Kingdom are a causality for the prevailing bankruptcy.

Table 5.3: Summary output of the regression analysis

SUMMARY OUTPUT							
Regression Statistics							
Multiple R	0.326476202						
R Square	0.10658671						
Adjusted R Square	0.059564958						
Standard Error	629.8787121						
Observations	21						
ANOVA							
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>		
Regression	1	899327.9953	899328	2.265753	0.148620828		
Residual	19	7538196.647	396747.2				
Total	20	8437524.643					
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i> <i>Upper 95.0%</i>
Intercept	4536.033525	211.1003975	21.48085	8.60E-15	4094.057175	4978.009874	4094.057175 4978.009874
Interest rates	-91.5217367	82.78119338	-1.10557	0.148621	-225.9242846	36.8808112	-225.9242846 36.8808112



Graph 5.1 The representation of interrelationship between Interest rates and Bankruptcies in Australia

Source: Trading Economics <https://tradingeconomics.com/>

CONCLUSION:

The conclusion states that lowering the interest rates positively brings down the Bankruptcy level however there is lag time period between the two time frames of lower the interest rate and curtailment of

bankruptcies being filed. There was a positive correlation between lowering the interest rates and the lowering of bankruptcies with most of the economies which were considered in the study.

From the study it can be stated that interest rates do have an impact on bankruptcies depending on the situation of the economies with a lag effect ranging from 1 year to 4 years.

In today's global world scenario it can be stated that there is need to lower interest rates as it one of major inputs in any organization. The Cost of Capital Theory holds good as interest cost acts as a major input cost for all organizations, if this is kept at the level which is competent to world it would lead to lowering of bankruptcies as witnessed in most of the cases.

Keeping in view the macro view on India the Interest level rates are still seem to at staggering high level which is further aggravating the level of bankruptcies. To improve the situation the interest rates need to be lowered.

LIMITATIONS AND FUTURE SCOPE:

In this study the analysis of 5 economies has been incorporated whereas more data of other countries can also be studied. The time span taken into consideration was of 20 years, longer time horizon study can also be conducted. This study has only focused on two variables of Interest Cost and Number of Bankruptcies reported. There could be multiple other reasons also which lead to bankruptcies which can be incorporated in further studies.

The level of economic development of the economies and the type of demographic development stage of each of these economies is different, hence the comparison is not completely equitable.

In this study only 2 statistical techniques of Regression and Granger Causality were used for support of the conclusion. Other techniques which can be incorporated for further study can be are Altman's Z score can be used to further have better insight into the relationship between variables and Bayesian Logistic Regression could be used.

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APPENDIX:

Detailed Graphical of: (2019, Jul-Sep) Corporate Process, Corporate Insolvency Bankruptcy News (The quarterly Newsletter of the Insolvency and Bankruptcy Board of India, Vol 12

Table 1: Snap shot of the Number of Bankruptcy cases admitted with the CIRP (Corporate Insolvency Resolution Process) and their Progress:

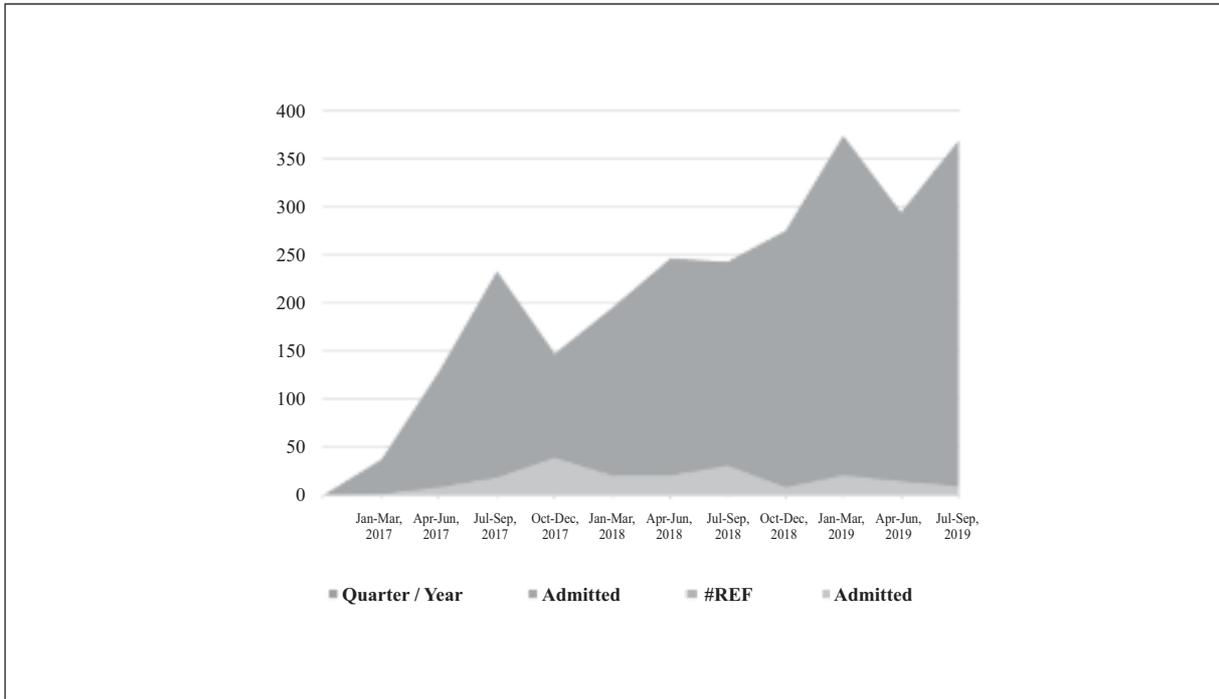
Quarter	Beginning of the quarter	Admitted	Appeal/Review/ Settled	Withdrawal under section 12A	Approval of the resolution plan	Commencement of liquidation	The end of the quarter
Jan - Mar, 2017	0	37	1	0	0	0	36
Apr - Jun, 2017	36	129	8	0	0	0	157
July - Sept, 2017	157	233	18	0	2	8	362
Oct - Dec, 2017	362	147	38	0	7	24	440
Jan - Mar, 2018	440	195	20	0	11	59	545
Apr - Jun, 2018	545	246	20	1	14	52	704
Jul - Sept, 2018	704	243	30	27	29	87	774
Oct - Dec, 2018	774	275	8	36	17	82	906
Jan - Mar, 2019	906	374	20	19	22	86	1133
Apr - Jun, 2019	1133	294	14	19	27	93	1274
Jul - Sept, 2019	1274	369	9	14	27	96	1497
Total	NA	2542*	186	116	156**	587	1497

The following is the status of the number of CIRP's (Corporate Insolvency Resolution Process) which have been admitted by the board:

Table 2: Time line within which the cases were resolved

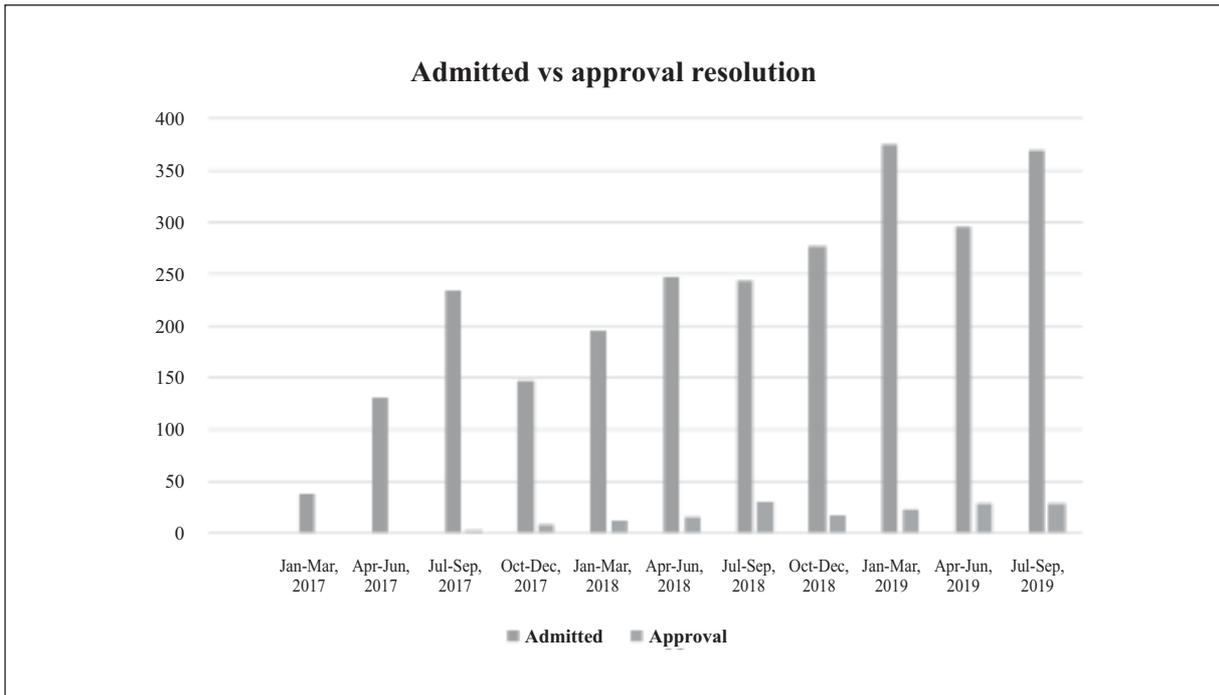
Status of CIRPs	No. of CIRPs
Admitted	2542
Closed on Appeal / Review / Settled	186
Closed by withdrawal under section 12A	116
Closed by Resolution	156
Closed by Liquidation	587
Ongoing CIRP	1497
> 270 days	535
> 180 days < 270 days	324
> 90 days < 180 days	276
< 90 days	362

Impact of Interest Rates on Bankruptcies

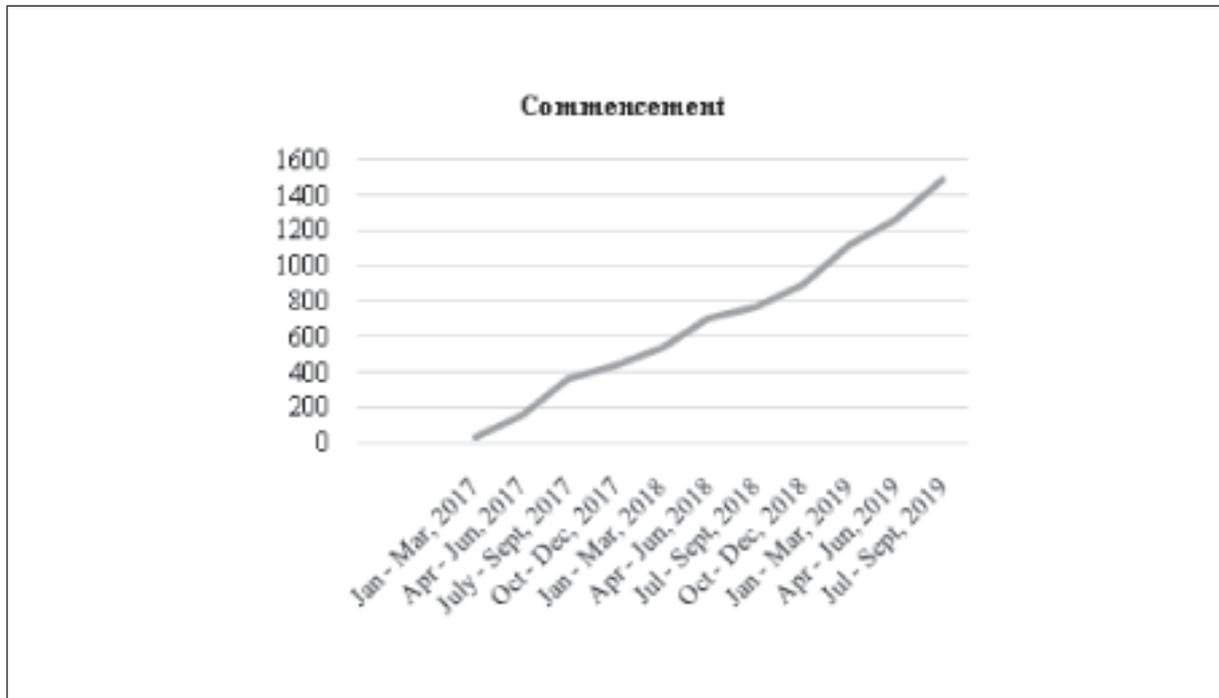


Graph 1: Number of cases admitted v/s number of cases reviewed and settled

The following are the number of Bankruptcies which have been admitted at board of the bankruptcies:



Graph 2: Number of Cases Admitted v/s Number of Cases Resolved

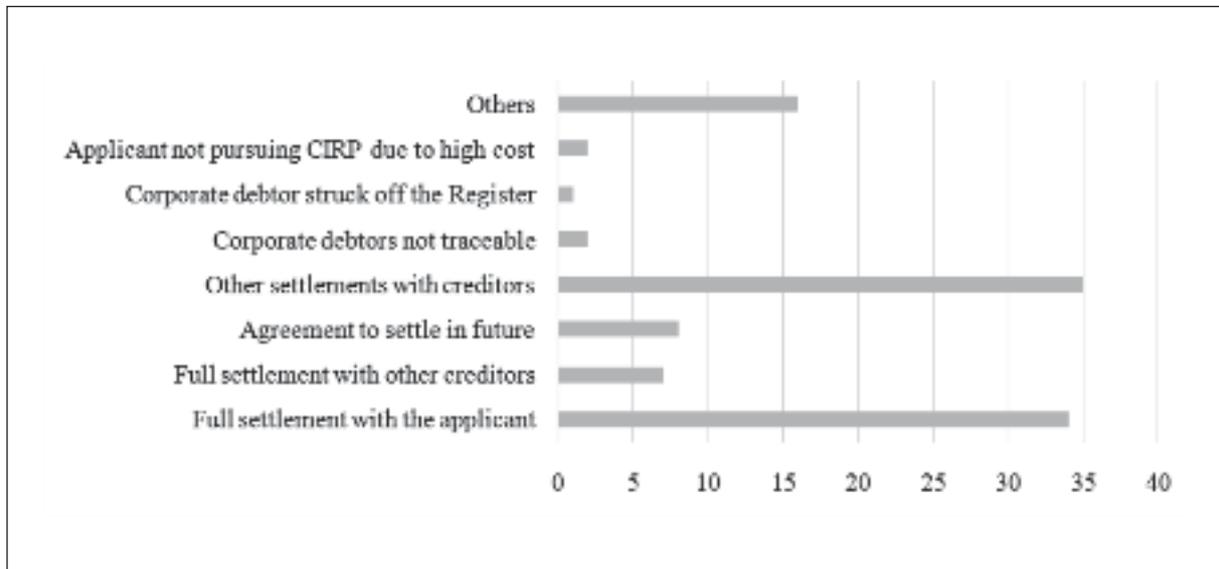


Graph 3: Number of Liquidations which have commenced

Table 3: The Reasons of Withdrawal of the Cases

SL. No.	Reasons for Withdrawal*	Number
1	Full settlement with the applicant	34
2	Full settlement with other creditors	7
3	Agreement to settle in future	8
4	Other settlements with creditors	35
5	Corporate debtors not traceable	2
6	Corporate debtor struck off the Register	1
7	Applicant not pursuing CIRP due to high cost	2
8	Others	16

