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Dynamic Analysis of 50-story High-Rise Building Based on Non-Linear Dynamic Time-History Analysis with Aerodynamic Optimization

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Abstract

In this paper study of non-linear dynamic time history analysis of Fifty storied RCC Residential building Considering Aerodynamic optimization carried out and response of such building due to earthquake studied. These building models of this study are Conducted by E-TABS 2019 software. The purpose of this study is to examine the dynamic behavior of the building model under the seismic effect. Model-C (square shape with chamfered corner) and

Model-Y (Y-shape without corner modification) are taking for analysis and compare their results. Results show that Model-Y has better dynamic behavior in terms of displacement and story drift.

Keywords: Aerodynamic, modification, Mitigation Response, nonlinear time history analysis.

Introduction

In the last 25 years, the Earthquakes of high magnitude are experienced around the world leading to the loss of much human life and economy. due to the huge physical destruction research has been ongoing to reduce these harmful effects on human life and develop a more flexible structure that becomes feasible in high magnitude earthquakes. A structure should be a solid, heavy structural system and proper connection which effectively resists loads and wind effect (along and across).(Aly,A.M. & Abburu,S, 2015) [1].

Skyscraper has been a vision and dream for technical advancement, construction progress, and Economical hub for any city. The most modern building with an efficient structural system using High-strength materials show less building weight and become slender and flexible with low damping. These mega-tall buildings are sensitive to wind excitation.(A.G Devenport, 1998) [2].

Many engineers and researchers have investigated the methods to decrease such an excitation and improve the performance of tall buildings against wind-govern loads. In these studies, always concentrate on Aerodynamic and structural modification using active, passive, and mixed damping to decrease wind-induced motion. Aerodynamic modification of building shapes such as slotted corners, horizontal slots, and chamfered corners could reduce wind response compare to traditional building shapes. (K.C.S Kwok, 1988) [3].

Review of Literature

(Kimleng Khy, Chatman Chintanapakdee, et al 2019) theauthor investigates four buildings with various storey-15, 20,31 and 39 subjected to earthquake excitation in Bangkok by response history

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analysis and non-linear response history analysis. As a result, it is carried out that the response history analysis procedure provides a good estimate for floor displacement and story drift ratios. The modified response spectrum analysis computes design shear force in a tall RC shear wall it can predict well shear force from 15, 31, and 39 stories.

(Mir & Sun, 2011) this paper shows a retrospective survey of the structural system for tall buildings and a detailed representation of recent, advanced, and potentially emerging systems. Nowadays modified forms of tubular system diagrids and braced mega tubes are trend and also outrigger system. Due to the premium for height principle variety of structural systems are possibly executed. It can be concluded that any structural system is scaled up, the load effect will be enormous than the strength of the structure so the goal is to minimize the load and consumption material by selecting a proper structural system. The major advantages of the core-outrigger system are without any need for expensive rigid-frame framing joint beam-column joint is sufficient it is also controlled by concrete, steel, and composite construction. The latest system which is used in Burj Khalifa in Dubai is a three-legged concrete tower Y-shaped, a buttressed core system this skyscraper has a triangular concrete core main lateral resisting system is virtual outrigger system. The Y-shaped tall skyscraper central triangular concrete core wall creates an interior core and spreadsthe shear wall into three wings to buttressed the core tube and thus effectively resist the lateral load. Now in Saudi Arabia, the Jeddah tower which is 1000m in height under construction is also the tallest Y-shaped tower in the world. All these configured concrete core structures are based on the height-based structural requirement.

(Shilpa Thilakarathna, 2018) In this paper, the author selects the two towers of residential buildings for a case study. Each tower is 45 stories and these buildings are located in Colombo, Sri Lanka. Which is categorized as a moderate wind zone and low to

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moderate seismic zone? In this study evaluation of the performance level of a critical element of the building such as column, shear wall, coupling beam, and link beam are analysed using non-linear response history analysis (NLRHA) procedure.in this tower, and R.C central core located in the middle of each tower and provide vertical transportation, stairs, and mechanical and electrical plumbing. The central core system is to be the primary element that provides the lateral load resisting structural system (LLRSS). the study compares the seismic performance of each 45-story building based on seismic load and lateral wind design.it noted that all the elements did not exceed the collapse limit. but the true nonlinear seismic demand receives from the NLRHA procedure at the MCE-level seismic hazard is higher than the both seismic and wind demand determined by the RSA procedure. the level of design wind load can change the seismic performance of the high-rise building.

(Mehmood & Warnitchai, 2016) in this paper investigator analysis four different building located in Bangkok with different story height varying 20 stories to 44 stories, different configuration of the floor plan and different arrangement of RC wall. Non-linear seismic response of tall reinforced concrete building examined it is called Uncoupled modal Response history analysis (UMRHA) procedure. It is a modified version of the classical modal analysis procedure, where the nonlinear response of each vibration mode is computed thereafter combined into the total response of the structure. “Tall buildings are generally a complex structural system consisting of different structural and non-structural components. Their seismic response is also very complicated as several vibration modes other than the fundamental mode normally contribute significantly to the response—this is commonly known as “higher modes effects.” (T. Mehmood et al). for understanding, this method needs to understand the knowledge of the modal hysteretic behavior of the structure Which can be derived from a cyclic modal pushover analysis. this procedure provides an accurate prediction of story shear, story overturning moment, inter-story drift,

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and floor acceleration of these tall buildings. It required extremely low computational effort compare to (NLRHA) procedure. in every case study, modal hysteretic behavior found flag shape type which is quite different from common hysteretic behavior assumed in seismic response analysis.

(Rahnavarda & Fard, 2018) author derived a 3-dimensional modelling using the finite element method to understand the behavior of progressive collapse of high-rise structures including a composite steel frame. Two different types of lateral resistance system also included to analysis and compare the building also have regular and irregular plan. All models are designed by E-TABS and reset up by ABAQUS and the steel moment frame is also model by ABAQUS. result demonstrates that side case removed column in moment frame and moment with centrically braced frame systems are more dangerous and destructive compare to corner case removal. after all removal cases moment force is higher in regular plan and regular plan damped early than irregular plan. All results by comparing these models show that irregular plan has poor performance and concrete slab need to be enriched. The author suggests that to prevent potential progressive collapse column should be design and controlled by DL+0.25LL load combination.

(Lu & He, 2018) in this paper, the author takes 6 elastoplastic models of the tall structure of 729m height to investigate the seismic performance of improved viscously damped outrigger (IVDO) at different height these models are obtained in PERFORM 3D. the elastoplastic models complete under 3 levels of earthquake frequent, basic and rare. The result of this study shows that IVDO control inter-story drift and by the calculated damping ratios at the lower height of the structure IVDO provide more damping than the top part of the structure but also IVDO limited control of inter-story drift at the upper area of the structure. IVDO reduces most of the overturning moment under the rare condition and it is also effectively reduced base shear force. It also represents that belt at a story where the

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IVDO is located where also improves the case of premature bulking during the earthquake. the author states that IVDO effectively reduce overturning moment and sufficiently control base shear force and top displacement under basic and rare earthquake condition.

(Akhtarpour & Mortezaee, 2019) author presents a study using 17 stories tall building located near the deep excavation. using PLAXIS software a hardening soil model with small-strain stiffness use to analyse the 17-story building using three different conditions, using soil interaction model, using a soil–structure–excavation interaction mode, and fixed base structure model. The result of this study shows that the soil interaction model and fixed base modal has 43% less base shear compare to soil-structure-interaction, excavation slightly increase 2% base shear. peak horizontal acceleration (PHA) has a maximum level on roof and minimum on base, the PHA level has 78% at a fixed base model and 62% more than the soil-structure interaction model. The drift of roof level at fixed based model is 35% more than the interaction model.

(Akhtarpour & Mortezaee, 2019) in this paper, the author investigates the preliminary design of 60 stories or 232 m tall buildings which is a hexagrid tubular structure the key focus on the pattern and size of hexagrid module stiffness-design criteria in the preliminary design phase. Modelling of this tall structure is accomplished by MIDAS software. Results demonstrate the perimeter structure takes 60-70% lateral load however vertical hexagrid performance (VH) is more effective than horizontal hexagrid performance (HH) almost 48%. Therefore, vertical hexagrid is more stiffed but if slight variation implies then the diagrid structure is more efficient for lateral load. In a system of horizontal hexagrid horizontal member is more stressed than the diagonal member similarly in a vertical hexagrid system vertical member is more stressed than a diagonal member.

(Ren & Bai, 2017) for seismic design of building conventional way is taking reinforced concrete cement beam, column,

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and wall. In tall structures, the column and shear wall are normally used to resist lateral loads consequently RC column and shear wall bear a high level of axial forces in lower stories.so the reinforced concrete provides the overall stiffness of the composite structural member and prevents buckling and the steel member raise the bearing capacity and ductility of the composite member before failure.in this paper author state that under the excitation of an earthquake structures may experience failure however many structural members lose their bearing capacity due to excessive deformation.to improve the performance of structures Fiber beam-column element model and multilayer shell model are taken to organize the finite element model of structures.

Methodology

In this present study, proposed fifty storied residential building square shape with chamfered corner and Y-shape building without any corner modification was selected to determine the dynamic behavior using Non-linear dynamic time history analysis. The building model consists of a frame structure with a shear wall throughout the structure.

Material and section details are in tabular form shown below: -

Table: 3.1 – Materials

Material	Grade	Unit
Concrete	M55	MPa
Steel	Fe550	N/mm2
E(Concrete)	37080.99	N/mm2
E(Steel)	200000	N/mm2
Density of Concrete	25	KN/m3

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Table: 3.2 – Section Properties

Section	Size	Unit
Beam	0.95 X 0.85	m
Column	1.25 X 1.05	m
Slab (T)	0.20	m
Shear wall	1	m
Brick wall	0.23	m

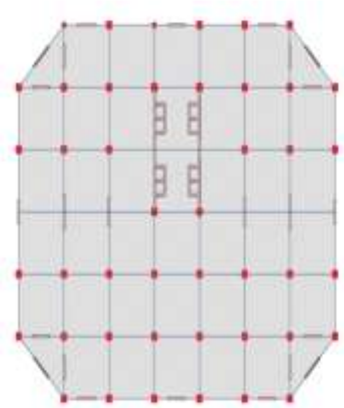

Fig 3.1: Model-C: Grid Layout

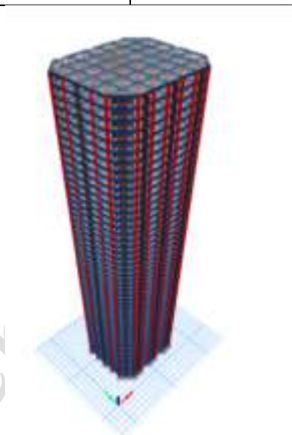

Fig: 3.2- Model-C: 3-D view

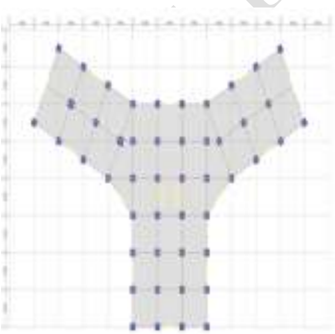

Fig: 3.3- Model-Y: Grid Layout

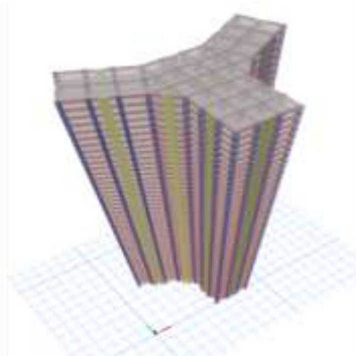

Fig: 3.4- Model-Y: 3-D View

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Analysis Result

The result obtained from the analysis is below. Graphical representation of variation in result is shown in figures. The graph shows the variation of displacement, Story stiffness, and story drift under seismic response in the X-axis and Y-axis.

Model – C Result

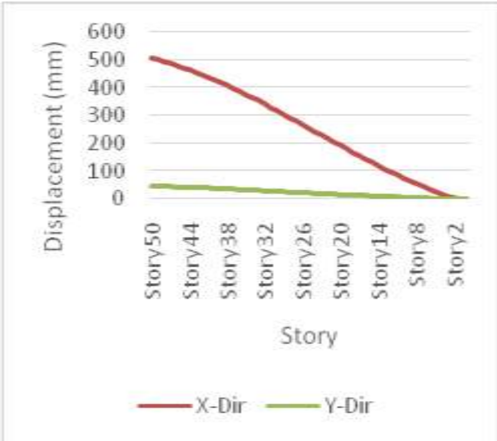

Fig 4.1-Displacement in X-axis

Fig 4.2- Displacement in Y-axis

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In the above figures, we can see that in X-axis displacement in the x-direction is 508.48 mm, and the y-direction displacement is 44.30 mm. In Y-Axis displacement in the x-direction is 33.43 mm and displacement in the y-direction is 338.96 mm.

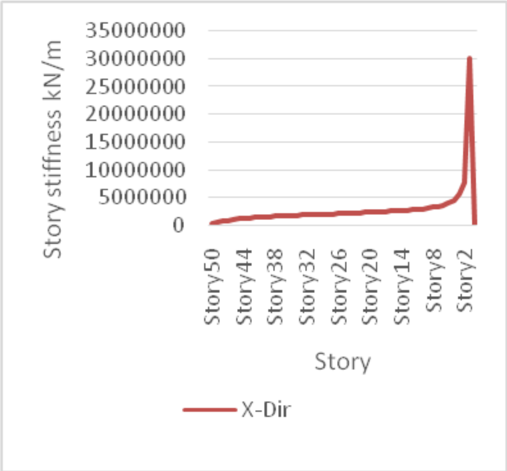

Fig-4.3 Model-C: Story stiffness (X-Axis)

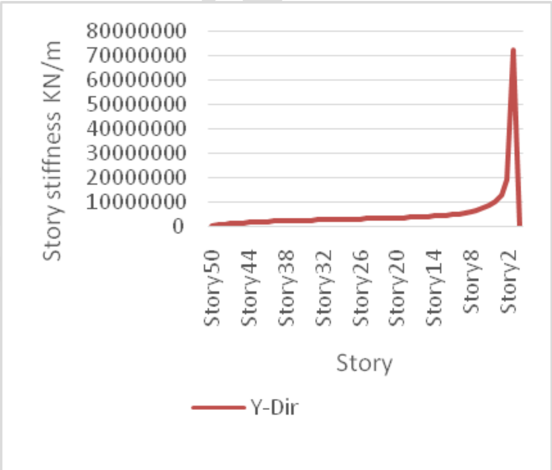

Fig-4.4 Model-C: Story stiffness (Y-Axis)

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In above figures result shows that in the X-Axis story stiffness is 30.16 KN/m and Y-Axis story stiffness is 72.51 KN/m.