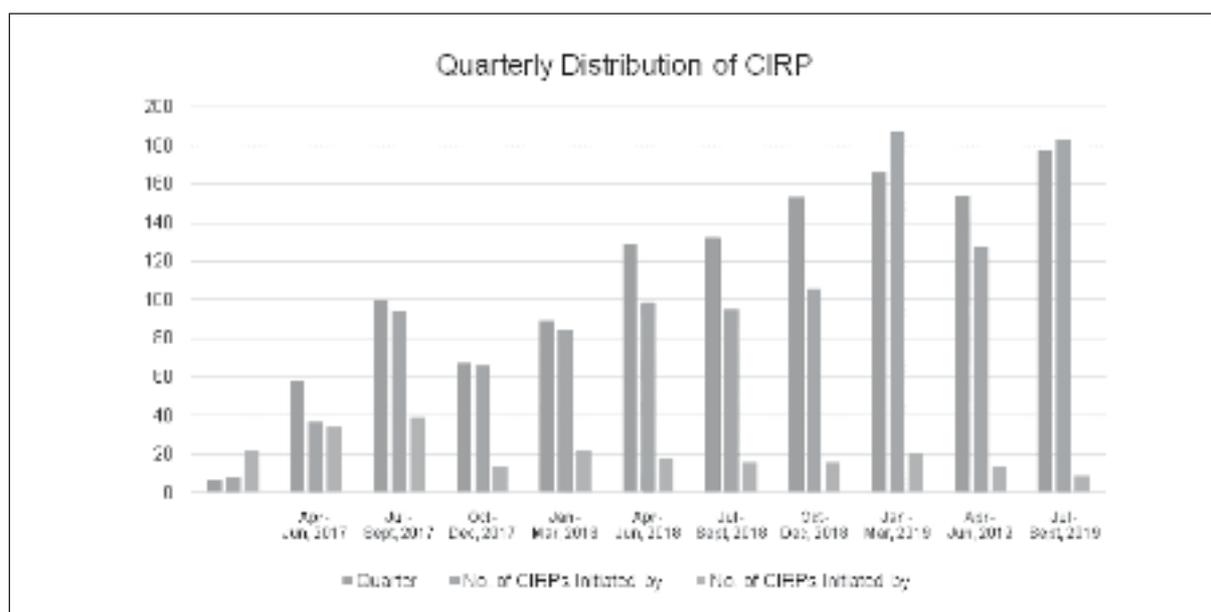
Status of CIRPs	No. of CIRPs
Admitted	2542
Closed on Appeal / Review / Settled	186
Closed by withdrawal under section 12A	116
Closed by Resolution	156
Closed by Liquidation	587
Ongoing CIRP	1497
> 270 days	535
> 180 days < 270 days	324
> 90 days < 180 days	276
< 90 days	362



Graph 4: The Process of Settlement of the Cases

Table 4: Quarterly Distribution of CIRP

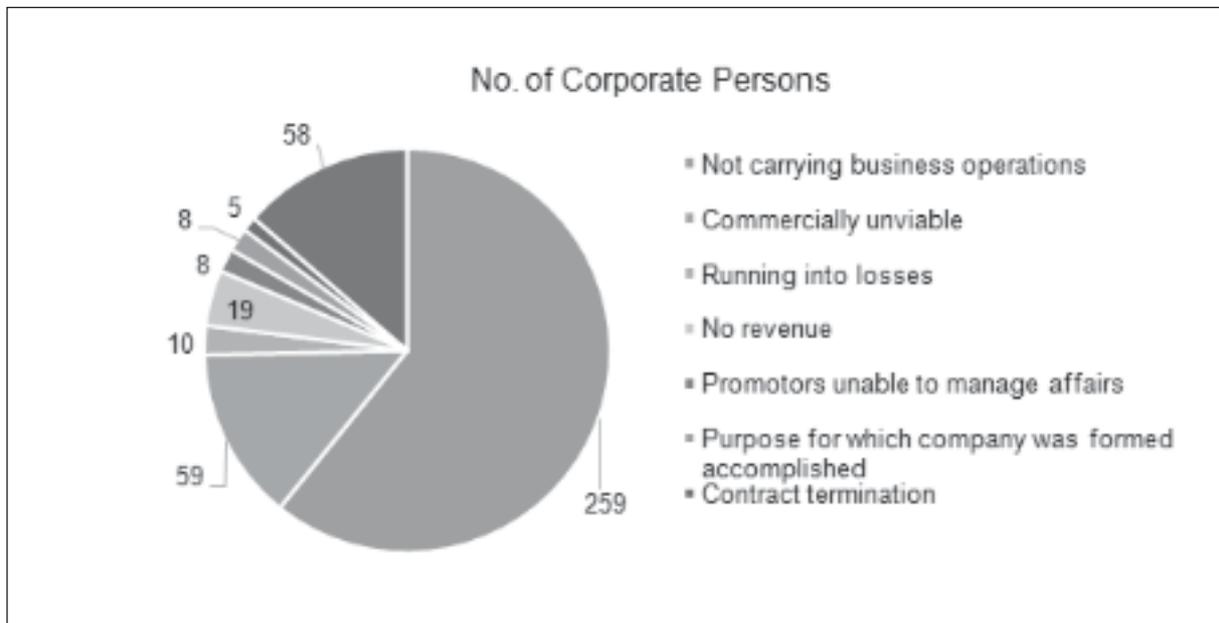
Quarter	No. of CIRPs Initiated by			
	Operational Creditor	Financial Creditor	Corporate Debtor	Total
Jan - Mar, 2017	7	8	22	37
Apr - Jun, 2017	58	37	34	129
Jul - Sept, 2017	100	94	39	233
Oct - Dec, 2017	67	66	14	147
Jan - Mar, 2018	89	84	22	195
Apr - Jun, 2018	129	99	18	246
Jul - Sept, 2018	132	95	16	243
Oct - Dec, 2018	153	106	16	275
Jan - Mar, 2019	166	187	21	374
Apr - Jun, 2019	154	127	13	294
Jul - Sept, 2019	177	183	9	369
Total	1232	1086	224	2542



Graph 5: Quarterly Distribution of CIRP

Table 5 : Reasons for the Voluntary Liquidation

SL. No.	Reasons for Voluntary Liquidation	No. of Corporate Persons
1	Not carrying business operations	259
2	Commercial unviable	59
3	Running into losses	10
4	No revenue	19
5	Promotors unable to manage affairs	8
6	Purpose for which company was formed accomplished	8
7	Contract termination	5
8	Miscellaneous	58
	Total	426



Graph 5: Reasons for Voluntary Liquidation

Does Environment and Salary Affect Job Satisfaction?

Dr. Sapna Parihar*

ABSTRACT

The biggest problem IT sector facing now a days is employee retention. IT employees have tendency to switch their jobs more frequently than any other sector. The problem seeks considerable attention as turnover of highly skilled could be very much expensive for the organization. The present study tries to find the impact of attractive salary, working hours, working environment and relationship with colleagues on the employee's attitude towards their job. A self design opinionnaire consisting 18 items, based on five point likert scale and nominal scale was framed. The designed opinionnaire distributed to 300 IT employees in Madhya Pradesh but due to the incomplete information only 257 respondents considered for study. Dummy Regression Analysis has been used as some of the items in the opinionnaire were measured on nominal scale. The result shows that working environment has strong positive impact on the job satisfaction i.e. Comfortable sharing of opinions, adequate personal space, relationships with coordinates, empowered and encouraged to solve problems, better communication with senior management, freedom, value the opinion, respect, trust and career growth positively affect the satisfaction of IT professional . On the other hand dissatisfaction with the salary structure has strong negative impact on the job satisfaction level among the IT professional. Conflicts in the organization and uncomfortable timing have negative but moderate influence on the job satisfaction. Therefore organizations must consider these variables to keep their employees' satisfaction high.

KEYWORDS: Conflict, Satisfaction, Work Environment, Salary, Time.