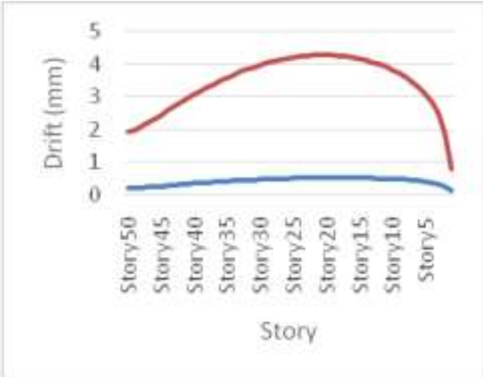

Fig-4.5 Model-C: Story Drift (X-Axis)

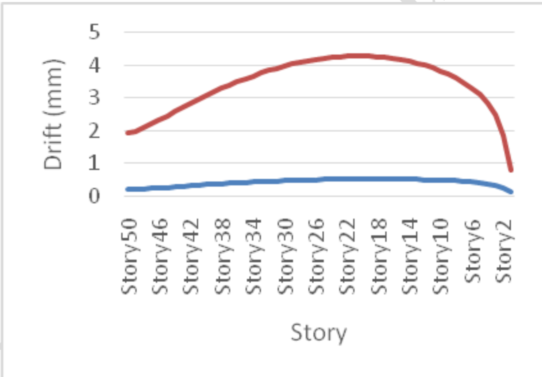

Fig-4.6 Model-C: Story Drift (Y-Axis)

In Model-C result elaborate that X-Axis Story drift in X-direction is increase from story 4 to story 22. The maximum drift is found in the 22nd story is 4.27 mm. in the y-direction drift increase from story 3 to story 17. Maximum drift found in 18th story which is 0.57 mm.

In Y-Axis story drift in x-direction is increase from story 13 to story 18. The maximum drift found in the 18th story which is 0.52 mm.

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In y-direction drift increase from story 4 to story 21. The maximum drift found in the 21st story which is 4.28 mm.

Model – YResult:

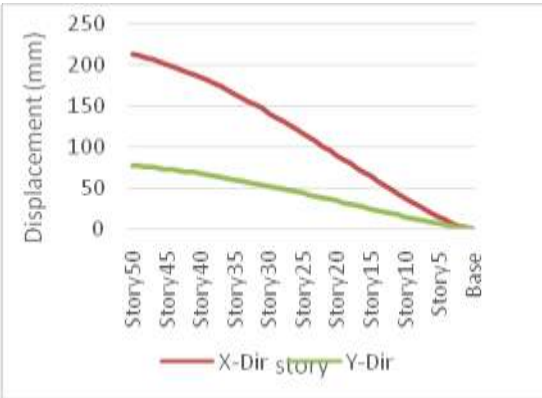

Table 4.7- Displacement in X-axis

Table 4.8- Displacement in Y-axis

In the above figures, we can see that in X-axis displacement in the x-direction is 213.01 mm, and the y-direction displacement is 76.34 mm. In Y-Axis displacement in the x-direction is 39.88 mm and displacement in the y-direction is 227.93 mm.

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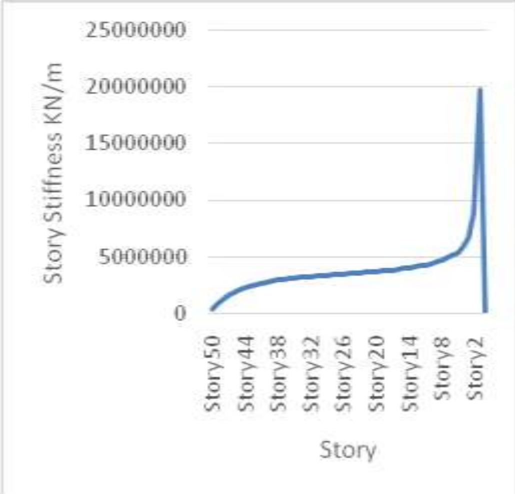

Fig-4.9 Model-Y: Story stiffness (X-Axis)

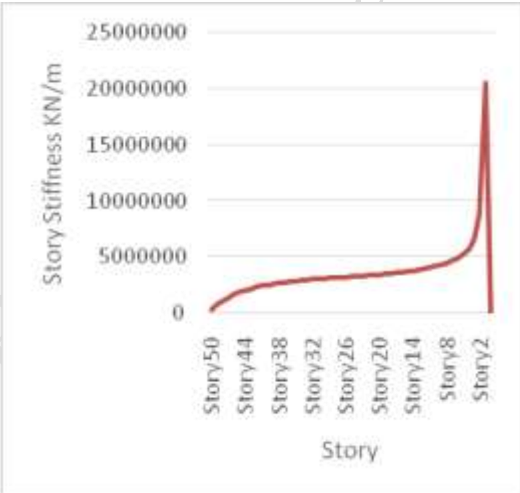

Fig-4.10 Model-Y: Story stiffness (Y-Axis)

In above figures result shows that in the X-Axis story stiffness is 19.72 KN/m and Y-Axis story stiffness is 20.48 KN/m.

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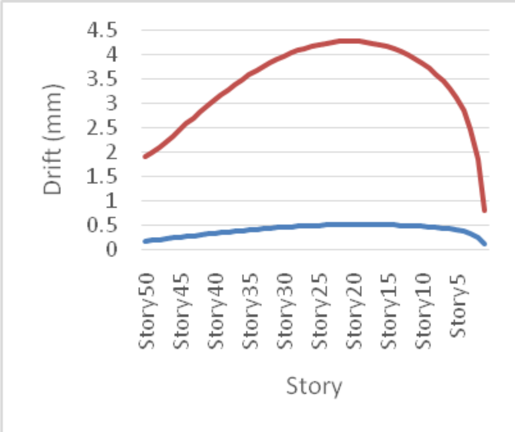

Fig-4.11 Model-Y: Story Drift (X-Axis)

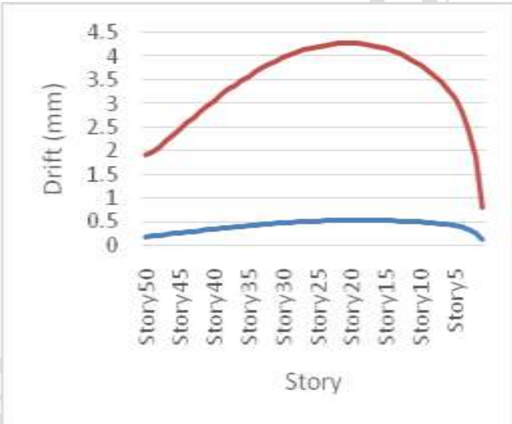

Fig-4.12 Model-Y: Story Drift (Y-Axis)

In Model-Y result elaborate that X-Axis Story drift in X-direction is increase from story 4 to story 20. The maximum drift is found in the 20th story is 5.23 mm. in the y-direction drift increase from story 3 to story 18. Maximum drift found in 18th story which is 0.52 mm.

In Y-Axis story drift in x-direction is increase from story 3 to story 18.

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The maximum drift found in the 18th story which is 0.52 mm. In y-direction drift increase from story 4 to story 21. The maximum drift found in the 21st story which is 4.28 mm.

Conclusion

This paper focus on the seismic behavior of a 50-storied Reinforced Concrete structure, include shear wall throughout the structure, Present the displacement, story stiffness, and story drift. Aerodynamic optimization which is considering in this study is corner optimization included so that the response of the structure improves.

1. After conducting the analysis result shows that displacement in Model-Y on X-Axis is 50% better than in model-C which indicates that the Y-shape building model is a stiffer structure.
2. In Y-Axis, Model-Y has less displacement which is 30% better than model-C.
3. Between both model’s story stiffness is more in Model-C compare to Model-Y.
4. Story drift between each model is almost similar except for the y-direction which is less compare to the x-direction.

In terms of drift, stiffness, and displacement the dynamic behavior of Model-y shows better result which has a lower displacement value on the x-axis or y-axis, drift occurs between mid-stories which can elaborate that because of its shape Model-Y has strength and flexibility which structure required.

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Go Green: Consumer Purchase Intention towards Eco Friendly Packaging

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Abstract

Packaging is an important aspect of marketing and therefore influences the buying decision of the customer. Also, in recent days environmental issues have become a big concern. So, companies are focusing on adapting sustainable business practices which has given

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rise to the emerging topic of green marketing and marketers are focusing deeply on this trend. Increasingly, environmental-sensitive choices are needed in research and analysis on supply chain management. In the design and implementation of the globally integrated supply chain operations, environmental awareness is becoming crucial. Environmental protection changes social and cultural attitudes while economic growth has an impact on the environment and reduces the environmental sustainability of both producers and consumers at only circumstantial levels. Attitudes towards the environment are modifying to encourage sustainability innovation as well as the advantages of such a source of growth will surely survive the present generation. The corporate social responsibility is also one of the important factors which may influence the market performance of a business concern. This chapter explores the impact of eco-friendly packaging on the buying behavior of consumers. The basic objective of this study is to conduct a detailed analysis and a good understanding of consumer trends and purchase behavior in relation to packaging.

Introduction

Eco-friendly products and concern for the environment have become a way of life for many customers today. This trend is spreading quite rapidly and thus creates a great deal of concern on the part of manufacturers as it addresses the main facts of the packaging industry: the content itself, its recycling, re-use and transport. Moreover, because the customer appreciates healthy goods, only packages of safe materials can be effective, but also packages that can better and longer retain the useful properties of the product and take account of its peculiarities. With emissions levels rising every year and buyers keen to make more sense of their everyday use, sustainable packaging is an important problem for producers and distributors. As it is made of recycled waste material that decreases resource consumption, eco-friendly packaging is better for the environment. It decreases the carbon footprint and the

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effect on the environment; but is also useful after it has fulfilled its purpose because the packaging materials are biodegradable. It decreases the carbon footprint and environmental effects, but is also advantageous because the packaging materials are biodegradable after fulfilling its purpose.

More significant efforts are needed to introduce environmentally-friendly packaging. First of all, packaging meets essential criteria. Functions that need to be taken into account when making Ecological-friendly packaging. Protection, storage, loading and transport, selling, promotion, service and guarantee are the principal functions of packaging (Lindh et al., 2016b).

Consumers have less knowledge about eco-friendly packaging (MeikeKetelsen, 2019). They need some guidance in distinguishing the normal packaging and eco-friendly packaging. Lack of awareness among customers becomes barrier to purchase for eco-friendly packaging. Studies have shown that labels, logos and products (LiseMagnier and Dominique Crié, 2014) for packaging are the most important characteristics for customers in the recognition of packaging that is environmentally friendly.

Objective behind Eco-Friendly Packaging

The objectives include;

1. To examine the influence, in the attitude and purchase intentions of consumers on environmental-friendly products, specifically Fasting moving consumer goods, or non - renewable things, of the four traditional marketing-mix elements, satisfaction and words of mouth (WOM).
2. The ambition includes obtaining consumer information from consumer's point of view. Empirical research seeks to intentionally and unintentionally militarization the relationship between cognitive factors that affect green purchasing intention through the moderating mechanism of green products that have in turn examined their green purchasing behaviour.

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3. The purpose of this chapter is to grasp the factors that affect the consumer's behaviour when buying green products. The dependent factors are willingness to buy and environmental outsourcing, attitude, knowledge and standards are the independent factors. The whole research has also shown that consumer procurement intentions for green products are positively influenced by attitudes and personal norms.
4. It has been noted that Greening currently represents an important competitive advantage in the marketplace. Whenever a brand does anything for society and environment, it inevitably improves its brand image.
5. Even though green products are manufactured from non-hazardous chemicals and components, they not only improve the physical but also psychological health. Wide windows have been implemented in sustainable building that enable fresh and high-quality air with plenty of natural lighting. This enhances psychological health as well as lowers stress.
6. The purpose is to increase knowledge of green as well as allow efficient packaging choices and what tends to make a green package. The intention was to highlight the many misunderstanding that consumers have regarding what's really better for the environment. Though a numerous definition has been developed on sustainable and green – both from a consumer point of view and as defined as renewable by some representatives in the green packaging industry – it is important to conclude with what it means to be sustainable for packaging manufacturer.

As observed, how companies can improve their sales and their brand identity by using green packaging. It is expected that in this study; environmentally sustainable packaging is better because it consists of reprocessed wastematerial that decreases energy consumption. Don't just concentrate on economic targets, but also strive to resolve your sustainability targets. Eco-friendly packaging is

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quite adaptable, and it can be right-used and re-used in almost all of the major manufacture of products. Traditional packaging methods and technologies make a contribution to global warming and environmental problems. Through use of environmentally friendly packaging minimizes the level of plastic consumers are using. It requires more energy to use the unsustainable petrochemical resources that are part of all plastic materials. Going green will attract more consumers, depending on their environmental awareness. As world citizens responsible, people have an obligation to cut our carbon footprint as well as find a method to eliminate plastics steadily from their technologies.

Research in Eco Friendly Packaging

The study will deploy a concurrent mixed method research design. A research triangulation technique (Flick, 2004) will be used to identify pertinent themes underlying the construct of Eco-friendly packaging. To start with, an in-depth analysis of existing literature will be conducted to identify pertinent themes underlying the construct of Eco-friendly packaging. This will be followed by an ethnographic analysis of Social media of selected brands found to be negatively impacted by Eco-friendly packaging as per credible secondary data sources.

Ethnography will help further proofread the themes identified from in-depth review of literature by careful investigation of user generated content on such Social media. These themes will be used to develop an instrument/questionnaire for the study. The questionnaire will be distributed amongst appropriate number of respondents (Hair et. Al. 1995) selected based on Judgemental sampling. To make the study’s results more conclusive questionnaire will be targeted towards certain selected product categories carefully selected based on review of literature. Appropriate analytical tools such as exploratory factor analysis, confirmatory factor analysis and multiple regressions will be used to draw meaningful conclusions from the collected data.

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Major findings in Eco-friendly packaging

1. The findings in these specific studieshave shown that the green brand image awareness, the eco-label as well as the green appeal of the product have had a positive impact on the environmentally friendly purchasing intentions. The outcomes of the research also showed that eco logo or the significance of the green product attributed the most to the factor. Consumers make green transactions amongst consumers. In the other hand, this analysis showed that both green ads and green packaging had marginal effects on sustainable buying intentions. However, this study also suggests that further analysis could be pursued by analysing a single form of green commodity, such as energy efficient air conditioning and the design of eco-friendly buildings.
2. In order to examine consumer attitudes of the environment Friendly product, theresearch has taken into consideration certain variables, such as willingness, integrity, inclination, ethics, recognising, ambition, sustainable development. The research suggests that there's still a lack of consistency to recognize a food as organic because such regulatory authorities are engaged in the certification process. For such labelling and licensing, a standard quality control board must be set up. As a new concept, there seems to be a lack of relevant understanding. Citizens ought to be trained and adequately informed of the environmental risks associated with it. The modern green movement has to branch out to the public, and it will also take considerable time and commitment. Investors and the business community need to see the climate as huge massive investment targets, and advertisers will need look at the overall opportunities of this new green revolution. Because it is a modern idea, it would have its own phase of adoption.
3. The purpose behind, would be to determine the influence of eco-friendly customer perceptions on their sensitivity concerning the sustainability of packaging items. The eco - conscious mindset of

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customers has a significant positive effect on their openness to the recyclability of product packaging. Marketers are also urged to include recycled packaging for healthy customers. In this research, the important and optimistic effect of customer perception on its reuse and recycling of product packaging on the consumer's understanding of the recyclability of product packaging is supported. Marketers as well as product manufacturers should develop recycled packaging for eco consumers in such a manner that they have been ecologically responsible. It is also recommended that companies pack their products with colour designs which are appealing to its customer. Generally, customers are looking at vibrant colours, so marketers should observe the preference of colour for packaging items that enhance their appeal.