INTRODUCTION:

The biggest problem IT sector facing now a days is employee turnover. IT employees have tendency to switch their jobs more frequently than any other sector. The problem seeks considerable attention as turnover of highly skilled could be very much expensive for the organization. Cost of recruitment, training, hidden cost such as incomplete projects, interruption in team-based projects

are some of the reasons for delaying the projects, which may results in losing organization's reputation and sometimes clients too. According to Phillips (2012) there are 12 categories of costs of turnover i.e. exit, recruiting, employment, orientation, training, wages and salaries paid while training, lost productivity, quality problems, customer dissatisfaction, loss of expertise/knowledge, management time for turnover and temporary

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replacement costs. The demand of Indian IT professional is high because of cost effective, high quality and skilled resources. Global market is offering handsome perk to IT professional to attract them, which is one of the important reasons of high turnover. Impassionate employees who want to achieve everything in a fast track mode in their life could be another reason for high turnover rate.

IT firms are taking various measures such as work from home, flexible working hours, training, good salary structure, family tour, medical insurance etc. to keep the employee turnover ratio low and their satisfaction high. Job satisfaction of employee is considered as a main aspect of success of any organization and as well as the efficiency and career development of employees. Job satisfaction can be defined as employee's perception towards their job and verdict to what extent they are satisfied or dissatisfied. Research shows that satisfied employee are much more involved, loyal, supportive and committed to their work. The research on job satisfaction throughout the past several decades is appreciated by psychologists for both its humanistic and monetary value to business organizations. Job satisfaction has been judged to be very crucial for organizational success. More satisfied employees perform with more commitment and show higher retention rates and higher productivity. Higher levels of job satisfaction leads lower absenteeism, better intellectual and physical health. Hosking (2013) suggested five points to keep satisfaction high in his article i.e. stretching the abilities at work place and accepting new challenges, Stepping out from comfort zone, giving careful thought to what changes would be beneficial on the job and talking to the supervisor, getting involved in outside professional activities, sharing your

views/problems for seeking the solution from your mentors they might help you to see the light at the end of the tunnel and rethink your attitude. The present study tries to find the impact of attractive salary, working hours, environment and relationship with colleagues on the employee attitude towards their job.

REVIEW OF LITERATURE:

Ranaweere and Lee (2018) revealed that coworkers and nature of work are the most influential factors of job satisfaction and inadequate work cooperation, absence of proper appreciation mechanism, gaps in communication flow and less job autonomy make the staff dissatisfied with their jobs. Physical working condition, career opportunities and development, salary and benefits are the moderate influencing factors on job satisfaction. Cooperation, appreciation and feedback have negative impact on satisfaction. Guha and Chakrabarty (2016) identified few factors revealing attrition rate among the IT employee giving highest priority to social life (HPSL) and highest priority to work life (HPWL). Attraction of 'higher income' and 'higher company brand name' appears to be the major concern of the HPWL group of employees, whereas HPSL group of employees' propensity to change organization significantly positively linked with factors like 'higher company brand name' and 'higher portfolio'. Attraction of 'higher income' appears to be third important reason for leaving an organization for HPSL group of employees. It can be said that the HPWL group of employees have much positive attitude towards financial matters. Therefore attitude toward life has vital impact on turnover behavior.

Iyer and Deshmukh (2018) studied the variables which may affect job satisfaction of

Indian nurse and found that role ambiguity and role conflict play vital role to predict job satisfaction. Role clarity, training sessions and workplace spirituality are also important factors. Pseekos et.al. (2011) found the negative relationship between personal environment fit and interpersonal conflict at work, signifying that as P-E fit increased, levels of interpersonal conflict at work decreased. This suggest that a lack of fit between employee personality and work environment appears to be relevant for understanding increased reporting of interpersonal conflict at work. Accordingly, when an employee does not fit well with his or her job, conflict with coworkers is more likely to occur. Findings also point out that as fit between an employee's personality and work environment increased, the employee's level of job satisfaction also increased and negative relationship between workplace aggression and job satisfaction, indicating that as level of workplace aggression increased, the employee's level of job satisfaction decreased.

Ahuha et.al. (2007) examined the antecedents of turnover intention of IT professionals spending most of their workweek away from family at a client site. The study highlights the impacts of work–family conflict and job autonomy and provides empirical evidence for the effects of work–family conflict, perceived work over load, fairness of rewards, and job autonomy on organizational commitment and work exhaustion. Work–family conflict is a key source of stress among IT professionals and leads turnover intention. Narayan and Zafar (2011) revealed that gender, experience, behavior by superiors, work surroundings, emotional intelligence are the predictors of job satisfaction among the IT professionals. Work

environment, treatment by superiors and emotional intelligence are more or less equally contributing to the job satisfaction of the respondents. Emotional intelligence and experience of the employees of the software firms contribute considerably to the level of job satisfaction. The level of job satisfaction is same and do not differ significantly for males and females working in the software industries. Emotional intelligence plays a vital role in the level of job satisfaction of the employees of software industries.

Rajandan and Shivramkrishnan (2013) proposed a model of job satisfaction among the higher education faculty members of Andhra Pradesh. Model suggests that motivation, work itself ,working conditions, working relations, organization's policies & procedures, pay and benefits, teaching performance, research performance and strengths and opportunities appear to be the significant determinants of Job satisfaction, while stress adversely impacts job satisfaction. Study also concludes that as the age and seniority increases the satisfaction level decreases. More qualified faculty members were found more dissatisfied.

OBJECTIVE:

How Working Environment, Salary And Relationship Affect The Job Satisfaction Among IT Employee.

RESEARCH METHOD:

Study was conducted in several stages. In the first stage related literature review was done to understand the problem, concept and past studies. Various articles, books and journals were referred. In the second stage research design was made and a self design opinionnaire consisting 18 items, based on five point likert scale and nominal scale was

framed. To find out the various dimensions of job satisfaction which include personal satisfaction with the work, proud to be in the organization and decision making power to handle the work responsibility. The second part of the opinionaire includes predictors which influence work satisfaction. The dimensions which are related with working environment are comfortable sharing of opinions, adequate personal space, relationships with coordinates, empowered and encouraged to solve problems, better communication with senior management, freedom, value the opinion, respect, trust and career growth. Similarly other predictors are working hours, conflicts with colleagues and the salary and financial benefits. The questionnaires were distributed to 300 IT employees in Madhya Pradesh but due to the incomplete information 43 questionnaire were not incorporated and analysis has been performed on remaining 257. In the third stage data was classified and tabulated in order to get information in fruitful manner. Multiple regression analysis was used to find how predictors are influencing the dependent variable.

HYPOTHESES:

- H01 Work environment has significant impact on work satisfaction.
- H02 Salary offered has significant impact on work satisfaction.
- H03 Conflict has significant negative impact on work satisfaction.
- H04 Time (working hours) has significant negative impact on work satisfaction.

Regression Model

$$Y = \alpha + \beta_1 X_1 + \beta_2 D_{1i} + \beta_3 D_{2i} + \beta_4 D_{3i}$$

Where

$$Y = \text{Satisfaction} \quad X_1 = \text{Working Environment}$$

D1i = Dummy Variables shows:
 Remuneration (Satisfied=1) (ELSE=0) INTO satisfied with Salary
 Remuneration (not satisfied=1) (ELSE=0) INTO notsatisfied with Salary
 Remuneration (Neutral=1) (ELSE=0) INTO Neutral with Salary

D2i = Dummy Variable shows:
 Conflict (Yes=1) (ELSE=0) INTO Conflictyes
 Conflict (No=1) (ELSE=0) INTO Conflict no)
 Conflict (Neutral=1) (ELSE=0) INTO Conflict neutral

D3i = Dummy Variable shows:
 Working hours (Comfortable=1) (ELSE=0) INTO comfortable time
 Working hours (uncomfortable=1) (ELSE=0) INTO uncomfortable time
 Working hours (Neutral=1) (ELSE=0) INTO neutral ontime

RESULT ANALYSES:

Table 1 shows correlation analysis among all the variables. It shows that job satisfaction is positively related with working environment, salary and comfortable timings. R square in Table 2 shows the proportion of variation in job satisfaction that can be predicted by working hours, satisfied with Salary, Conflict neutral, Conflict yes, uncomfortable time, not satisfied with Salary, Working environment. These predictors jointly explain 78.7 % variation in job satisfaction.