4. Significant environmental concerns as well as the degradation of natural resources have driven human society to concentrate on eco-friendly consumption. Even more organisations are now manufacturing eco-friendly goods, and customers are now showing increased intention of buying these commodities. Fortunately, the majority of the studies address that positive perceptions of buyers will not affect real purchase intentions still most customers do not buy green products. This research explores need for a systematic review to analyse the available studies in order to determine the numerous variables behind the contradictory actions of consumers. Environmental impacts, product characteristics, environmental awareness and subjective norm and perceived behavioural have evolved as the key factors, although high prices, cost competitiveness, low environmental regulations, Availability as well as lack of community confidence of green products have identified as significant obstacles to the purchasing of green products.
5. The major researches were carried with ambition for growing awareness among young Indian consumers' intent to buy

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products containing/packaged in eco - friendly packaging. The goal of sustainable validity of TRA to Customers in India with sustainable purchasing intentions as a mindset and maybe an individual standard that greatly affects purchase intentions towards eco-friendly packaging. The research provides a new insight into sustainability, with particular relevance to a developed world, by adding extra constructions including environmental issues and ability to pay. Indian customers have a constructive outlook towards an environmentally friendly branded product and are willing to pay premium for that as well. Moreover, the packaging industry should always introduce additional features which make packaging quite feasible.

Conclusion

Research seeks to examine consumer behaviour, in order to preserve quality, support products and to provide comfort for the functions of green packaging. However, the research also identified elements that influence consumer behaviour when taking green packaging into account in the buying process. The purpose of this study is to grasp the factors that affect the consumer's behaviour when buying green products. The dependent factors are willingness to buy and environmental outsourcing, attitude, knowledge and standards are the independent factors. The whole research has also shown that consumer procurement intentions for green products are positively influenced by attitudes and personal norms. Even though green products are manufactured from non-hazardous chemicals and components, they not only improve the physical but also psychological health. Wide windows have been implemented in sustainable building that enable fresh and high- quality air with plenty of natural lighting. This enhances psychological health as well as lowers stress. It has been noted that Greening currently represents an important competitive advantage in the marketplace. Whenever a brand does anything for society and environment, it inevitably improves its brand image. Packaging made of minimal material was

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considered not to be durable enough to avoid contamination and harm as far as protecting functions are concerned. In addition to offering huge ecological benefits, consumers also consider that price is an important factor which affects the buying decision. Finally, reliability reflects confidence; the authenticity of details on the package was misunderstood by customers.

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Role of Workplace Spirituality and Emotional Intelligence on Employee Retention In Education Sector

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Abstract/ Introduction

The issues of talent retention are not limited to the corporate world. This topic has also become prominent in the academic community. Teachers in academics are concerned not only with their pupils' cognitive development, but also with their overall development. In the twenty-first century, the scope of monitoring institutional performance has expanded. The metrics used to assess institutional effectiveness aren't solely based on their students' academic records and achievement. One of the components on which institutions should concentrate is the retention of top achievers who can make a major contribution to institutional performance. Faculty members in academia have always been evaluated only on the basis of their cognitive talents. Domain expertise, conceptual clarity, academic delivery, presenting skills, awareness of current trends, and adherence to academic norms are all frequent performance metrics used to evaluate instructor

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performance. This aids in determining faculty members' cognitive abilities and the breadth of knowledge they can impart to their pupils. This is an example of a performance metric.

However, another facet of intelligence other than IQ that has yet to be studied in the academic sphere is domain of intelligence. Other types of intelligence, such as emotional, spiritual, kinesthetic, musical, and others, are included in this realm of intelligence. In addition to cognitive evaluations of teachers in higher education institutions, evaluations of their emotional and spiritual quotients can help identify how well faculty members contribute to the holistic development of their students.

With this in mind, the purpose of this research is to determine the impact of emotional and spiritual types of intelligence on faculty members' performance, hence assisting in the retention of high performers.

Origin of The Concept

You've been stranded thousands of miles from home and have no money or belongings. Many people will be depressed and bemoan their bad luck in such a situation. For Seasane, though, it formed the bedrock of his life's work and legacy. Around 200 BC, the previously prosperous merchant lost everything in a shipwreck. He then went on to research the works of numerous thinkers. In his sermons, he stressed the importance of being cool under pressure and avoiding emotional extremes. He thought that everything in our environment works in a network of cause and effect. We may not always be able to influence the events that affect us. We can still control how we handle things even if we have factual

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knowledge in our rational mind. It requires temperance, justice, and courage not only in extreme circumstances, but also in dealing with daily obstacles with clarity and integrity. The concept is that those who have developed morality and self-control in themselves may bring harmony and tranquility to their personal and professional relationships. This occurs in our emotional mind, which is located in a separate location from our intellectual mind.

Statement of The Problem

The study of intelligence has always been a topic of interest. Recent societal and commercial upheaval has highlighted the necessity for a thorough examination of the term "intelligence." Human intelligence was compared to blocks of wax in the 4th century B.C. because humans differed in color, size, moistness, and amount of intelligence. Intelligence in this age was determined by one's intellectual level of mental knowledge, and intellectual deficiencies were regarded as excessively difficult. This was the time when Plato and his ally Socrates felt that intelligence is the reason for everything since it organizes everything. These ancient thinkers believed that people with high intelligence have more diverse skills than those with low intelligence (Sternberg, 2014). Philosophers in the eighteenth century believed that the mind has no substance. It is a process in which sensory inputs are transformed into a coherent and meaningful experience. Apperception is the name given to this concept (Kant, 1997). The construct intelligence gained prominence in the late eighteenth and early nineteenth centuries, and the widespread curiosity prompted scientific thought and investigation into the issue. Sir Francis Galton, an explorer and anthropologist,

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agreed that human intelligence was the consequence of evolutionary processes and ascribed the degree of success in people's lives to such heredity (Cianciolo& Sternberg, 2004). Galton has made several questionable comments about African and Anglo-Saxon IQ. Such views about intelligence have a long-term effect on the intelligence discussion, which has lasted far into the twentieth century accounts of intelligence. Galton's work and arguments were expanded and further explored by James Cattell. He was a significant supporter of and contributor to the creation and acceptance of quantitative intelligence measurements. His goal was to learn everything he could about human intelligence. Based on studies about students' reaction times and other rudimentary sensory processes, he arrived to the conclusion that there is a general, unifying human intelligence (Cattell&Ferrand, 1896, as cited in Ciancolo& Sternberg, 2004).

Alfred Binet and Theodore Simon discovered more reliable ways of assessing intellect in 1916. (Cianciolo & Sternberg, 2004). They defined intelligence as a collection of judgement abilities that could only be examined by looking at higher-level cognitive talents like verbal skills and social comprehension, rather than simple mental processes like those measured by Galton (2000) and J. Cattell (1890). Their original exam consisted of a series of exercises that might be used to assess children's mental abilities. The Stanford-Binet Intelligence Scales were renamed the Binet-Simon Intelligence Scales after Lewis Terman (1916) re-examined and polished the Binet-Simon intelligence test and introduced it to North America. Terman was the first to use the intelligence quotient (IQ) score in his research (Cianciolo& Sternberg, 2004).

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William Stern established the notion of Intelligence Quotient in 1912. At the time, IQ was calculated by multiplying a person's mental age by their chronological age and then multiplying the result by 100. Later on, other new ways for calculating the intelligence quotient arose.

Purpose of the Study

The current study aims to investigate the elements that influence high-performing faculty members' decision to remain in their institutions so that they can contribute effectively to institutional performance. The study is founded on the multiple intelligence theory, which states that faculty members' emotional and spiritual intelligence, in addition to their academic successes, have an impact on their performance and retention. As a result, the study focuses on assessing faculty members' emotional and spiritual intelligence, as well as the impact of emotional and spiritual intelligence on faculty performance and, as a result, retention.

Review of Literature

A great deal of study has already been done to emphasize the evaluation procedures used in public and private sector institutions for recruiting, evaluating, and retaining faculty members. According to studies, academic credentials, which reflect an individual's cognitive intelligence, are currently the sole criteria used at institutions for the recruitment, advancement, and retention of teaching faculty. However, the goal of this study is to widen the criteria for assessing and evaluating teaching faculty performance using a multiple intelligences reference frame.

To grasp the principles, significant research trends, and scope for future research, a complete review of research

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publications on empirical and conceptual studies was conducted. Emotional Intelligence (EI), Spiritual Intelligence (SI), Faculty Performance (FP), and Faculty Retention are the study's main topics (RT). The content for the literature review comes from a variety of library resources and electronic databases.

Performance is described by Ones and Schmidt (2020) as a set of observable and unobservable activities that can be evaluated at work. Based on the nature of the job, Vishwesvaran (2020) identified ten separate characteristics of performance. Individual performance can be described as the actions and behaviors that individuals engage in in order to achieve organizational objectives (Campbell, et al., 2020). According to Rothmann and Coetzer (2020), it is a multidimensional term that describes how one completes an assigned task efficiently and effectively using existing skills. Kahn (2020) discovered that jobs with high core job characteristics give people the freedom and drive to put more of themselves into their work. Autonomy, task identity, and feedback were the variables studied. They stated that the majority of postsecondary institutions have a fixed wage scheme. The study also found that while instructors' salaries are unrelated to their productivity, remuneration is important in attracting and retaining staff.

According to Rothmann and Coetzer (2020), performance is a multidimensional term that describes how one completes an assigned task efficiently and effectively using existing talents. According to Cascio and Aguinis (2020), job performance is evaluated in terms of the criteria. Criteria are the benchmarks by which a person's success on the job is

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measured. Employees are crucial to organizational success because without them, there would be no company (Hayward, 2020). Empirical data on issues related to the implementation of merit pay plans in higher education institutions. Individual and organizational characteristics influenced faculty members' perceptions of problems with their merit pay systems, according to their research.

Based on the nature of the job, **Vishwesvaran (2019)** identified ten separate characteristics of performance. Various metrics to rank HEIs were offered in a paper published by the Department of Higher Education titled "National Institutes Ranking Framework." Teaching and learning resources, research productivity and effect, graduation outcome, outreach and inclusivity, and stakeholder perception are the parameters. These criteria bring excellence and clarity into the process of creating world-class educational institutions in the Indian context. To find this link, he conducted a literature review-based study and discovered that staff opinions of the research-teaching relationship vary in a variety of ways. He came to the conclusion that faculty members consider the research-teaching relationship to be a pedagogical decision. This link can also be made more relevant to higher education practice and research. It was discovered that faculty members' performance is average, and that there is a considerable positive association between remuneration and employee performance.

Spearman (2019) proposed a two-factor theory of intelligence that divided intelligence into general and particular talents. All IQ tests evaluate general talents, which are a generalized kind of mental energy. Specific skills are mental

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acts that differ from one person to the next and from one act to the next. He considered that general abilities are more essential than specific ones in determining intelligence. Donald Hub proposed two types of intelligence in 2019: intelligence A and intelligence B. Intelligence A refers to the biological and genetic components of intelligence, whereas intelligence B is produced when intelligence A interacts with the environment.

During these years, the rational domain of intelligence, which can be measured in terms of logical thinking and general aptitude, received a lot of attention. Various IQ measures have been used in the studies over the years. Sternberg (2018) discovered some false assumptions underpinning numerous IQ tests: that speed is a component of intelligence; that a large vocabulary reflects intelligence; and that more intelligent people can solve IQ tests better. Gardener (2018) said that IQ tests are unconcerned about the procedure of determining it. He went on to say that these exams, which reveal a person's cognitive domain of intellect, have little to do with a person's day-to-day living. As a result, he coined the term "Multiple Intelligence."

Emotional Intelligence was first characterized by Payne (2018) as an individual's ability to creatively react to fear, pain, and want. He looked at a variety of methods for developing emotional intelligence in oneself and others.

Emotional intelligence, according to Cooper (2018), is the ability to recognize, comprehend, and successfully employ the power and acumen of emotions as a source of human energy, knowledge, trust, creativity, and influence. Sternberg (2018) defines intelligence as a set of mental capacities required for adapting to, as well as collecting and modeling

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information from, any environment. Emotional intelligence is the capacity to recognize and control one's own and others' emotions. It can also be defined as a person's ability to use the information he gathers in his thinking and actions. The authors analyzed numerous emotional intelligence models and concluded that emotional intelligence is a skill. Emotions are crucial for survival, decision-making, communication, and interpersonal and intrapersonal components, according to them. According to the authors, if emotional intelligence is seen as a natural aspect of life, society will become more humane and stimulating. Emotional intelligence, according to Sternberg (2018), is a sort of social intelligence that comprises the ability to monitor one's own emotions as well as the emotions of others in order to direct one's reasoning. They speculated that emotional intelligence may have been designated as emotional competence, but the term intelligence encompasses both organismic and behavioral abilities. Their research coincided with Gardener's (2018) work on multiple intelligence, in which he discovered that emotional intelligence is merely intrapersonal intelligence defined as access to one's own feelings however the skills they propose for emotional intelligence are sometimes lumped in with social intelligence, which is defined as the ability to comprehend and control others Persons in good moods are more likely to see a high probability of happy events in life and a lower probability of negative events, while people in bad moods are the opposite. Emotional management has an impact on the information channel. They came to the conclusion that various persons are more or less emotionally intelligent, and they developed an ability-based concept of emotional intelligence.

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Research Gap

On the basis of a thorough evaluation of the literature, research gaps have been identified. Citation analysis and content analysis were utilized to identify the research gap, identify the problem, and further determine the study's independent and dependent variables.

1. Although researchers and authors have been interested in the topic of employee performance and retention, the reciprocal interdependence of retention and employee performance has not been fully examined.
2. Emotional and spiritual intelligence have been used in very little research to address the issue of faculty performance and retention.
3. There isn't a single empirical study that shows a link between emotional intelligence, spiritual intelligence, and employee performance and retention.

Objectives of the Study

The proposed research is based on the following concepts:

1. To investigate the factors that influence teacher performance and retention in higher education institutions.
2. Assessing the Emotional and Spiritual Intelligence of these institutions' faculty
3. To assess how Emotional Intelligence affects faculty performance.
4. To assess Spiritual Intelligence's impact on faculty performance
5. Determine the effect of faculty performance on retention.

Hypotheses of the Study

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Hypo-theses	Null Hypothesis	Alternate Hypotheses
H1	There is no significance that cognitive competence has a major impact on faculty performance.	Cognitive intelligence has a substantial impact on faculty performance.
H2	Emotional intelligence has no discernible effect on teacher performance.	Emotional intelligence has a substantial impact on faculty performance.
H3	Spiritual intelligence has no discernible effect on faculty performance.	Spiritual intelligence has a substantial impact on teacher performance.
H4	There is no significance between faculty performance and employee retention.	Faculty performance and retention are linked in a substantial way.
H5	There is no significance between educational attainment and emotional intelligence.	There is a strong significance between educational attainment and emotional intelligence.
H6	Gender and emotional intelligence do not have a substantial relationship.	There is a strong significance between emotional intelligence and gender.
H7	Age and emotional intelligence don't seem to have much of significance.	There's a strong significance between age and emotional intelligence.

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H8	There is no correlation between spiritual intelligence and gender.	There is a strong significance between spiritual intelligence and gender.

Research Design and Methodology

The art of scientific enquiry is known as research. Through scientific inquiry, the goal of research is to contribute to the current reservoir of knowledge.

It includes information on respondent characteristics, study design, hypothesis development, research instrument utilized, and analysis methodologies used. The demographic variables utilized in the study are also described in the chapter, as well as how they were assessed and what the outcomes were. The methods for analyzing the data have been briefly outlined. The ethical considerations raised throughout this study are also discussed.