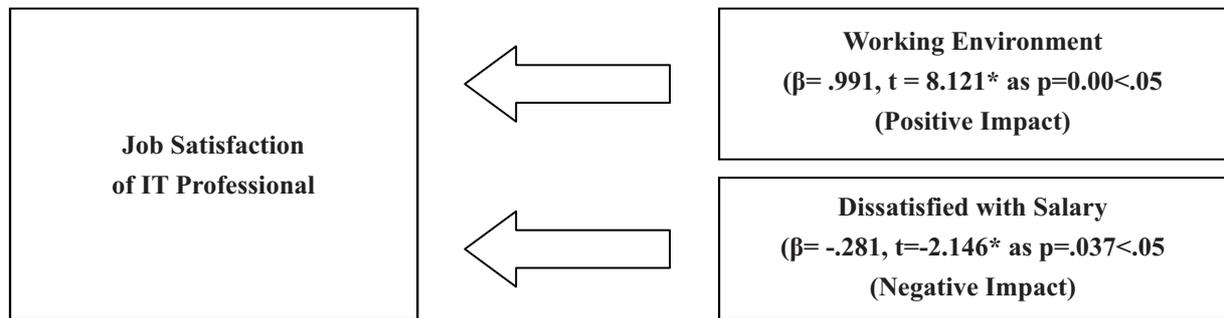
Table 3 shows ANOVA it confirms the linearity at 5% significant level as F= 24.242

significant as ($P=.000<.05$). Therefore hypothesis of non linearity is rejected and regression analysis can be performed. Table 4 shows the coefficient calculated through regression analysis and the proposed model is as follows.

Satisfaction = .077+ .991 (Working Environment)*+ .059 (Satisfied with Salary) -.281(Not Satisfied with Salary)* - .087 (Conflict Yes)-.010 (Conflict Neutral)-.046 (Uncomfortable Time) -.190 (Neutral on Time)

The model shows that 'work environment' and 'satisfaction with salary' have positive effects on the job satisfaction as β value are .991 and .059 respectively are positive and significant. On the other hand Not Satisfied with Salary, Conflict Yes, Conflict Neutral, Uncomfortable Time and Neutral on Time have negative β values and insignificant i.e. -.281, -.087, -.010, -.046 and -.190 respectively. Which shows that dissatisfaction with salary, conflicts, uncomfortable timings have negative effect on salary.

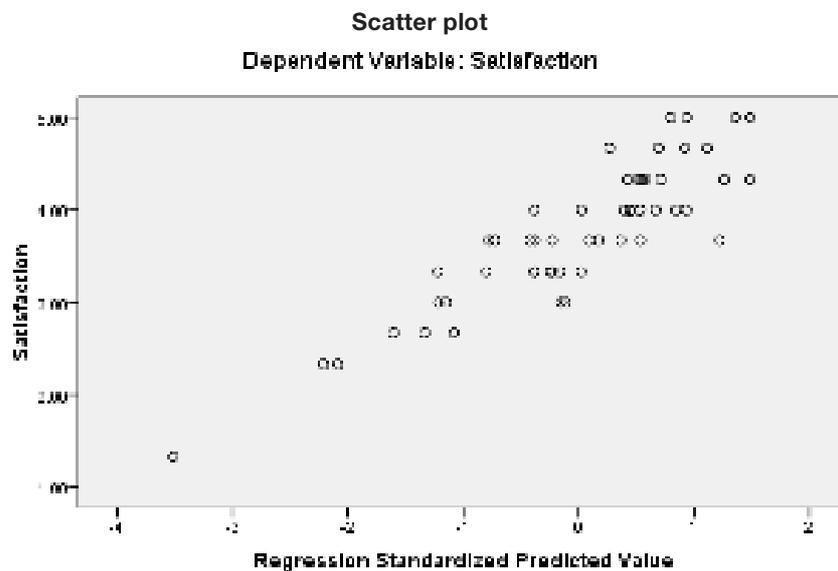
Figure 1



While running the regression analysis few variables i.e. neutral with salary, conflict no and comfortable time could not show

significant value as shown in Table 5 and therefore excluded from the analysis.

Figure 2



CONCLUSION AND IMPLEMENTATION:

The present study is an attempt to see the variables which are responsible for higher job satisfaction. The study assumes that employees' job satisfaction is affected by salary they are getting, time they are spending in the organization, and the culture in the organization. Multiple regression and correlation analysis have been conducted where job satisfaction is taken as continuous dependent variable and work environment is one of the continuous predictor variables. Other predictors such as salary, conflict and working hours are coded as dummy variables. The analysis shows that working environment has strong positive impact on the job satisfaction i.e. sense of belongingness, decision making power create positive environment. On the other hand dissatisfaction with the salary structure has strong negative impact on the job satisfaction level among the IT professional. Conflicts in the organization and uncomfortable timing have negative but moderate influence on the job satisfaction. Therefore organizations must consider these variables to keep their employees' satisfaction high which ultimately results into high productivity and increase work efficiency at workplace. Creating belongingness by taking opinion in decision making process, fair promotion and increments, flexible timings, creating team spirit among the employees and better conflicts handling procedure could be few measures to development positive environment and increase satisfaction level.

LIMITATIONS:

Study has concentrated on only Madhya Pradesh' IT firms although bigger population of IT employees are residing in metro cities such as Pune, Bangalore, Delhi, Mumbai etc.

where some more determinants of job satisfaction may be found with extended research.

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Table 1: Pearson Correlation Correlations

	Neutral on Time	Uncomfortable Time	Comfortable Time	Conflict Neutral	Conflict No	Conflict Yes	Neutral With Salary	Not satisfied With Salary	Satisfied With Salary	Working Environment	Satisfaction
Neutral on Time	1.00										
Uncomfortable Time	-0.13 (0.18)	1.00									
Comfortable Time	-0.66* (0.00)	0.66* (0.00)	1.00								
Conflict Neutral	0.09 (0.25)	0.38* (0.00)	-0.36* (0.00)	1.00							
Conflict No	-0.17 (0.11)	-0.17 (0.11)	0.26* (0.03)	-0.62* (0.00)	1.00						
Conflict Yes	0.11 (0.21)	-0.18 (0.10)	0.05 (0.36)	-0.27* (0.02)	-0.59* (0.00)	1.00					
Neutral With Salary	-0.03 (0.42)	0.22 (0.06)	-0.14 (0.15)	0.05 (.36)	-0.29* (0.02)	0.07 (0.30)	1.00				
Not satisfied With Salary	0.03 (0.42)	-0.03 (0.42)	-0.04 (0.38)	-0.05 (0.35)	0.07 (0.30)	0.23 (0.05)	-0.50* (0.00)	1.00			
Satisfied With Salary	0.00 (0.50)	-0.25* (0.03)	0.19 (0.09)	0.00 (0.50)	-0.19 (0.09)	0.23 (0.05)	-0.46* (0.00)	0.43* (0.00)	1.00		
Working Environment	-0.32* (0.01)	-0.41* (0.00)	0.55* (0.00)	-0.21 (0.06)	0.20 (0.08)	-0.02 (0.43)	-0.10 (0.24)	-0.34* (0.01)	0.44* (0.00)	1.00	
Satisfaction	-0.33* (0.01)	-0.33* (0.01)	0.50* (0.00)	-0.16 (0.13)	0.19 (0.08)	-0.07 (0.30)	0.00 (0.49)	-0.45* (0.00)	0.87 (0.00)	1.00	

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887 ^a	.787	.754	.37164

a. Predictors: (Constant), neutral ontime, satisfied with Salary, Conflict neutral, Conflictyes, uncomfortable time, notssatisfied with Salary, Working environment

Table 3: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	23.437	27	3.348	24.242	.000 ^a
	Residual	6.353	226	.138		
	Total	29.791	253			

a. Predictors: (Constant), neutral ontime, satisfied with Salary, Conflict neutral, Conflict yes, uncomfortable time, notssatisfied with Salary, Working environment

b. Dependent Variable: Satisfaction

Table 4: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.077	.494		.155	.877
	Working Environment	.991	.122	.756	8.121	.000*
	Satisfied with Salary	.059	.138	.038	.430	.669
	Not Satisfied with Salary	-.281	.131	-.173	-2.146	.037*
	Conflict yes	-.087	.140	.047	-.624	.536
	Conflict neutral	-.010	.140	.005	-.068	.946
	Uncomfortable time	-.046	.201	-.019	-.227	.821
	Neutral on time	-.190	.182	-.080	-1.043	.302

a. Dependent Variable: Satisfaction

Table 5: Excluded Variables^b

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
					Tolerance
1	Nutral with Salary	. ^a	.	.	.000
	Conflict no	. ^a	.	.	.000
	Comfortable time	. ^a	.	.	.000

a. Predictors in the Model: (Constant), neutral ontime, satisfied with Salary, Conflict neutral, Conflictyes, uncomfortable time, notssatisfied with Salary, Working environment.

b. Dependent Variable: Satisfaction

RESEARCH

Online Shopping Intention: An empirical analysis of Perceived Risks and CRM

Niharika Bharti* & Dr. Rafiya Zaman Rizvi*

ABSTRACT

The purpose of this study is to investigate the influence of perceived risks (privacy risk, product risk, convenience risk and delivery risk) and CRM on online shopping intentions of the customer. The study proposes a conceptual model to illustrate the associations of perceived risks and CRM on online shopping intention. The model is further validated quantitatively using statistical analysis on a sample size of 138 respondents from NCR region. The results indicate that privacy risk and convenience risks are negatively related to online shopping intention while product risk and delivery risks are not related to online shopping intention. On the other hand, CRM acts as a catalyst in triggering online shopping intentions among customers. The findings of the study also present the future implications

KEYWORDS: *Perceived Risk, CRM, Online Shopping Intention, Customer Relationship Management.*

INTRODUCTION:

According to IAMAI-KPMG report [1], India is expected to have around 236 million users by 2016 and further this user base is expected to rise to 314 million by the year 2017. According to Internet Live Stats [2], India has witnessed 14 percent growth rate in internet users in the year 2014 with total penetration of 19.19 percent. This large internet base is expected to have a direct influence on online purchases in the country.

Internet has now emerged as a worldwide accessible marketplace for personal shopping as well as exchanging commercial experiences by the online shoppers. Despite this tremendous development in e-shopping, a

considerable number of internet users find it as risky. The perceived risk is considered as a major challenge which hampers the decision making process of online consumers (Mathur, 2015). Online consumers find online shopping more risky as compared to its brick and mortar counterpart due to the difficulties faced in product evaluation as there are no tangible contacts to the product or visual indications about product quality. Furthermore, there is lack of face-to-face or direct interaction with the sales personnel and the online purchase gets affected by privacy and security issues (Laroche, Yang, McDougall, & Bergeron, 2005). In the light of these concerns, it is assumed that internet users face the problem of risk and security

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issues while making online purchases as compared to physical purchases. The internet users still find it difficult and risky to share their credit/debit card details online.

On the contrary, now days, companies are indulging themselves highly into managing relationships with their customers. An established customer relationship base helps build up trust towards the company and thus induces customer loyalty. When the company has gained the trust of the customer, their perception of risk towards opting for online purchase of the products and/or service of that company is changed. Companies are now establishing themselves in the cyberspace by having E-CRM attributes on their site to keep up with the changing trends and inclination of customers towards shopping online. Which aspect of E-CRM is crucial for customer satisfaction is not clear. Finally, the recognizing and satisfying customer needs is the foundation of improving customer retention (Day, 1994).

RESEARCH OBJECTIVES:

- To review the past literature on the constructs taken for the study and to further extend the study with contemporary data.
- To study the association between perceived risks and online shopping intentions of the consumers.
- To analyze the catalytic role of CRM on online shopping intentions of consumers.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION:

The advancement of World Wide Web has led to the emergence of a new way of shopping known as e-tailing or electronic retailing and the study of customer's involvement in online shopping have become crucial (Ling, Chai, &

Piew, 2010). While the online shopping is experiencing a dramatic growth in the country, security concerns and risks are viewed as potential threats to limit this growth. Security, usefulness and ease of navigation are considered as salient supporters of online shopping and the increased level of perceived web security leads to greater online purchase intent (Salisbury, Pearson, Pearson, & Miller, 2001).

Perceived risk definition:

The concept of perceived risk was initially proposed by Bauer as “Consumer behavior involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which at least are likely to be unpleasant” (Bauer, 1960). Alternately, perceived risk can be viewed as a measure of expected or possible dissatisfaction that arises from a buying decision, based on buyer's purchase goals (Zheng, Favier, Huang, & Caot, 2012). Forsythe and Shi (2003), in their study proposed and examined various types of risks perceived by online shoppers as product performance risk, financial risk, convenience risk and psychological risk associated with decision making and online shopping intentions.

Privacy risk: Privacy risk includes unauthorized use of personal information shared by the user during internet usage and providing the information collected by companies to third parties. Over the internet, privacy risk is mainly caused due to privacy information loss as the shared information can be collected, tracked and further shared to third parties in order to send emails or spam (Mathur, 2015). The consumers also show frustration and disappointment over the loss

of consumer privacy in case of electronic transactions. Consumers are worried that the banks may share their personal details with the third party which may be further used to sell additional products (Gerrard & Cunningham, 2003). Perceived risks make the consumers unwilling to exchange personal information with the web providers and the increased privacy risk decreases the likelihood of online purchases (Hoffman, Novak, & Marcos, 1999).

H₁: Perceived privacy risk is negatively associated to online shopping intention of customers.

Product risk: Product risk is associated with making inappropriate or poor purchase decision. Since the online shoppers see the product on the e-stores and have no physical contact with the product, they may develop lack of trust and fear high risk due to the absence of direct communication (Khan, Liang, & Shahzad, 2015). Therefore, the shopping experience online is largely dependent on the information provided online to recompense the absence of physical contact (Chen & Tseng, 2011). Product risk is defined as the loss incurred due to non performance of the product or brand as expected (Horton, 1976). Product risk involves various aspects as not receiving the product paid for, inability to compare prices, inability to return a product and product not performing up to expectations (Bhatnagar, Misra, & Rao, 2000). The study also suggested that with the increase in product risk, the likelihood of online purchase decreases.

H₂: Perceived product risk is negatively associated to online shopping intention of customers.

Convenience risk: Convenience risk is associated with the perception of the customer that their time and efforts are wasted in case of repair and replacement of purchased product (Ko, Jung, Kim, & Shim, 2004). Convenience risks involve the difficulties faced during online shopping that are a result of problem in navigation and order placement, improper procedure for order cancellation or delay in receiving the ordered merchandise (Forsythe & Shi, 2003).

H₃: Perceived convenience risk is negatively associated to online shopping intention of customers.

Delivery risk: Customers associated delivery risk with damage free and on-time delivery. Delay in product delivery has a negative impact on the customer satisfaction (Wang & Chang, 2012). Since the customers have to wait for the product ordered online and they cannot use or consume the product immediately, this makes them annoyed and minimizes the chances of online repurchase (Ryan & Valverde, 2005). A wide range of fear associated with the delivery of product includes: lack of timely delivery, product damage during transportation or handling or improper packaging and handling during transportation (Claudia, 2012). Consumers also fear the wastage of time and effort in case of repair or replacement of product.

H₄: Perceived delivery risk is negatively associated to online shopping intention of customers.