Research Design

The conceptual structure that directs the research process is known as a research design. It explains the purpose of the investigation as well as the operational consequences. The main goal of this research is to look at the impact of emotional and spiritual intelligence on faculty retention performance. As a result of the need to observe the impact of independent variables on the dependent variable, the study design is causal. Faculty performance and retention are dependent variables, while cognitive intelligence (as assessed by academic qualifications), emotional intelligence, and spiritual intelligence are independent variables. The study relies heavily on primary data. The research process began

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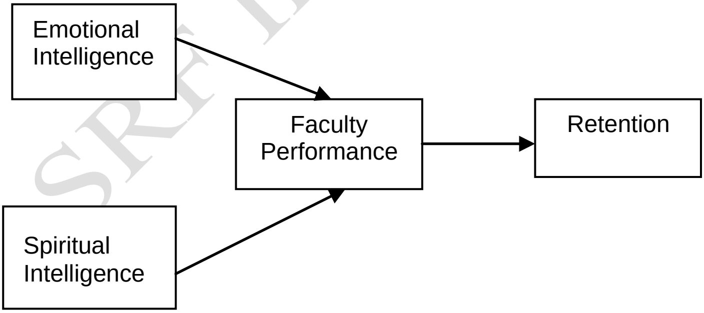
with the discovery of a research gap through literature review, and the discovered research gap was then transformed into a problem definition. The study objectives are then developed in accordance with the problem definition. To collect data in accordance with the objectives, a questionnaire-based survey is done, analytical tools are used to examine the data, and the results are interpreted to prove causality in the model.

Research Model

The research study is split into two halves. The relationship between faculty performance and their academic credentials (which indicate their cognitive intelligence) was investigated using regression analysis in the first part, as well as the extent to which the relationship improves when Emotional Intelligence and Spiritual Intelligence are factored in. In the second section, using faculty performance as an intermediate variable, a model was developed to assess the relationship between emotional and spiritual intelligence and retention.



Proposed Research Model

Sampling and Data Collection

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Because the faculty members and students in these institutions are selected on an all-India basis, and these institutions are located in the country's educational and industrial hubs, the sample in this study consists of faculty members from all private engineering and management institutes and universities in selected cities in Delhi NCR. However, the findings of the study may be valid across India. This research project involves a finite population.

The study's scope is limited to higher professional education institutes in Delhi NCR. Some cities in Delhi NCR were specifically chosen based on the quantity of institutions in each city. Because the study focuses on retention, which is a unique concern in private educational institutions, private universities and institutes were chosen.

Faculty members are chosen via Judgmental Sampling. A list of various private management and engineering institutes in Delhi-NCR and 12 different cities around Delhi- NCR was obtained from AISHE report, 2014. Tier I and Tier II cities are the cities that have been chosen. Then, using random sampling, 75 management and 54 engineering universities are chosen from the list. Finally, non-probability judgmental sampling was used to pick teachers. 1000 academic members from these institutes provided primary data.

Research Instruments

The current study is based on primary data acquired through structured questionnaires from respondents. Standard inventory modified to the Indian cultural context are used to assess Emotional Intelligence (EI) and Spiritual Intelligence

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(SI), while standardized questionnaires are used to assess Faculty Performance and Retention.

The purpose of the pilot study was to ensure that the questionnaire frame was viable. It was first used for content verification among a peer group. Based on feedback from the peer group, the inventory was changed (without changing the intent). Emotional and spiritual intelligence inventories have been culturally contextualized and altered. This was accomplished by doing a detailed examination of items used in inventories and then reiterating some of the items (in terms of language) while constructing the questionnaire without changing the objective of what was asked in the inventory. “My ability to discover meaning and purpose in life helps me adjust to challenging situations,” for example, says one statement in the original inventory of spiritual intelligence. In the questionnaire, this statement is rephrased as "I can readily adapt to demanding workplace settings." The line "I express pleasant feelings I encounter at work incorrectly" has been renamed "I inappropriately express happy emotions at work" in the emotional intelligence questionnaire. The factorial structure of the modified inventory has been examined using exploratory factor analysis because the inventories were contextualized.

A pilot research was carried out by distributing the questionnaire to a small group of people. The final questionnaire is composed of 135 questions relating to the variables under research, based on the results of the pilot study. The questionnaire was created in stages, including various components. The demographic factors are covered in the first section of the questionnaire. The second section corresponds to the retention-related questions. The

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customized inventory of emotional and spiritual intelligence are found in sections three and four, respectively. Questions about teacher performance make up the sixth section. The same question wording and sensitivity of questions were taken into consideration. To reduce answer bias in the questionnaire, contradictory statements were provided. Standard inventories have been reworded in order to adapt the inventory to the cultural environment. Since the questionnaire was distributed both online and offline, a total of 1000 responses have been collected. Personal visits to colleges, as indicated in the sampling strategy, were performed to gather responses from faculty members in the offline manner. Because the replies were on a continuous scale, the mean score was used to fill in the gaps in the questionnaire.

The following grading scales were used:

Scale of Emotional Intelligence

Individuals' emotional intelligence behavior at work has been measured using the Genos Emotional Intelligence Inventory. The measure consists of 70 statements relating to various emotional intelligence components.

Scale of Spiritual Intelligence

Self-Assessment of Spiritual Intelligence inventory has been used to assess persons' spiritually intelligent behavior in the workplace.

Performance of The Faculty

A questionnaire has been devised to assess faculty performance utilizing models such as the National Board of Accreditation's Performance Based Assessment System and the National Institute Ranking Framework. The parameters relating to various aspects of teacher performance are

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identified. The teacher's self-evaluation is based on the scores achieved for performance indicators. This section's first portion contains questions about teaching and learning approaches. Following that are questions on co-curricular and co-academic activities, and finally, questions about faculty members' research and research-related activities.

Retention

A questionnaire has been created to determine the elements that influence retention. A pilot research was carried out to confirm the predictability of 32 variables. The components with communalities of less than 0.4 were removed from the final questionnaire, leaving only the remaining factors.

Research Techniques

The research investigation is conducted using a combination of statistical and analytical methodologies. The techniques utilized and the goal of their utilization is detailed in this section.

Chi-Square Analysis

The chi square test is used to determine the significance of a relationship between two attributes. It's a statistical metric for comparing sample variance to population variance. This is an important non parametric test because no tight assumptions about the sort of population or parameter values are necessary. This test is meant to determine the relationship between faculty members' emotional and spiritual intelligence and demographic characteristics such as gender, age, and qualification. The chi square analysis is found to be appropriate because the demographic variable is a categorical data and the emotional and spiritual quotient are utilized as mean values to examine the link.

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Analysis of Logistics Regression

When the independent variable is categorical or non-metric, and the outcome variable is non-metric or metric, logistic regression is an effective statistical technique. It does, however, offer the advantage of being able to readily incorporate non-metric variables into the results. As a result, this technique was utilized in the study to see if there was a link between faculty members' academic credentials (which show their cognitive competence) and their performance. Academic credentials are non-metric variables in this assessment. As a result, logistic regression is shown to be appropriate for application.

Analysis of Correlation

It is a statistical analytic approach for determining the strength of the association between the variables under investigation. This has been used as an a priori strategy to determine whether the independent and dependent variables being measured are correlated. We can determine the extent of impact of one variable on another once a correlation has been established.

Exploratory Factor Analysis (EFA)

We frequently attempt to quantify things that aren't directly measurable. Emotional intelligence, for example, is a trait that is not readily quantified. Factor analysis is used to measure such latent variables. Factor analysis achieves parsimony by explaining the highest amount of shared variation in a correlation matrix with the least number of explanatory constructs by reducing a data set from a group of connected variables to a smaller set of factors. Exploratory factor analysis was used in this study to uncover different

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dimensions under each variable assessed and to determine which statements in the study pertain to which component. Because the inventories utilized are culturally tailored, exploratory factor analysis is required.

Reliability Results

The degree of consistency between multiple measurements of variables is measured by reliability. Cronbach's Alpha, a reliability measure, was calculated to analyze the consistency of the results obtained.

Since standardized inventories are employed, the validity of the inventories used in cases of emotional and spiritual intelligence has been ensured by reading the technical handbook of the inventories used. In the area of psychometric testing, face validity is regarded significant. On the surface, it is dependent on whether the items measure the attribute of interest. Although the normal performance-based assessment form was employed in the case of Faculty performance and retention, factorial validity was established. The inclusion of items in a factor has been based on factor-item correlations.

Ethical Considerations

The goal of the study is initially presented to the participants. The participants were then given a structured questionnaire with an explanation of the goal of gathering information for each section. The subjects' full consent is sought prior to the start of the study. The responders were assured of their anonymity and confidentiality. Participants were told that their names would not be revealed or used.

Conclusion of the Study

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Several researchers have looked into faculty performance. The most well-known research on faculty performance, on the other hand, are mostly concerned with evaluating their rational thinking. Verbal comprehension, quantitative aptitude, visual comprehension, reasoning, and other characteristics are used in studies to determine the intelligence quotient. Only a few studies have looked at performance using metrics other than these. A rational mind and an emotional mind are the two areas of the human mind. There isn't a single study in the academic world that looks into the relationship between faculty performance and their emotional and spiritual intelligence.

The duty of producing future leaders and managers has been left to universities and institutions of higher learning. It is essential for a company to maximize and develop the potential of its top performers. An ideal institution envisions its faculty members upholding high standards in the teaching-learning process and preparing students for careers in the sector. In addition, they are urged to contribute to the growth of intellectual capital. As an employee, a faculty member must communicate effectively with all stakeholders, including students, coworkers, owners, management, and industry peers. As a result, the teaching profession's performance is determined not only by their cognitive abilities, but also by their grasp of the emotional components of the teaching-learning process. The usefulness of their teaching learning skills may be severely harmed if they lack emotional and spiritual skills.

All of these factors must be combined in a successful approach to prolonged high performance, and the person as a whole must be considered. As a result, the integrated theory of

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performance management must take into account the teacher's body, emotions, and spirit. The performance pyramid is the name for this hierarchy.

Several businesses in the business world have included emotional and spiritual intelligence into their performance evaluation systems. However, academic institutions have yet to develop a comprehensive system to evaluating faculty members' performance. Other types of intelligence, in addition to academic success, may have an impact on an individual's performance score. As a result, the goal of this study is to see if emotional and spiritual intelligence play a role in evaluating faculty members' performance, and if so, how much of an impact these intelligence kinds have on their performance.

Furthermore, educational institutions that strive for greatness try to keep their star performers in order to establish, grow, and protect their intellectual capital. As a result, another goal of the research is to discover the link between faculty performance and retention, as well as how emotional intelligence and spiritual intelligence influence faculty performance and, as a result, indirectly influence retention.

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A Study of Consumer Behaviour towards Online Grocery Shopping

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Introduction

Consumers play several roles in the process of selecting, buying and using goods, services and experiences" (Solomon, 2013). One of the Internet business applications that has received much attention in the last few years is Online Grocery Shopping (OGS) (Belsie, 1998).The feature of online grocery shopping is that consumers purchase grocery products through retailers' websites by simply clicking the mouse button for the required items (Kurnia and Chien 2003).While the market on the online platform is still in its nascent stage, India's online grocery market is estimated to grow at a compounded annual growth rate of 62 per cent during 2016-2022 (IBEF, 2015; Wresearch, 2015). Online environment offers some specific attributes influenced consumer's decision-making process. The most frequently mentioned attributes of online grocery shopping

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are time-saving (Morganosky *et al.*, 2000; Anesbury, 2015) and saving of effort during the purchase process (Seiders *et al.*, 2007).

Role of Internet in Promoting Online Transactions

As per Internet World Stats, Internet is defined as the worldwide interconnection of individual networks operated by government, industry, academia, and private parties.

According to The Internet Group (an on-line consulting company), the Internet is the medium for delivering information-based value to the global market-place.

From the study of (Li and Zhang, 2002) suggests that a consumer's motivation to shop and the information load on the Internet could influence evaluation of prices and explain why certain prices would be more acceptable.

The Internet represents a technological innovation, whose effects range from communication to interaction; however, its potential has not been fully explored and studied (Hoffman, Novak & Peterson, 1997, 123).

Table No 1.1-Internet Users in the World by Regions- March, 2019

Country	Percentage
Asia	50.4%
Europe	16.5%
Africa	10.9%
Latin America/ Caribbean	10.1%
North America	7.5%
Middle East	3.9%
Oceania/ Australia	0.7%

Source: Internet World Stats

Table No 1.1 shows the internet users in the world by regions as on March, 2019.

Review of Literature

Verhoef and Langerak (2001) in their study titled "Possible determinants of consumers' adoption of electronic grocery shopping in the Netherlands" discussed the consumers' behavioural intention to adopt electronic grocery shopping. Kurnia and Chien (2003) in their

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research paper titled "The Acceptance of Online grocery Shopping" discussed the Australian consumers perception of online grocery shopping in order to identify some factors that may foster or hinder its acceptance. Handet al. (2009) in their study titled "Online Grocery Shopping: the influence of situational factors" discussed the importance of situational factors as triggers for consumers to start online grocery shopping.Ranadive (2015) in his study titled "An Empirical Study on the Online Grocery Shopping Intentions of consumers in Vadodara city" discussed the factor that affect the consumer buying intentions and shopping preferences. The researcher found that the perceived behavioural control factor greatly influences the internet shoppers' behavioural intentions to shop for groceries online. Baheti and Kaushal (2015) in their study titled "The Analysis of Consumers Attitude towards Online Grocery Shopping" discussed the impact of varied attributes on the consumers' attitude towards online grocery shopping.Hanus (2016) in his study titled "Consumer Behaviour During Online Grocery Shopping" discussed about advantages and disadvantages of online grocery shopping from consumers' point of view. Dani (2017) in the study titled "A Study on Consumers Attitude towards Online Shopping" discussed the study consumer's attitudes towards online shopping and specifically studying the factors influencing consumers to shop online.Bauerová and Klepek (2018) in their study titled "Technology Acceptance As a Determinant of Online Grocery Shopping Adoption" discussed the Technology Acceptance Model as the better understanding for consumer behaviour towards habitual online shopping.

Research Methodology

The research was done to study the consumer behavior towards online grocery shopping. For accomplishment of objectives, both primary and secondary data is used. Primary data was collected by sending self-structured online questionnaires to 250 respondents. The questionnaire was prepared on a 5 point Likert scale (5 – Strongly Satisfied, 4 – Satisfied, 3 – Neutral, 2 – Dissatisfied, 1 –

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Strongly Dissatisfied).Within the timeframe,200 respondents sent back the completed questionnaires. Hence, the response rate was 80%. The responses were analyzed byusing SPSS software.Secondary data was collected through journals and internet websites.For analysis of data, ANOVA has been applied. Factor analysis has also been applied to extract the factors affecting purchase of grocery product online.

Research Objectives

1. To study the influence of customers demographic characteristics on their attitude towards online grocery shopping.
2. To extract the factors affecting purchasing of grocery product online.

Hypotheses

1. There is no significant relationship between gender and customer satisfaction level of online grocery shopping.
2. There is no significant relationship between age and customer satisfaction level of online grocery shopping.
3. There is no significant relationship between marital status and customer satisfaction level of online grocery shopping.
4. There is no significant relationship between educational qualification and customer satisfaction level of online grocery shopping.
5. There is no significant relationship between occupation and customer satisfaction of online grocery shopping.
6. There is no significant relationship between family size and customer satisfaction of online grocery shopping.
7. There is no significant relationship between family income and customer satisfaction of online grocery shopping.

Data Analysis and Interpretation

Analysis of demographic profile of respondent

For analysis of the demographic variables of the respondents such as gender, age groups, marital status, educational

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qualification, occupation, family size and family income are taken into consideration which allows us to measure the vibrant of respondents.

Table No1.2 – Demographic profile of respondents

1.	**Gender**	**Frequency**	**%**
	Male	81	40.5
	Female	119	59.5
	Total	200	100.0
2.	**Age groups**	**Frequency**	**%**
	15-25 years	164	82.0
	25-35 years	21	10.5
	35-45 years	5	2.5
	Above 45	10	5.0
	Total	200	100.0
3.	**Marital Status**	**Frequency**	**%**
	Married	32	16.0
	Unmarried	168	84.0
	Total	200	100.0
4.	**Educational Qualification**	**Frequency**	**%**
	Under Graduate	50	25.0
	Graduate	67	33.5
	Post Graduate	72	36.0
	Professional	3	1.5
	Others	8	4.0
	Total	200	100.0
5.	**Occupation**	**Frequency**	**%**
	Business	23	11.5
	Government	4	2.0
	service	26	13.0
	Private sector	13	6.5
	Housewife	131	65.5
	Student	3	1.5

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	Other **Total**	200	100.0
6.	**Family Size**	**Frequency**	**%**
	1-3 members 3-5 members 5 and more members **Total**	31 130 39 200	15.5 65.0 19.5 100.0
7.	**Family income (pm)**	**Frequency**	**%**
	1,00,000 or below 1,00,000-2,00,000 2,00,000-3,00,000 3,00,000-4,00,000 4,00,000 and above **Total**	24 37 41 31 67 200	12.0 18.5 20.5 15.5 33.5 100.0

Table No 1.2 shows the demographic profile of respondents. There is 40.5%male respondentand 59.5% female respondent. 84% surveyed people belong to unmarried and 16.0% people belong to married group. In regard to age group, it has been found that 82.0% people belong to the age group of 15-25 years followed by 10.5% under the group of 25-35 years, 5.0% come under the group of above 45 years and the least percentage of people(2.5%) comes under the group of 35-45 years. As regards occupation profile, it has been found that the highest percentage of respondents i.e 65.5% belong to student followed by private sector (13.0%), business (11.5%),housewife (6.5%), government service (2.0%) and other

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1.5%. In regard to family size, it has been found that majority of the respondent i.e 65.0% has 3-5 members in their family followed by 5 and more members (19.5%) and 1-3 members (15.5%). In regard to family income, 33.5% surveyed people belongs to income group of 4lakhs and abovefollowed by 2lakhs-3lakhs (20.5%), 1lakhs-2lakhs (18.5%), 3lakhs-4lakhs(15.5%) and the least number of respondents 12.0% comes under 1lakh or below family income.

Analysis of Association between Demographic Variables and Customer Satisfaction

In this section, ANOVA has been applied between different demographic variables and customer satisfaction level.

Table No 1.3 ANOVA between Gender and Customer Satisfaction Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.211	4	.053	.215	.930
Within groups	47.984	195	.246		
Total	48.195	199			

The result of ANOVA (Table No1.3) shows that F=.215, P> .05 in case of gender andcustomer satisfaction level of online grocery shopping. It signifies that statistically there is no significant relationship between gender and customer satisfaction level towards online grocery shopping.This result is corollary to the study titled “Consumer Perception towards online grocery stores, Chennai” by Sathiyaraj et al.(2015)

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Table No1.4- ANOVA between Age and Customer Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups Within groups	4.658 107.737	4 195	1.165 .552	2.108	.081
Total	112.395	199			

The result of ANOVA (Table No1.4) shows that F= 2.108, P> .05 in case of age and customer satisfaction level of online grocery shopping. It signifies that statistically there is no significant relationship between age and customer satisfaction level towards online grocery shopping.

Table No1.5 –ANOVA between Marital Status and Customer Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups Within groups	.712 26.168	4 195	.178 .134	1.326	.262
Total	26.880	199			

The result of ANOVA (Table No1.5) shows that F=1.326, P> .05 in case of marital status and customer satisfaction level of online grocery shopping. It signifies that statistically there is no significant relationship between marital status and customer satisfaction level towards online grocery shopping. This result is corollary to the study titled “Determinants Attributes of Online Grocery Shopping in India – An Empirical Analysis” by Prasad and Raghu (2018).

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Table No1.6 –ANOVA between Educational Qualification and Customer Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups Within groups	8.442 184.038	4 195	2.111 .944	2.236	.067
Total	192.480	199			

The result of ANOVA (Table No1.6) shows that F=2.236, P> .05 in case of educational qualification and customer satisfaction level of online grocery shopping. It signifies that statistically there is no significant relationship between educational qualification and customer satisfaction level towards online grocery shopping.

Table No 1.7 –ANOVA between Occupation and Customer Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups Within groups	3.839 393.681	4 195	.960 2.019	.475	.754
Total	397.520	199			

The result of ANOVA (Table No1.7) shows that F=.475, P> .05 in case of occupation and customer satisfaction level of online grocery shopping. It signifies that statistically there is no significant relationship between occupation and customer satisfaction level towards online grocery shopping.

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Table No1.8 –ANOVA between Family Size and Customer Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups Within groups	.908 68.772	4 195	.227 .353	.644	.632
Total	69.680	199			

The result of ANOVA (Table No1.8) shows that F=.644, P> .05 in case of family size and customer satisfaction level of online grocery shopping. It signifies that statistically there is no significant relationship between family size and customer satisfaction level towards online grocery shopping.

Table 1.9 –ANOVA between Family Income and Customer Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups Within groups	3.039 396.961	4 195	.760 2.036	.373	.828
Total	400.000	199			

The result of ANOVA (Table No1.9) shows that F=.373, P> .05 in case of family income and customer satisfaction level of online grocery shopping. It signifies that statistically there is no significant relationship between family income and customer satisfaction level.

Analysis of average time spent on internet

Table No1.10- Average time spent on internet

Average time spent daily	Frequency	%
Up to 1hr	24	12.0
1-2 hrs	64	32.0
3-4 hrs	58	29.0

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More than 4 hrs	54	27.0
Total	200	100.0

The average time spent on internet in Table No1.10 shows that 32.0% of the respondents spent 1-2 hr daily on an average on internet followed by 3-4 hrs daily (29.0%), more than 4 hrs daily (27.0%) and the least time spent is up to 1hr daily by 12% respondents. It shows that on an average people spent 1-2 hrs daily on internet.

Extraction of Factors Affecting Consumer Shopping Behavior towards Online Grocery Shopping

Factor analysis is a method of data reduction. Factor analysis is based on the correlation matrix of the variables involved, and correlations usually need a large sample size before they stabilize. Before applying factor analysis, first of all, the adequacy is to be checked, to check the adequacy KMO and Bartlett's Test of Sphericity has been applied. The calculated KMO value is .903 which is more than the standard value i.e. 0.60 which depicts that sampling is adequate and the data analysis can be pursued further.

Table No 1.11-Extracted factors after applying factor analysis

S. No.	Factor wise dimension	Factor loading	Eigen value	% of variance explained	Cumulative % of variance
1.	**Convenient and Remarkable** I found online shopping interesting I found online shopping entertaining I feel online supplier as trustworthy I feel online shopping	.767 .706 .673 .625 .777 .784	4.894	23.306	23.306

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	easy to use I wish to continue using online shopping I would offer other people to buy online product				
2.	**User friendly** No parking problem No traffic problem No fear factor Easily accessible website	.851 .880 .876 .673	4.275	20.357	43.663
3.	**Trustworthiness** I receive the product at right time Online vendor provides product as per commitment Quantity and brand always as per the order Return of spoil items	.635 .666 .620 .628	3.912	18.629	62.292

Table No1.11 shows that three factors have been extracted after applying factor analysis namely'Convenient & Remarkable', 'User friendly' and 'Trustworthiness'. The extracted factor named 'Convenient' is corollarywith the results of the study titled "A Study on Consumers' Attitude Towards Online Shopping" by Dani (2017), "Consumer Behaviour During Online Grocery Shopping" by Hanus (2016), "Consumer Response to Online Grocery Shopping" by Moranosky and Cude (2016), "Online Grocery Shopping and Consumer Perception: A Case of Karachi Market in Pakistan" by Saleem et al.(2018), " Determinant Attributes of Online Grocery

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Shopping In India – An Empirical Analysis" by Prasad and Raghu (2018).

Findings of The Study

The following are the major findings of the project:

1. There is no significant difference between gender and customer satisfaction level of online grocery shopping.
2. There is no significant relationship between ageand customer satisfaction level of online grocery shopping.
3. There is no significant relationship between marital status and customer satisfaction level of online grocery shopping.
4. There is no significant relationship between educational qualification and customer satisfaction level of online grocery shopping.
5. There is no significant relationship between occupation and customer satisfaction level of online grocery shopping.
6. There is no significant relationship between family size and customer satisfaction level of online grocery shopping.
7. There is no significant relationship between family income and customer satisfaction level of online grocery shopping.
8. Three factors named'convenient & remarkable', 'user friendly' and 'trustworthiness' have been found after applying factor analysis.

Suggestions

Such a system of online shopping should be developed that can offer variety of products to satisfy customer needs. It should offer some price discounts and gift vouchers so that customers feel motivated to do online shopping rather than going for offline shopping. It's always a need for grocery products in every home so the products should be made available at right time, right place and in right quality. A fast delivery process is to be there that ensures that products will be made available to customer as and when they require and there will be no delay in that.

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Conclusion

Technology has made significant changes over the years to provide consumers a better online shopping experience. With the rapid growth in the technology consumers are shifting from in-store shopping to online shopping. Online shopping is found to be interesting, entertaining and easy to use that saves the time and efforts of the customer that would have been wasted in searching for product in-store shopping.

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Government Policy towards Foreign Direct Investment in India

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Abstract

Foreign direct investment acts as a catalyst for domestic industrial development, speeds the economic activities, accelerates economic growth and brings socio-economic prosperity by making contribution to the development through the transfers of financial resources, technology, innovations and improved management techniques. FDI provides financial resources for investment in the host country and thereby augments the domestic savings. There has been comparatively more foreign direct investment in the states like Gujarat, Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu and nominal investment has been reported in the states where the problems related to regular supply of electricity, communication and connectivity, security, and investment climate are prevailing.To gain higher level of economic growth most of the States are taking efforts to simplify the rules and procedures and ease the process of setting up and operation of the industrial units. Many State Governments have announced attractive incentives in the form of capital subsidies, sales tax concessions, concessional power tariffs and exemption from certain other charges or taxes among others. . Each state government has its own incentive policy laid down in its industrial policy. Under this incentive policy states' offers various types of incentives such as

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stamp duty exemption for land acquisition, refund or exemption of value added tax, exemption from payment of electricity duty etc. Decision to provide incentives are based on the amount of investments, project location, employment generation etc. So incentives differ from state to state. Thus the present paper analyses the Governments' attitude and policy towards the foreign direct Investment and it also emphasizes on the impact of pandemic Corona on the inflow of foreign capital in India.

Key words: Foreign Direct Investment , domestic investment, Partial liberalization, Globalisation

Introduction

Developing countries are said to have three types of development gaps such as investment gap, foreign exchange gap and Tax revenue gap. FDI has the potential to fill all these gaps as it not only serves the long-term financial interests of foreign investors, it can also play a critical role in the growth dynamics of host countries. FDI provides for the required capital for development activities and also assist the domestic investment, hence filling the investment gap. FDI provides for the foreign currency reserves and also promotes export-earning by its spillover effects on the economic activities in the host country, hence filling the gap of foreign exchange. Finally, FDI helps in mitigating the tax revenue gap by generating tax revenue through creation of additional economic activities.

Apart from playing the role of bridging the gaps, FDI facilitates the transfer of managerial skills and technological knowledge. UNCTAD (1999) defined the role played by FDI in economic growth. It summarized that foreign capital investments helps in developing the technology, skill and knowledge base in the underdeveloped host region as these intangible resources are the basic means of achieving higher development goals. It also boosts the international trade competitiveness and this helps in reaping the benefits of economies of specialization and scale as it broadens the demand base. FDI also helps in maintaining competition in domestic

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markets as there is always checks on the anticompetitive practices of the firms. FDI supplements the domestic savings and investments due to increased economic activities so indirectly it helps in increasing domestic financial resources for development and maintaining the basis for future growth and development. Thus FDI enhances the economic growth of the developing country by proper utilization of resources and by creating economies of scale.

Keeping the importance of FDI in mind, it is imperative to study the government's attitude towards the foreign direct investment.

At start government's approach was restrictive towards foreign capital due to prolonged historical experiences of colonialism. But on the eve of independence, pressure for economic development compelled government of India to adopt realistic approach towards foreign capital.

In 1949 then Indian Government provided 3 major assurances to foreign investors by the Industrial policy statement 1948 that were as follows:

1. No discrimination would be made between foreign and local undertaking.
2. Foreign exchange facilities would be provided to foreign investors in terms of remittances of profits and repatriation of capital.
3. Fair and equitable compensation would be given to foreign investors in case of nationalization of undertaking

After independence the FDI policy of India can broadly be classified into two parts, first is FDI policy before liberalization and FDI policy after liberalization. Pre-liberalization period comprise of four phases where each phase characterized with changing attitude of respective governments towards foreign capital and its role in economic development. The Phase I was from 1948 to 1966. Under this period India adopted the policy of welcoming foreign capital but with caution. The second phase was the period 1966-1979. During this period India's policy towards FDI got restrictive. The period 1980-1990 was the start of adoption of the policy of partial liberalisation of

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the economy. 1991 onwards, government of India completely changed its policy towards FDI with wide liberalisation. By this time period Government of India recognized the role of FDI in the overall growth of the economy and consequently the policies related to FDI started to become more liberal and welcoming.

Pre-Liberalisation Period

Phase-I: The Period of "Cautious welcome policy" (1948-66)

The reason behind this cautious approach lies in colonial experiences of our nation. Before independence the British capital was present in Indian economy but it harmed more than to promote our economic development. Though ample amount of foreign capital was in banking, insurance, shipping extractive industries and plantations but these were serving the interest of colonists not the Indian economy. So after independence, India had pursued an extremely cautious and vigilant approach while formulating FDI policy.

During this time the import-substitution strategy of industrialization was adopted. Due to this colonial exploitation industries of India were destroyed. Partition of India also affected our growth process. India was lagging behind in Industrial techniques and technical knowhow because of repercussion of Industrial revolution that took place in Britain and compelled India to serve as market of finished goods. So with a view to balance between the sovereignty and growth, IPR 1948 laid emphasis on significance of foreign capital in industrialization process along with it proper regulation. India's FDI policy was inherent in the Industrial policy resolutions only. IPR 1956 recognised the small technological base of the economy. It emphasized on developing local capabilities in technology. IPR 1956 led emphasis not only on the need of technology imports but also on the foreign investment to be done in high technology areas.

In later period of this phase government started building up the ground for next liberal phases but still the element of cautiousness was more. Earlier foreign companies were asked to find an Indian partner for investing in capital projects but in 1963-64 Government of

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India decided to give the “letter of intent” to foreign companies to proceed with their capital projects. In 1965 certain tax concessions were made for Non-Resident Account.

Thus there was two pronged intention of policy. On the one hand it promoted FDI in the areas of high technology and high priorities to build national capability through foreign collaboration for keeping the objective of “self reliance” and on the other hand it tried to discourage FDI in low technology areas to protect and nurture domestic industries.

Phase II: The Period of “Selective and restrictive policy” (1967-79)

This period can be said a period of mixed policy stance as it started with breaking the receptiveness shown towards foreign capital in later periods of phase one. Government started being selective and restrictive towards foreign capital during the period of 1968-79.