Customer Relationship Management (CRM): It is the central focus of the business as it involves knowing what the customer wants and thinks about an organization (Roberts-Witt, 2000). A satisfied customer

proves to buy more, be more loyal and a lot more profitable in the long run (Anton, 1996). This has made CRM as one of the most important conversation in the business as well as the academic world (Connelly, 2001); (Dennis, 2000); (Leon, 2001); (Reda, 2000). Now, in the present era of internet, the concept of E-CRM (Electronic - Customer Relationship Management) has evolved as a web-centric measure in establishing and

maintaining customer relationship across various channels and business functions. E-CRM has also enabled personalized services, generating customer profiles, online ordering, e-mail, automatic help and generating automatic response to e-mail (Rowley, 2002).

H₅: Customer Relationship Management acts as a catalyst for online shopping intention.

Table 1 : Perceived Risk dimensions and CRM proposed in literature

Dimensions	Definition	Sources
Perceived risk	Possible dissatisfaction arising from a purchase decision based on buyer's purchase goals.	(Zheng, Favier, Huang, & Caot, 2012)
Privacy Risk	Probability that the personal information may get disclosed in case of online transactions.	(Garbarino & Strahilevitz, 2004) (Maignan & Lukas, 1997)
Product Risk	Perception that the merchandise purchased may not perform as originally expected.	(Kim, Ferrin, & Rao, 2008)
Convenience Risk	Perception that the time and efforts are wasted due to repair and replacement of purchased product.	(Ko, Jung, Kim, & Shim, 2004)
Delivery Risk	Potential loss of delivery as a result of goods damaged, goods lost or sent to a wrong place.	(Dan, Taihai, & Ruiming, 2007)
CRM	Building, maintaining and continuously strengthening a network with individual consumers which would mutually benefit both sides, through interactive value-added contacts in the long run.	(Shani, 1992)

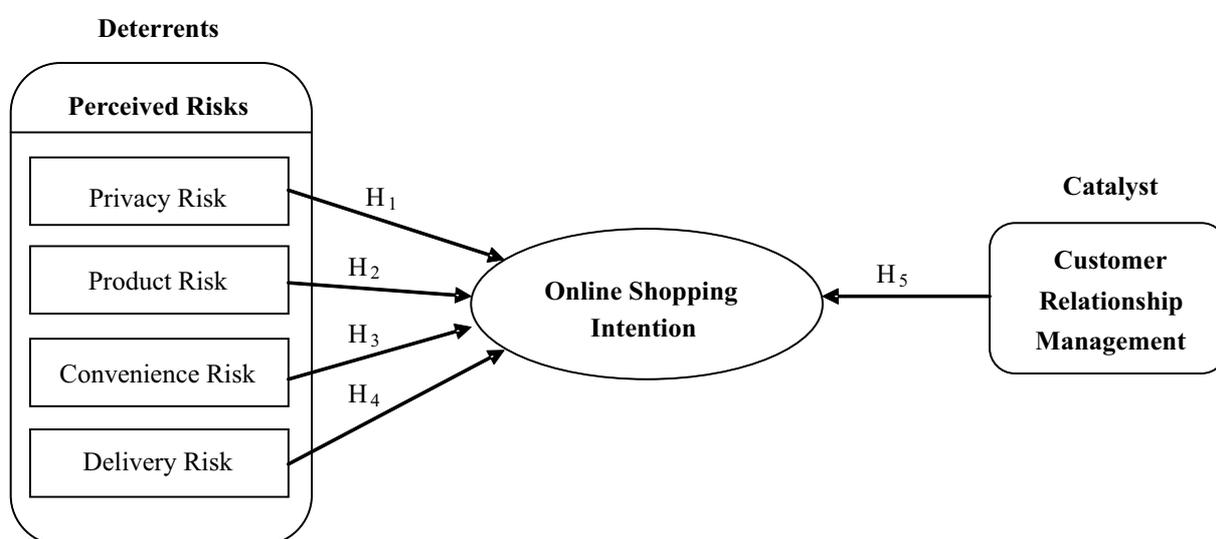
Conceptual Model:

In the following conceptual model (see Figure 1), the Online Shopping Intention acts as a dependent variable and is influenced by various Perceived Risks and CRM associated with the online shopping which act as independent variables. The model identifies the contribution of each type of risk and CRM in framing the shopping intention of the

customers. The model aims to answer the following questions:

- What is the impact of privacy risk, product risk, convenience risk and delivery risk on online shopping intention of customers?
- Does Customer Relationship Management (CRM) have a positive influence on online shopping intention of customers?

Fig. 1: Conceptual Model of Online Shopping Intention



RESEARCH METHODOLOGY:

The purpose of the paper is to study the influence of perceived risks and Customer Relationship Management (CRM) on Online Shopping Intention of the customers. For this purpose structured questionnaire is used to collect the required data using non-probability convenience sampling technique of data collection.

Data Collection: The study targets the respondents of NCR (National Capital Region). The electronic questionnaires were distributed online to 350 respondents out of which 144 were filled and received. After rejecting the incomplete and irrelevant

questionnaires the final sample size was further reduced to 138.

Sampling and Measurement: This questionnaire analyzed different variables of conceptual model through 23 questions. The overall reliability of the construct was calculated to be 0.820 through Cronbach's Alpha which is considered as good according to previous researches and expert's suggestions.

Table 2: Reliability

Cronbach's Alpha	No. of Items
.820	27

The questions were rated on a 5 point likert scale, where, 'Strongly Disagree' denotes (1) to 'Strongly Agree' which denotes (5). The data thus obtained was analyzed by reducing the statements using Exploratory Factor Analysis and Multiple Regression Analysis.

Independent variables under study are Privacy Risk, Product Risk, Convenience Risk, Delivery Risk and Customer Relationship Management (CRM) while the dependent variable is Online Shopping Intention.

DATA ANALYSIS AND FINDINGS:

The data was collected from online shoppers of National Capital Region (NCR). Sample size for the study was 138, out of which fifty five percent were males and forty five percent

were females. Respondents belong to different age categories, with maximum of sixty eight percent from 21-30 age groups, sixteen percent from less than twenty age groups followed by eight percent each from 31-40 and above 40 age groups. This denotes that online shopping is quite popular among the youth as compared to their elder counterparts. Out of total respondents, seventy two percent were single while only twenty eight percent were married. On analyzing the educational qualifications of the respondents, majority (fifty two percent) are post-graduates, followed by graduates (twenty nine percent) and intermediates (twelve percent). This shows the popularity of online shopping among the post graduates. The following table shows the general demographic characteristics of the sample:

Table 3: Demographic Sample Characteristics

Variables		Frequency	Percentage
Age	<i>Less than 20</i>	22	16
	<i>21-30</i>	93	68
	<i>31-40</i>	11	8
	<i>Above 40</i>	11	8
Gender	<i>Male</i>	75	55
	<i>Female</i>	62	45
Marital status	<i>Single</i>	99	72
	<i>Married</i>	38	28
Educational Qualification	<i>Intermediate</i>	17	12
	<i>Graduate</i>	39	29
	<i>Post-graduate</i>	71	52
	<i>Others</i>	10	7

Factor analysis:

Exploratory Factor Analysis is used for data reduction followed by varimax rotation for identifying the number of factors that influence online shopping intention. A five-factor model was estimated, accounting for approximately 69 percent of the total variance which was above the acceptable limit of fifty percent suggested for social sciences research

by . All the dimensions with factor loadings of 0.4 were rejected, to ensure maximum internal consistency. The resultant factors demonstrated good reliability, with Cronbach's alpha values of .812, .794, .783, .771,.826 respectively. The five factors emerging from data reduction include privacy risk, product risk, convenience risk, delivery risk and CRM.