Though IPR 1970 provided some ease to the large industrial houses and foreign enterprises. These foreign enterprises could now enter in core and heavy industries investment sectors. But prohibition on investment in industries reserved for public sector was still continued.

Then again some tough restrictions were imposed with the enactment of Foreign Exchange Regulation Act (FERA), 1973. The new regulatory framework was consolidated through this act. As a first act of regulation, it was required to bring down the non-resident share holding to 40 % in all branches of foreign companies in India along with Indian joint stock companies within 2 years. This regulation led to huge capital flight. This was done with a view to keep ownership and effective control to be Indian hands. And as a result the total number of collaboration agreements reached an all time low of just 242 (Kumar 1994) during the period 1967-79.

With the huge exodus of capital after the earlier restrictions government provided some relaxation to foreign companies engaged in export oriented businesses and high

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technology and high priority areas. These foreign companies were allowed to have equity holding more than 40 %.

Further relaxation was provided for keeping the interest of Indian economy in mind. Government allowed foreign companies that were engaged in strategic technologies to carry on business with non-resident interest. But this continuance of activities was possible only with the permission of Reserve Bank of India. Same relaxation was provided to those foreign companies that were dealing with basic and core industries of national interest. This process of easing the restrictions continued. Government established special economic zones for boosting exports and also provide incentives to the foreign investors'.

But this softness was on outer side, government was still cautious and very inquisitive from inside towards foreign investors. This resulted in no benefit to Indian economy as despite all these efforts there were no significant increase in exports. Government learnt from its mistake of being too restrictive and intrusive. So it resorted to policy of partial liberalization.

Phase III: The Period of "Partial liberalisation Policy" (1980-90)

After learning lessons from earlier restrictive regime, Government adopted the policy of Partial liberalization in trade and investment policy in 1980s. Steps to ease the licensing requirements were undertaken. Tariff rates were reduced. A good number of items were shifted from import licensing to Open General Licensing (OGL). Technology policy of 1983 laid emphasis on the need to modernize the industries and enhance export competitiveness via this modernisation and marketing of exports through Transnational Corporations (TNCs). Import of capital goods and technology were essential for modernization of the industries. Thus a liberal attitude towards import of capital goods and technology hence towards Foreign Investment was set.

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During this phase there were innumerable steps undertaken that can be considered as precursor of full liberalization of 1990s. Some major steps were as follows:

1. RBI simplified the exchange control procedures, along with the liberalization of facilities with respect to Bank deposits
2. Government started providing tax benefits on investment, such as Estate duty was abolished.
3. Long term capital gains exchange of any foreign exchange asset was exempted from Tax.

Along with these direct incentives to attract more foreign capital, Government took continuous efforts in easing the procedures and removing the hurdles in the path of investment flows. Fast track Disposal system was introduced for investment proposals of some countries. Some quantitative measures were taken like quantitative ceiling of Rs. 40 lacs by NRI's in private ltd. companies was removed, relaxations were provided to Export oriented units in Equity restrictions under FERA act. Non FERA companies were allowed to increase the foreign equity from 40 per cent to 51 percent. Foreign equity participation permitted in the tourism sector was raised to 51 per cent. Four new EPZ's were proposed to set up specifically for promoting FDI. Foreign Investment and technical collaborations were sought in wide range of activities. Investment in core sector industries like fertilizers, cement, petrochemicals, etc., export oriented industries as well as hotels and hospital projects by oil exporting developing countries was allowed up to 40% foreign equity. This limit could be raised in such investments that involve strategic technologies. For Export Oriented Units and free trade zones this investment limit was raised to 100% foreign equity participation. The new investments were allowed in existing companies if it involves technology or exports.

Despite all these steps towards liberalization, this phase was characterized as partial liberalization era because still there were some major restrictions like there was ban on financial and Technical

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collaborations in 22 categories of industries such as paper, cement, consumer goods and other industries, where indigenous technology was sufficiently developed. As a result of this gradual liberalization of FDI policies , investment inflows got better as shown by the increased number of collaboration agreement approved per year during the period 1967-79 to 1980-88.1

Post-Liberalisation Period

Phase IV: The Period of "Liberalisation and Open door policy"

With the aim of raising economic growth potential and integrating Indian economy to the world economy India initiated economic liberalisaion. With the introduction of Industrial policy reforms in 1991 FDI policy was eased. Steps like gradual removal of restrictions on investment projects and business expansion were undertaken. Access to foreign technology was allowed and its funding was increased.

After the balance of payment crisis in 1990-91, India adopted a series of policy reforms under the Structural Adjustment Programmes (SAP). These SAP were suggested by the IMF. Under this SAP framework, India adopted open door policy towards FDI. Industrial policy 1991 regards foreign capital essential for modernisation, technology up gradation and industrial development. GOI liberalised its policy towards foreign investment in 1991 to permit automatic approval for foreign investment up to 51 % equity in 34 industries. FIPB was set up to process application for cases not covered by automatic approval.

A series of measures that were undertaken to liberalise foreign investment were

1. Abolition of industrial licensing except for 18 industries
2. Dual route of approval of FDI was introduced (i) through an automatic approval channel for FDI in 35 priority sectors by RBI and (ii) through Foreign Investment and Promotion Board (FIPB)/ Secretariat for Industrial Assistance (SIA)
3. Automatic permission was given in case of technology

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agreements in high priority industries, restriction of FDI in low technology areas was removed and technology imports were liberalized.

4. Non-resident Indians (NRIs) and Overseas Corporate Bodies (OCBs) were permitted to invest up to 100 per cent in high priorities sectors.
5. Convention of Multilateral Investment Guarantee Agency (MIGA) for protection of foreign investments was signed.
6. Hike in the foreign equity participation limits to 51 per cent for existing companies and liberalisation of the use of foreign “brands name”

These steps were further boosted by less stringent Foreign Exchange Management Act (FEMA), 1999 (that replaced the Foreign Exchange Regulation Act (FERA), 1973). RBI dealt with the investment proposals coming through automatic route and also that relates to the FEMA. On the other hand government with it three institutions viz. the Foreign Investment Promotion Board (FIPB), the Secretariat for Industrial Assistance (SIA) and the Foreign Investment Implementation Authority (FIIA) handled the investments coming through approval route and matters pertaining to FDI policy. Along with these reforms financial sector reforms helped in adopting greater liberalization in capital account. The FDI flows since 1991 has increased leaps and bounds as a result of proactive stance of the government.

Recent Changes in FDI Policy

Government of India has modified its FDI policy in February 2009. Some of the important features of the modified policies were: (1) Many sectors in manufacturing were open to 100 per cent FDI under the automatic route. FDI was allowed up to 100 per cent in all these industries except defense production where it is capped at 26 per cent. FDI was not allowed in a few services including retail trading (except single brand), lottery business and gambling. In the permitted services, foreign equity was allowed below 50 per cent4. (2) FDI was

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currently allowed only up to 49 per cent in scheduled air transport services or domestic passenger airlines. (3) Broadcasting services also have similar rules. Up linking of non-news television channels is the only broadcasting service permitted to have 100 per cent FDI after clearance by the Foreign Investment Promotion Board (FIPB). Majority foreign equity is not allowed in cable television networks and direct-to-home (DTH) operations (4) FDI was allowed only up to 26 per cent in print media. (5) FDI was allowed up to 74 per cent in financial services such as private banks. Insurance however, could get FDI only up to 26 per cent. (6) Minority foreign equity up to 49 per cent was permitted in asset reconstruction companies (ARCs), stock exchanges, depositories, clearing corporations and commodity (7) Although FDI up to 74 per cent was allowed in telecommunication services—both basic and cellular— but only 49 per cent was allowed under automatic route with the rest requiring approval from FIPB.

Foreign investment policy is changed to some extent in 2011 like routes changes: 100 % FDI through automatic route given to distillation and brewing, construction of industrial explosives, hazardous chemicals, airports, green field investment in petroleum sector and cash trading & export trading. Increase **in equity limit**: equity limit of FDI increased to 100% through automatic route in mining, coal lignite for national consumption, infrastructure development for marketing of petroleum and natural gas, investigation and mining of diamond and precious metal. **FDI in new sectors:** 100% FDI through automatic approval provided in electronic trade and its process, storage of rubber and coffee. **Removal of restrictive conditions:** obligatory investment in BEBE commerce condition should be removed. **Process simplification:** FDI through automatic route if sectoral policy of FDI is not surpassed.

Most recently under make in India programmes steps are undertaken to release restrictions impending the path of foreign investment in India with a view to improve ease of doing business. According to World Bank report, India ranks 142 out of 189 countries

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in the category for ease of doing business based on surveys conducted in the two major cities of India, Mumbai and Delhi. For increasing investors' confidence, it is necessary to improve the various constituents of Doing Business indicators like starting a business, trading across borders, getting electricity, getting credit, protecting minority investors, dealing with construction permits, paying taxes, registering property, enforcing contracts and resolving insolvency as these are the indicators being looked by the firm at before going forward with an investment decision in a country.

Thus for improving over these indicators government of India as well as state governments had undertaken certain initiatives such as requirement of minimum paid up capital for companies be removed, requirement of common seal for companies removed, requirement of filling declaration of commencement of business is removed, Loans and guarantees to fully owned subsidiaries allowed, process to approve transaction is made simpler, Customs clearance facilitation committee constituted at ports for expeditious clearance of goods, Five services of companies incorporation, registration with ESIC and EPFO and allotment of PAN and TAN through a single procedure on e-Biz portal.

FIPB got abolished with a view to increase the transparency and for increasing the pace of clearance procedure in FDI proposals so as to attract more and more FDI in the country. Since abolition of FIPB, individual departments of the government have been empowered to clear FDI proposals in consultation with Department of industrial policy and promotions. At present only 11 sectors including Defense, small arms and retail trading, require government approval for FDI and about 90-95 % FDI proposals came under automatic approval.

Following economic reforms, the states are now empowered with increased autonomy in many key areas such as infrastructure. Slowly but surely there is increasing realization among the states that they can shape their own destiny. This prompted the governments at

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the sub-national level to initiate measures to attract more financial resources into the states including FDI (NCAER, 2004).

Most of the States are taking efforts for simplifying the rules and procedures to ease the process of setting up and operation of the industrial units. Many State Governments have announced attractive incentives in the form of capital subsidies, sales tax concessions, concessional power tariffs and exemption from certain other charges or taxes among others. The State Industrial Development Corporations help foreign investors by providing information and guidance in selecting projects and their location, arrangement of infrastructure facilities through concerned Government agencies and also follow up with the State and Central Government Departments and Corporations. Single Window System is now in existence in most of the States for providing approval for setting up industrial units.

Each state government has its own incentive policy laid down in its industrial policy. Under this incentive policy states' offers various types of incentives such as stamp duty exemption for land acquisition, refund or exemption of value added tax, exemption from payment of electricity duty etc. Decision to provide incentives are based on the amount of investments, project location, employment generation, etc so incentives differ from state to state. Apart from this central government also provide some incentives aimed at attracting more and more foreign direct investment to the states such as Incentives for setting-up Special Economic Zones (SEZ), National Investment & Manufacturing Zones (NIMZ) Export Oriented Units (EOUs)etc. Export incentives like duty drawback, duty exemption/remission schemes, focus products & market schemes etc. are provided. Areas based incentives like incentives provided to set-up units in North-East region, Jammu & Kashmir, Himachal Pradesh, Uttarakhand. Sector specific incentives are provided like Modified Special Incentive Package Scheme (MSIPS) in electronics. Since 1991, the inter-state competition to attract FDI has begun to show up

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since the New Economic Reforms has radically changed the framework within which states development policies are implemented.

Pandemic and Its Impact on foreign capital inflows in India

Corona pandemic disrupted the social and economic order across the world. It led to loss of life on the one hand and on another has devastating effect on economic conditions of billions of people due to lockdown. Global growth being turned negative in 2020, there is anticipation of worst economic slowdown since great depression according to WEO 2020.

When corona pandemic hit the Indian economy it was going through the lowest phase of growth over last 6 year. As soon as a major turnaround in the economy was expected, this pandemic started affecting economic activities across all sectors including agriculture, MSME's, construction, services,, trade and investment both domestic as well as foreign. OECD projected the contraction of 6% for single hit of virus. For double hit it projected the contraction of 7.6% in the world economy and 7.3% for the Indian economy. Pandemic and its containment measures gave shock to both supply and demand, hence disrupting the global production, distribution as well as investment networks.

Foreign direct investments across globe are disrupted as well. IMF projected that investors displaced 83 billion US $ from developing countries since corona virus started expanding. UNCTAD (World Investment Report) forecasted, global FDI inflows to decline by 40 % in 2020-21 from its 2019 value of US $ 1.54 trillion. India as well as other nations is trying to attract market and resources seeking FDI by offering growth opportunities in sectors like defence, agriculture, MSME's and sunrise industrial.

FDI is attributed to increase employment, domestic investment along with the overall economic growth of country where it's being taken place due to its stable and long term nature. As economic activities have been slowed down, unemployment is increasing and demand is declining due to loss of income, investment

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is stalled. So to spur the production activities garment undertook some reform measure to attract foreign investors. FDI may contribute in many ways rather than only role of financing of projects. Multinational enterprise are more productive and are largely R&D intensive than the domestic once. SO they are certainly in better position to hep government to combat the negative effect of pandemic. While laying a red carpet for MNCs for investing in India with the promise to offer investment friendly, competitive, business environment and immense opportunities, prime minister of India must have considered these roles of FDI in helping in economy to get back to the track. As far as the effect of Pandemic on the flows of FDI is concerned, the WIR of UNCTAD provides mix response. The report said FDI inflows to the developing countries are not uniformed not only in terms of quantity but also in quality. It further says that fast growing economies like India, Indonesia, Thailand, Malaysia etc., are seeing the surge in FDI inflows mainly in manufacturing and services sector. Contrary to the negative prospects provided for global FDI inflows, UNCTAD gave a positive remark for Indian economy by tagging it as most resilient economy in south Asia and also showed the positive prospect about the FDI inflows. India's large market will continue to attract large market seeking investment. The percentage growth of FDI equity inflows is 13% in FY 2019 – 20 recording a total of 49.7$ million as compared to 44.26$ million in 2018 -19. Total FDI in FY 2019 -20 is highest in last 4 years that is 73.46$ million and increase of 18% as per the department of industrial policy and promotions. In the fourth quarter of FY 2019-20 total FDI inflows were 18.3$ million which is higher than the FDI inflows of last quarter of FY 2018-19 but the growth in FDI inflows in the last quarter of FY 2019-20 is negative and the increase is very marginal in comparison to the past years for the same quarter.

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Table

Year	FDI equity inflows
Jan 2018 – March 2018	14076 $ million
Jan 2019 – March 2019	17711 $ million
Jan 2020 – March 2020	18325 $ million

In January 2020 alone, FDI equity inflows were 55.7$ million that declined to 33.6$ million in February 2020. When pandemic knocked the economy in March 2020 it went up marginally to 42.7$ million. For the first quarter of FY 2020-21 UNCTAD in its report claimed that number of green field investment announcements may decline by 4% and mergers and acquisition by 8% but there are some areas where global venture capital forms and technology companies are showing interest such as professional services, digital economy, health infrastructure etc. Deals worth over 650$ million is concluded by investors in digital sector, in first quarter of 2020. It indicates that where Greenfield FDI is bound to decline, India's large market may provide cushion to the economy by attracting market seeking investment in the country. Despite the depressing projections about the FDI inflows to be decreased by 40 % in 2020 from the 2019 value of FDI inflows and increase of 5-10 % in 2021, the future prospects South Asia looks brighter in post pandemic time. WIR 2020 points out that in 2019 FDI flows to South Asia increased by 20% to USD 57 billion and this growth is mainly due to increase in investment in India. The reason behind the brighter future prospects for investment inflows lies in the disruptions created in the Chinese economy due to Corona and US China trade war and geo political differences between China and major countries. All these conditions created a situation of uncertainty and gave a severe.