Table 4: Factor Analysis of Perceived Risks & CRM on Online Shopping Intention

Factors Extracted	Variables	FL	C	EV	VE	CA
Privacy Risk	I feel that my personal information given for transaction can be shared with third party by the retailer.	.859	.835	2.339	9.379	.812
	I feel that my credit/ debit card details can be misused by the retailer.	.854	.802			
	I feel insecure sharing mycredit/ debit card details.	.812	.760			
	I do not have complete knowledge about online payments.	.454	.460			
Product Risk	I may not get the same merchandise as ordered online.	.855	.768	1.735	6.957	.794
	I may receive defective merchandise.	.779	.752			
Convenience Risk	It is difficult to judge the color and size of merchandise online.	.827	.753	2.162	8.671	.783
	It is difficult to judge the quality of merchandise online.	.820	.812			
	It is difficult to examine the product online.	.713	.774			
	It is difficult to search for the right product online.	.446	.498			
Delivery Risk	It is difficult to cancel the order once placed.	.780	.690	7.117	28.540	.771
	I may not receive the product ordered online.	.673	.675			
	It is difficult to wait for the delivery of the product.	.662	.603			
	I don't find the shipper reliable and trustworthy.	.596	.479			
	I may not receive the product on time.	.569	.530			
Customer Relationship Management	I think online shopping companies are maintaining good relations with their customers.	.835	.743	3.750	15.038	.826
	I am satisfied with the online shopping services offered to me.	.834	.724			

FL=Factor Loadings; C=Communalities; EV=Eigen Values; VE=Variance Explained; CA=Cronbach's Alpha

Multiple Regression Analysis:

Hypothesis 1: *Perceived privacy risk is negatively associated to online shopping intention of customers.*

The effect of privacy risk on online shopping intention was found to be significant at 0.05 level and thus the hypothesis is supported.

Table 5: Regressions of Privacy Risk toward Online shopping intention

Model	Predictor	Items	R	R ²	β	p-value
1	Privacy Risk	4	.642	.412	0.107	.000**

Note: **Denotes significance at the 0.05 level.

Hypothesis 2: *Perceived product risk is negatively associated to online shopping intention of customers.*

The effect of product risk on online shopping intention was not significant at 0.05 level and thus, the hypothesis is not supported.

Table 6: Regression of Product Risk toward Online shopping intention

Model	Predictor	Items	R	R ²	β	p-value
2	Product Risk	2	.144	.021	-0.184	.247**

Note: **Denotes significance at the 0.05 level.

Hypothesis 3: *Perceived convenience risk is negatively associated to online shopping intention of customers.*

The effect of convenience risk on online shopping intention was significant at 0.05 level and thus, the hypothesis is supported.

Table 7: Regression of Convenience Risk toward Online shopping intention

Model	Predictor	Items	R	R ²	β	p-value
3	Convenience Risk	4	.484	.234	0.101	.000**

Note: **Denotes significance at the 0.05 level.

Hypothesis 4: *Perceived delivery risk is negatively associated to online shopping intention of customers.*

The effect of delivery risk on online shopping intention was not significant at 0.05 level and thus, the hypothesis is not supported.

Table 8: Regression of Delivery Risk toward Online shopping intention

Model	Predictor	Items	R	R ²	β	p-value
4	Delivery Risk	5	.213	.046	0.074	.294**

Note: **Denotes significance at the 0.05 level.

Hypothesis 5: *Customer Relationship Management acts as a catalyst for online shopping intention.*

The effect of Customer Relationship Management (CRM) on online shopping intention was significant at 0.05 level and thus, the hypothesis is supported.

Table 9: Regression of CRM toward Online shopping intention

Model	Predictor	Items	R	R ²	β	p-value
5	CRM	4	.804	.646	0.763	.000**

Note: **Denotes significance at the 0.05 level.

Regression Equation:

$$OSI = \alpha + \beta_1 F_1 + \beta_2 F_2 + \beta_3 F_3 + \beta_4 F_4 + \beta_5 F_5$$

$$OSI = 3.624 + (0.107 * 0.642) + (-0.184 * 0.144) + (0.101 * 0.484) + (0.074 * 0.213) + (0.763 * 0.804)$$

OSI = Online Shopping Intention, F1 = Privacy Risk, F2 = Product Risk, F3 = Convenience Risk, F4 = Delivery Risk and F5 = Customer Relationship Management.

Here, α is the constant, while, β1 β2 β3 β4 β5 represent the coefficient of regression for different independent factors.

HYPOTHESIS RESULTS:

Table 10: Summary of outputs

Hypothesis	Output
H ₁ : Perceived privacy risk is negatively associated to online shopping intention of customers	Accepted
H ₂ : Perceived product risk is negatively associated to online shopping intention of customers	Rejected
H ₃ : Perceived convenience risk is negatively associated to online shopping intention of customers	Accepted
H ₄ : Perceived delivery risk is negatively associated to online shopping intention of customers	Rejected
H ₅ : CRM is positively related to online shopping intentions of customers	Accepted

FINDINGS AND CONCLUSION:

The present study focuses on studying the various risks perceived by the online shoppers and how they affect their shopping intentions. As these risks seem to have a somewhat negative effect on an online shopper's intention, customer relationship management (CRM) practices of the company serve as a motivator to bridge the gap. The research proposes a conceptual framework to explain the relation between the independent and dependent factors under study. The hypotheses were tested using a data reduction technique followed by multiple regression analysis. The analysis result suggested that privacy risk has a negative impact on online shopping intentions. This is compatible with the findings of (Tasi & Yeh, 2010). Convenience risk also shows an adverse effect on online shopping intention which is also supported by (Bhatnagar, Misra, & Rao, 2000). Product risk is not found to have any impact on online shopping intention which is contradictory to the study results of (Forsythe & Shi, 2003) and so is the delivery risk which is in contrast with the findings of (Biswas & Biswas, 2004). CRM, on the other hand, has a positive relationship with online shopping intention (Javadi, Dolatabadi, Poursaedi, & Asadollahi, 2012). Thus, the study suggests that e-retailers need to ensure the security of the personal details (credit/debit card details) shared by the customers during online transactions and add features to their virtual stores that would make them appealing and user friendly.

RESEARCH IMPLICATIONS:

Based on the finding of the study, first, the e-retailers need to eliminate the risk perceived by the customers which acts as a deterrent factor towards online shopping intention and

at the same time enhance their payment gateway security maintaining the privacy of the personal information shared online. Online shoppers should feel secure sharing their financial details and credit/debit card information.

Second, the e-retailers need to install user friendly features that make their website easily navigable with convenient order placement/ cancellation mechanism that makes the shopping experience hassle free for the customers.

Finally, as we have seen from the results that CRM positively effects the shopping intention of online shoppers the e-retailers need to add the above features by using their CRM practices in collecting feedback from customers. Further, necessary actions need to be taken to ensure that the needs and wants of the customers are well served.

LIMITATIONS:

- The study is limited to few types of perceived risks and there are many other risks that influence the online shopping intentions of customer.
- The study uses non-probability convenience sampling technique and the samples were not chosen randomly.
- Due to time and cost constraints the research was limited to National Capital Region only.
- The study targets very limited number of respondents (i.e., 138), thus, the result cannot be generalized over a larger population.
- The research methodology used for data analysis may not be suitable to completely assess the influence of perceived risks and CRM on online shopping intention.

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http://www.iamai.in /rsh_pay.aspx ?rid=4hjkHu7GsUU=
<http://www.internetlvestats.com/internet-users/>
- Abbreviations:**
 IAMAI: Internet and Mobile Association Of India.
 KPMG: Kraayenhof, Peat, Mitchell & Goerdeler
 CRM: Customer Relationship Management
 E-CRM: Electronic-Customer Relationship Management

Core valueS

1. Passion:

The soul of Welingkar blossoms in our heart, mind and body.

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We foster academic rigour in an environment conducive to innovation.

3. Result oriented, Process driven Work Ethic:

We adopt dynamic quality processes to ensure accountability and exceptional performances.

4. We Link and Care:

We support and collaborate with all our stakeholders through mutual trust and respect.



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We are committed to give our students Quality Management Education in tune with the changing needs of business and industry.

We shall endeavor to do this by:

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We shall follow a data oriented factual approach to Quality Management leading to continual improvement of our processes culminating in total customer satisfaction.



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