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Role of Social Infrastructure in Economic Development of India

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Abstract

The overall economic development and growth of any nation depends upon social infrastructure it possesses. The sound social infrastructure of any nation is driving force behind the economic growth and supports the different segments of the economy to flourish. Over a period of time, it is being increasinglyrecognized that the process of economic development needs to be coordinatedwith the growth of the social sector if it is to be sustainable. In addition, the social services such as health and education are being recognised as agents of socio-economic transformation. At the same time, it is also true that without economic growth sustained improvement in human well-being is not possible. However, suitable government policy is inevitable for effective management of human resources. In India, huge backlog of untapped human resources exists which is reflected in low Human Development Index for the country. This requires an

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effective strategy to identify the human development objectives and commitment on the part of the government. This paper attempts to analyse the role of Social Infrastructure in India. The present paper focuses on education and health.

Key Words: Social infrastructure, Health, Education.

Introduction

In economic development of any country infrastructural development plays a crucial role. The suitable quality and satisfactory infrastructural facilities safeguard the high standard of living as well as also helps in improving productivity and efficiency. According to the World Bank, Infrastructure is an umbrella concept involving numerous activities described to as 'Social Overhead Capital'. Infrastructure is broadly classified into:¬Social Infrastructure is that infrastructure that supports in stimulating the educational, health related and culture related standards of the people, say for e.g., schools, colleges, universities, hospitals, museums etc. on the other hand, Economic Infrastructure contributes and encourages the economic activities, such as roads, highways, railroads, electricity, telecommunications, water supply etc.

Human development and improvement in quality of life are the ultimate objectives of all planning. This is to be achieved through policies and programmes aimed at promotion of both equity and excellence. Social infrastructure is one of the dominant factors, ensuring the satisfaction of basic human needs, as well as the development of the state and its territory. Social infrastructure plays a significant role in both the economic development of a nation and the development of society's quality of life. Social infrastructure

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improves social wellbeing and promotes economic growth by providing elementary services and facilities which allow businesses to develop and flourish. “It is increasingly being recognized that the process of economic development has to be matched by the growth of the social sector if it is to be sustainable. In addition, the social services such as health and education are being recognised as agents of socio-economic transformation [Panchmukhi, 1995]”. At the same time, it is also true that without economic growth sustained improvement in human well-being is not possible. However, suitable government policy is inevitable for effective management of human resources. In India, huge backlog of untapped human resources exists which is reflected in low Human Development Index for the country. This requires an effective strategy to identify the human development objectives and commitment on the part of the government. This paper attempts to analyse the status of Social Infrastructure in India. The present paper focuses on education and health.

Review of Literature

A literature review is a examination of scholarly sources on a explicit topic. It offers an overview of current knowledge, allowing an individual to identify pertinent theories, methods, and gaps in the existing research. Social infrastructure has always been area of interest for many researchers in the context of socio-economic change and economic development.

In the present paper, Martin, and Yuan [2004] has developed a growth model with a public sector and a human capital sector to explore the impact of social infrastructure on investment in physical capital, the accumulation of skills,

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output, and consumption. The researchers found that the implications of the model are consistent with the empirical observations of Hall and Jones [1999].As per the study, economies where government guidelines and organisations encourage production over diversion have a betterstandard of social infrastructure, condition to the size of population and superiorand diverse technologies, which further upsurges output per worker by increasing the scope of participation in market, rather than diversive, activities.

The degree of these effects depends on economic agents' inherent propensity for rent-seeking. In addition, economies with unstable governments may suffer from an under-provision of social infrastructure and, consequently, have reduced levels of capital and output per worker.

The study conducted by Dash and Sahoo in [2010], investigated the role of physical and social infrastructure in economic growth in India after controlling for other important variables such as investment, labour force, and trade, using the Two- Stage Least Squares [TSLS] and Dynamic Ordinary Least Squares [DOLS] techniques. The time period covered for the present study was from 1970 to 2006. For the purpose, the researchers developed a composite index of physical infrastructure stocks so as to analyse its impact on output. The findings of the study revealed that the physical and social infrastructures is having a considerable positive effect on output independently from gross domestic capital formation and international trade. The study also revealed unidirectional causality covering a wide range from infrastructure development, human capital to output growth in India.

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The study carried out jointly by Frolova, Vinichenko, Kirillov, Rogach and Kabanova [2016] has discussed social infrastructure as one the dominant factors, which ensures the satisfaction of basic human needs and also promotes the development of the state and its territory. The present study also discusses about the availability of various facilities and services related to transportation, housing, social protection, health, and education which holds the crucial positions in the practice of state and municipal administration and is determined by a number of factors. Efficientadvancement of social infrastructure will offer a promising social security and political stability to the economy. However, at the local level, the operation and development of social infrastructurefaces challenges due to its multidimensional nature and hence, leads to special demand to the system of management. Concentration on a particular territory of all processes of sustenance of the population, territorial localization of the objects of social infrastructure confirms the effectiveness of autonomy of local government from the government institutions in the solution of the issues of local character.

Ahzam and Saxena [2017], in their research study, have examined the rising development in urban social infrastructure in MMR [Mumbai metropolitan region], India. The study found that, contrasting the other planned metropolis of India, MMR was distinctively built as a planned transference of a huge urban city. The study also explained the urban social infrastructure of this specific case study. An urban social infrastructure reflects the social attributes of the urban setting. In the instance of MMR, the government had a social agenda to encourage a social form based on socioeconomic division

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rather than a cultural one. The study includes a broad review of secondary source data to create the speculative framework for the research. The review also involves an extensive inspection of the past, present and future of the whole MMR [Mumbai metropolitan region] to better understand the whole context of urban morphology and social infrastructure as a whole and also its effects, pros and cons. The research puts forth a study that explains the social infrastructure of MMR by social area investigation using variables, which are found from social aspects of any big city and native/radical factors of Indian settlements. The study depends not only on form and space analysis but also on understanding of local conditions. As the local conditions of working, living, the geographical factors all widely affect the social infrastructure of the city. This research lays the understanding of the rising social patterns in in developing cities.

Henk, Frederick, and Talita, in their study [2017], discussed about the basic and social infrastructure investment can assist in addressing widespread inequality and divided societies by promoting economic growth and social development. The aim of the study was to determine whether basic and social infrastructure investment differently affect economic growth and social development indicators of urban and rural municipalities. Researchers used a balanced panel dataset containing infrastructure, economic, demographic, and social indicators for rural and urban municipalities and the time period taken for the same was from 1996 to 2012. To construct synthetic indices of basic and social infrastructure, principal component analysis was used. Restricted within least squares dummy variable estimation techniques were used to evaluate

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the differences between urban and rural municipalities. The elasticities of basic and social infrastructure investment were more pronounced for economic growth and social development indicators in rural municipalities. It was also found, that potentially influence policy decisions in terms of infrastructure investment in favour of rural municipalities to increase economic growth and social development.

The research carried out by Latham and Layton [2019] mentions that social infrastructure helps in recognising the public dimensions of often overlooked and undervalued spaces. It draws attention to the breadth, depth, and textures of sociality that can be afforded by different urban environments. In developing the concept of social infrastructure, the presentstudy pulls collectively four related components of social scientific inquiry i.e. effort on infrastructure; publicness and public space; sociality and encounter; and the politics of provision. An infrastructural approach to the topic of public space introduces geographers througha variety ofusefulmeans for recognizing the public life of cities.

The conclusion of the review of literature shows the impact of social infrastructure on investment in physical capital, accumulation of skills and output. The above-mentioned studies have been carried out on various studies pertaining to social infrastructure from social, economic, and other perspectives. These studies have been carried out with purpose of covering some selected aspects of social infrastructure. There is a wide scope for research on various aspects of social infrastructure.

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Social Infrastructure in India

Social infrastructure is the mixture of basic facilities which are essential for human development. Social infrastructure comprises of education, health, sanitation, and water supply. There are primarily two types of infrastructure – Economic infrastructure and social infrastructure. Both of these infrastructures are complementary to each other and are necessary for the overall development of an economy. Social infrastructure indirectly supports the economic system from inside. It improves the quality of human resources and thus, improves the efficiency of manpower. Expenditure on social infrastructure will lead to the increment and development of human capital of a nation. Investment in social infrastructure is a pre-requisite for inclusive growth and development of any economy. The Economic Survey 2019-20, presented in parliament shows that, there has been expenditure on social services by the Centre and States increased from 7.68 lakh crore in 2014-15 to 15.79 lakh crore in 2019-20 [Budget Estimate]. The expenditure on social services as a proportion of Gross Domestic Product [GDP] increased up to 7.7 percent in the year 2019-20 from 6.2 percent in 2014-15 showing an increase of 1.5 percent.

State of Education in India

Education is an important social achievement. It is also an agent of change [Dreze and Sen, 1996] It determines aspirations, technology, productivity, and mobility. It also changes perceptions of costs and values of human beings and their contribution to the economy of household and the nation [Mitra, 1977]".An important asset for the Indian economy is its education system being the second largest in the world.

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Expansion of the education sector has led to an improvement in the literacy rate in the country. In view of the new education policy aimed at universalising the education for all, state governments have abolished the tuition fee for all children up to the elementary level. Despite this, the dropout rates at primary and secondary level education remain high [Agrawal, 1997]".

Education in every sense is one the fundamental factors of development. No country can achieve sustainable economic development without substantial investment in human capital.

The economic survey of the 2019-20 says that expenditure on education, as a percentage of GDP increased from 2.8 per cent to 3.1 per cent between 2014-15 and 2019-20 [BE].

Table 1: Allocation for the Education Sector in Union Budget 2019-20 [Rs in crore]

	Real Estimates	**Budget Estimates**
Total Education	83625.86	94853.64
Dept. of School Edu & literacy	50113.75	56536.63
Dept. of Higher Education	33512.11	38317.01

The table 1 shows financial allocations for education sector. Since the Millennium budget in the year 2000, there has been 17-fold increase in spending on education from Rs. 5,635 crores to Rs. 94,853.64 crore in Union Budget 2019-20. Of the total education budget, Rs. 56,536.63 crore has been allotted for the school education while Rs. 38317.01 crore has

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been devoted for Higher Education. This indicates a 12.8 percent Year-on-Year [Y-o-Y] increase in FY 20 for school education and 14.3 percent Y-o-Y rise in budgetary allocation for higher education.

Table 2: Allocations for Key Initiatives in School Education in Union Budget 2019-20 [Rs in crore]

	Real Estimates	**Budget Estimates**
National Education Mission	30833.99	9949.04
Mid-Day Meal Program	36447.4	11,000

The table 2 shows allocations for key initiatives in School Education in Union Budget 2019-20. It shows that around 60 percent of the total education budget has been reserved for school education including the National Education Mission and Mid-Day Meal Programme. As compared to 2018-19, there has been increase in allocation of funds by 18.2 percent for the National Education Mission. Whereas the allocation for mid-day meal programme witnessed the rise by 10.5 percent from the previous financial year’s real estimates. Regardless, the rise in absolute spending on the sector, it still faces visible challenges in terms of disparities geography and demography.

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Table 3: Allocations for Key Initiatives in Higher Education in the Union Budget 2019-20 [Rs in crore]

	Real Estimates	Budget Estimates
Improvement in salary scale of University & College Teachers	469.18	2000.00
World Class Institutes	128.9	400.00
Research & Innovations	243.6	608.87
Indian Institutes of Management	372	445.53
Indian Institutes of Technology	5714.7	6409.95

"India now has 864 university-level institutions, 40,026 colleges and 11,669 stand-alone institutions [Niti Aayog]". During the last five years, the number of university-level institutions has grown by about 25 percent and the number of colleges by about 13 percent. There has been increase in India's GER [Calculated for the age group 18-23 years] showing an increase from 11.5 percent in 2005-06 to 25.2 percent in 2016-17. But still, we lag behind when we compare ourselves with the world average of 33 percent.

The Government has initiated the process of formulating a New Education Policy with a focus on quality education, innovation, and research. Recently, there has been the inclusion of three institutions from India in QS World University Rankings [IIT Mumbai, IIT Delhi and IISc] an achievement indeed. For the purpose of developing "World Class Institutions "a sum of Rs. 400 crores have been allocated in the 2019-20 financial year showing a substantial

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increase from the Rs.128.90 crore allocated in the 2018-19 RE as shown in above table. In the Union Budget 2019-20 there has been allocation of Rs 608.87 crore to research and innovation has been given due priority showing more than two-fold increase. It was Rs.243.6 crore in RE 2018-19.

State of Health infrastructure in India

Health is a holistic process related to the overall growth and development of the nation. **"**Health services in a country not only strengthen the self-reliance in the community but also empower people to develop their own means [Banerji, 1992]"."In the recent years, the health and economic growth linkage has become an important rationale and rallying point for countries to work towards advancing universal health coverage [UHC] by focusing on improving services provisions and developing mechanisms for financial protection. India has also committed to achieve UHC as part of the country's National Health Policy 2017 [NHP,2017]". At the same time, it is equally true that affordable health service should be accessible to the majority population. Better health of people is essentially related to and contributes to economic growth and overall development of a nation. Health is a social agreement between people. The global discourse on advancing universal health coverage is an opportunity for the governments at all levels to increase government spending on health, improve overall health services provision; and to develop mechanism for providing financial protection.

Globally, the average government spending on health as a proportion of GDP stands at around 5 percent and in terms of proportion of budget at 10 percent. expenditure on health increased from 1.2 per cent to 1.6 per cent during the

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same period as a percentage of GDP, the pre-budget document notes. In nominal terms, per capita government expenditure on health in health in India in 2014-15 was Rs. 1, 108 of the total Rs. 3,826 per capita health expenditure [MoHFW, 2016]".

Table 4: Allocation of Interim Union Budget of India on Health Sector, 2019-20

Ministry/Dept/Program	2017-18 [Actual]	2018-19 [BE]	2018-19 [RE]	2019-20 [BE]	Percent Change *
Ministry of Health & Family Welfare	53,114	54,600	55,995	63,371	16.0
Dept. of Health & Family Welfare	51,382	52,800	54,302	61,398	16.3
National Health Mission [NHM] Total	31,521	30,129	30,683	31,745	05.4
National Urban Health Mission [NUHM]	664	875	675	700	-20.1
Ayushman Bharat Program [ABP]	-	-	3600	8, 000	150.0
Health & Wellness Centre- Rural	-	-	1,000	1,350	35.0
Health & Wellness Centre- Urban	-	-	200	250	25.0
Dept of Health Research [DHR]	1,732	1,800	1,743	1,973	09.6
Ministry of AYUSH	1,531	1,626	1,693	1,739	06.9
National AYUSH Mission	479	505	505	506	00.0
Ministry of Women & Child Development	20,396	24,700	24,759	29,165	18.0
Total ICDS	19,234	23,088	23357	27584	19.5

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National Nutrition Mission [includg ISSNIP]					
Department of Pharmaceuticals Ministry of Chemical & Fertilizer	252	261	213	236	-09.6

Note: All amounts in Indian Rupee in Crores; BE: Budget Estimates; RE Revised Estimates

ICDS: Integrated Child Developing Services.

ISSNIP: ICDS System Strengthening and Nutrition Improvement Program

*Change is comparison between BE 2018-19 and BE 2019-20 [Interim Budget]

The table 4 shows allocation of Interim Union Budget of India 2019-20 for various heads of health. The table showed total allocation of 8,000 crore to Ayushman Bharat [AB] Program and NHM received 31,745 crores. 'Healthy India' has been identified as one of the 10 dimensions under Vision for India by 2030. There is approximately 13 percent increase in Union Budget 2019-20 over RE in 2018-19. A large part of the increase in the budget for health is often balanced off by annual economic growth, population growth and inflation rate. Therefore, for India to achieve NHP 2017 target, both Union and States have to increase health allocation by around 20 percent to 25 percent, every year for the next 5-6 years. Considering that India is amongst the fastest growing large economies, it is very much feasible and desirable. "The government spending on PHC makes health services efficient; reduces the cost and helps in delivery of preventive and

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promotive health services. The PHC system can tackle up to 80 percent of health needs and can reduce the need for specialized health services. Indian states have an elaborate network of primary healthcare facilities [Lahariya, 2019]".

Conclusions and Policy Recommendations

The ultimate aim of all planning and development is the socio-economic growth and achievement of sustained and equitable development remains the greatest facing the human race. Despite progress over the past few decades, a large mass still suffers from grossly inadequate access to resources-education, health services etc. required to give them a chance for better life. The essential task of development is to provide opportunities so that these people reach their potential [World Bank, 1995]

To withstand this impetus in human development and to further accelerate it, the role of the public sector in the delivery of social services is critical. Looking at India's demographic advantage of a large young population in the productive age group, improvements in social sectors like education and health will leave a profound impact on the quality of life of the people and productivity of the economy. Ayushman Bharat, is the world's biggest health care scheme to improve access to health and delivery of health services at a massive scale, has set up 28,005 Health and Wellness Centres as on January 14, 2020. Over a period of time India has crossed the health policy formulation stage and it is embarking on its implementation.

In plotting India's development trajectory, sequential national policies have bestowed due importance to the education sector. India's education sector is well placed to

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build sound foundations for sustainable development. This is demonstrated by its evolution through constitutional and legislative reform, union and state schemes, key budgetary announcements and towards its effective implantation.

There is need to formulate long-term plans of economic development of the country must incorporate the planning of education and health as a part of overall macro policy. Also, there is need to bridge infrastructure gaps to sustain economic growth. Though there is increase in investment in education and health, which is not sufficient and therefore need to boost its investment in social infrastructure.

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Poverty Alleviation through Women Empowerment At Arambagh Sub-Division In West Bengal: An Initiative Towards Growth

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Abstract

The poverty and unemployment are two severe problems leading low socio-economic development. Growth of entrepreneurship is a powerful strategy to alleviate poverty and unemployment. The development of entrepreneurship not only increases the rate of employment but also the status of women and ultimately leads to women empowerment. Since women constitute fifty per cent of total population of India, the socio-economic development cannot be fully realized as long as women are confined to subordinate position and their talents remain unexplored. To achieve the objective of social justice, it is necessary to harness the latent skills and potentials of women, especially the rural women. They play key role in rapid and sustained economic development by contributing at par

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with men in all developmental activities. In the past, women were restricted to the four walls of kitchen but of late things have changed and they are participating in all economic activities due to their awareness their rights and duties and skill. They are participating at par and even more than their counterparts. Empowering women is a prerequisite for development of a good nation. When women are empowered, society with stability is assured. It is essential as their thoughts and their value systems lead to development of a good family, good society and ultimately a good nation. Microfinance institutions target the poor; with the aim of empowering the weaker sections particularly women. The Government can make use of the SHGs model to reach everyone in the society along with the existing measures of welfare. If India to be the super power of 2025, it has to give prime importance to women who has been neglected earlier. Nobel Laureate Amartya Sen has emphasized that unless women are empowered, issues like health, literacy and population will remain unsolved problems of the developing countries in this part of subcontinent. Caution must be taken that these SHGs shall not become the pawns in the hands of politics.

The Government of India has implemented number of measures to eradicate the poverty during Five Year Plans such as IRDP, NREP, JRY, etc. The poor require small and urgent loans, whereas their options are restricted to programmes designed and approved by the Govt., which do not cater to their needs. Hence, to bridge the gap between the demand and supply of funds in the lower runs of economy, the micro finance schemes of the NABARD have made a smooth foray in eradicating poverty. But only government initiatives cannot

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change the whole scenario. Financial literary, awareness and mind set of the beneficiaries should be upgraded.

Key Words: Poverty, Growth, SHGs, Women Empowerment.

Introduction

The poverty in India is not only predominant in rural in absolute but also its incidence is more frequent. There is a big gap between rural and urban in terms of income, education, health and nutrition which are shrinking. The poverty is widespread in rural areas and in fact, urban poverty is considered to be reflection of rural poverty, as a large number of rural labourers migrate to urban for their livelihood. A phenomenon closely related to poverty is unemployment. The poverty and unemployment are two severe problems leading low socio-economic development. Eradication of poverty and unemployment is one of the objectives of planning period. Growth of entrepreneurship is a powerful strategy to alleviate poverty and unemployment. Since women constitute fifty per cent of total population of India, the socio-economic development cannot be fully realized as long as women are confined to subordinate position and their talents remain unexplored. To achieve the objective of social justice, it is necessary to harness the latent skills and potentials of women, especially the rural women. They play key role in rapid and sustained economic development by contributing at par with men in all developmental activities. Further, economic independence of women with equal opportunity is the need of the hour. This is possible by forming the voluntary associations like SHGs which are suitable for the empowerment of women.

The RBI has been playing a pro-active role in promoting MF. The lending to SHGs has been included in priority sector. The

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Self-Help Group Bank Linkage Programme (SBLP) is now considered by the banking system as a commercial proposition, with leverage of transaction costs, lesser NPAs and coverage. The NABARD has assigned the role of poverty alleviation programme through micro credit. The NABARD's SBLP has been a major effort to connect thousands of SHGs across the country with the formal banking system.

The Governments at the Center and at the State have been making all efforts in developing more and more entrepreneurs to fight against all social evils. The role of NGOs in women empowerment programmes need not be exaggerated. The NGOs are doing well particularly through self-help group formation, motivating women on savings and thrift and making them fully involved in economically productive activities through micro credit and finance. The NGOs have taken a lead role in forming SHGs. The main objectives of the study are: a) to analyse the impact of micro finance in reduction of poverty. b) to examine the entrepreneurial activities undertaken by SHG entrepreneurs to reduce poverty. c) to analyse the indicators of women empowerment and growth. d) to offer useful suggestions.

Poverty Reduction through Microfinance and Women Empowerment

Women constitute fifty per cent of world population. They suffer from many disadvantages as compared to men in terms of literacy, labour participation and earnings. The major strategies of women empowerment include social empowerment, economic empowerment, political empowerment and gender justice along with demographical justice. ―Presently, the world‗s population is 7.1 billion and

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growing at the rate of 97 million per year and it will reach 8.5 billion by the end of 2025. About 95 per cent of population growth will be in the developing countries. The Asian continent‗s population is 3.55 billion, which may reach 4.54 billion by 2025.

In the early societies, generally the males and females were playing an active and passive role respectively. The societies were male dominated and the females were considered only as a thing of enjoyment for them. The orthodox Hindu society believed that the women are dependent and they have no right to personal liberty, ―stree swatantrayam naarhati‖ which means women is not eligible for freedom.

Women constitute half of Indian population and play a vital role in the development of family, the community and the nation. It has been widely recognized that unless women‗s potential is properly tapped, no transformation and economic development is possible. Therefore, to accelerate the growth and prosperity of the nation, it is very important to create opportunities for socio-economic development of women in rural and urban India. In fact, since independence it has been felt that women experience poverty to greater extent than that of men. The benefits of poverty eradication programmes targeted towards the head of household have failed to trickle down and failed to reach the women. Since then, the Government of India has been emphasizing the need of designing separate development programmes for women. It plans to earmark a specific percentage for women beneficiaries in development programmes. There is an emerging need to improve women‗s status that should start

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with economic empowerment. Empowerment is a concept that gives equal importance to both men and women; it is the idea of sharing of power, of truly giving it away. Empowerment is the process through which individual gain efficiency, which is defined as the degree to which the individual perceive that they control their environment. In the words of former President of India Dr. A.P.J. Abdul Kalam, ― empowering women is a prerequisite for creating a good nation. When women are empowered, society with stability is assured. Empowerment of women is essential as their thoughts and value systems lead to development of a good family, good society and ultimately a good national.

If woman is empowered, her competencies towards decision-making surely influence her family's and neighbour's behaviour. The presence of these spill over effects will thus create a social multiplier 'where aggregate power will be greater than individual power. This indicates that woman is a power and women are a power. Based on this, MF or SHGs are successful to develop the entrepreneurship among women. In advanced countries, there is a phenomenal increase in the number of self-employed women after the World War II. ―In U.S.A, women own 25 per cent of all business, even though their sales are on an average less than two-fifths of those of their small business‖. In Canada, one-third of small businesses are owned by women and in France, it is one-fifth. Ninety per cent of the rural women are unskilled and 88 per cent are illiterate which makes them vulnerable to exploitation and economically dependent on men. No serious efforts have made to improve the condition of women. There is a need to promote entrepreneurship through which women are

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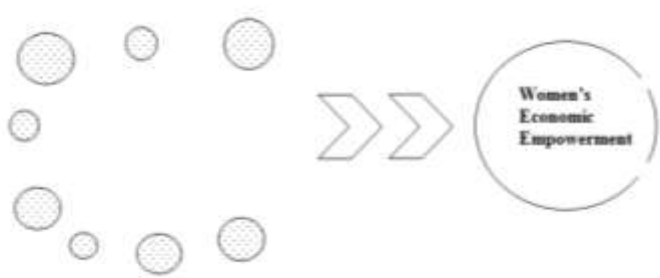
empowered.

Government Initiatives

The Government of India's policy on women development has undertaken various shifts of emphasis since independence. The most significant changes occurred in mid 1980s during the Seventh Five-Year Plan, which started a move towards equality and empowerment rather than development. This resulted into the evolution of Dept. of Women & Child Development under the Ministry of Human Resource Development and its counter parts in the states. Further, corporations were set up to implement training on entrepreneurship development, credit, technical consultancy services and marketing facilities. The Eighth Five Year Plan makes a further shift towards empowerment of women, emphasizing women as equal partners in the development process. The government continued advocacy for sustained equitable growth opportunities for women through increased participation in local governments, poverty alleviation programmes, the elimination of discrimination against girl children and reservation in education and job. It made to promote income generation activities, thrift, and credit through SHGs for women.



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Analysis and Findings

In terms of occupation of SHG entrepreneurs, generation of employment, investment of SHG entrepreneurs, and food expenditure of SHG entrepreneurs and savings of SHG entrepreneurs at Arambagh subdivision (including Panchayat) of WB have been described briefly. These are the major components of women empowerment towards growth.

Table 1: Population in India 2010-2019

	2010	**2019**	**Difference**	**%Growth 2010-2019**
Males	532223090	623724248	91501158	17.19
Females	496514346	586469174	89954828	18.12
Persons	1028737476	1210193422	181455986	17.64

Source: www.censusgov.in

It is revealed from Table 1 that the population of India has increased by more than 181 million during the decade 2010-2019. The growth rate of female population is 18.12 per cent and male population is 17.19 per cent. This indicates that growth of female population is greater than male during the decade.

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Table 2: Occupation of SHG Entrepreneurs

Occupation	No. of SHG entrepreneurs	
	Before	**After**
Labour	59 (23.60)	06 (2.40)
Agriculture	124 (49.60)	55 (22.00)
Business	26 (10.40)	59 (23.60)
Income Productive activity	17 (6.80)	95 (38.00)
Others	24 (9.60)	35 (14.00)
Total	**250 (100)**	**250(100)**
Df	**04**	
Chi-square	**138.9972**	
Critical value	**9.448**	
	Significant	

Source: *Field survey*

Figures in parenthesis show the percentages to the total

It is evident from Table 2 that percentage of entrepreneurs who have undertaken business, income productive activities and others have registered a growth after joining SHG. Those entrepreneurs who were carrying agriculture shifted themselves towards entrepreneurship activities such as tailoring. This shows that internal lending motivated the entrepreneurs to engage themselves in income generation activities. The calculated chi-square value is 138.9972 and the critical chi-square value at 5 per cent level of significance for 4 degrees of freedom is 9.448. This indicates that there is significant change in the type of occupation of the

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entrepreneurs after joining SHG as compared to before joining SHGs. Hence, it is inferred that joining SHG has brought change in occupation.

Table 3: Generation of Employment

Employment	**No. of SHG entrepreneurs**	
Crop Enterprise	24 (9.60)	03 (1.20)
Dairy	06 (2.40)	28 (11.20)
Sericulture	00	04 (1.60)
Poultry	02 (0.80)	16 (6.40)
Fishery	01 (0.40)	05 (2.00)
Others	217 (86.80)	194 (77.60)
Total	**250 (100)**	**250 (100)**
Df	**05**	
Critical value	**11.070** **Significant**	

Source: *Field survey*

Figures in parenthesis show the percentages to the total

It is observed from Table 3 that the percentage of entrepreneurs who have undertaken the crop enterprises has decreased from 9.60 to 1.20 and at the same time, the percentage of the entrepreneurs employed in dairy has increased from 2.40 to 11.20. The poultry activity of the entrepreneurs has increased from 0.80 per cent to 6.40 per cent after joining SHG. Further, it is evident from chi-square test that the calculated chi-square value is 49.4113 and critical value for 5 degrees of freedom at 5 per cent level of

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significance is 11.070. This signifies that the generation of employment has increased after joining SHG.

Table 4: Investment of SHG Entrepreneurs

Investment	No. of SHG Entrepreneurs	
	Before	**After**
Post Office Certificates	43 (17.20)	82 (19.62)
Bank deposits	66 (26.40)	133(31.82)
LIC Bonds	136 (54.40)	189 (45.22)
Others	5 (2.00)	14 (3.34)
Total	**250(100)**	**418* (100)**
Df	**03**	
Critical value	**7.815** **Insignificant**	

Source: *Field survey*

Figures in parenthesis show the percentages to the total

**Multiple choices*

It is evident from table 4 that there has been noticeable increase in the investments of the entrepreneurs. The percentage of entrepreneurs investing in Post Office Certificates has increased from 17.20 to 19.62. The percentage of them who invested in banks has increased from 26.40 to 31.82. At the same time, the percentage of

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entrepreneurs invested in LIC has decreased from 54.40 to 45.22. However, the calculated value of chi-square (5.7435) is less than its critical value (7.815) at 5 per cent level of significance for 3 degrees of freedom. Hence, it is proved that there has no significant improvement in investment of entrepreneurs. It is inferred that the entrepreneurs require the guidance on investment.

Table 5: Food Expenditure of SHG Entrepreneurs

Food Expenditure p.a	**No. of SHG entrepreneurs**	
	Before	**After**
Less than ₹ 5000	184 (73.60)	92 (36.80)
₹ 5001 to ₹ 10000	37 (14.80)	115 (46.00)
₹ 10001 to ₹ 15000	1 (0.40)	10 (4.00)
₹ 15001 to ₹ 20000	14 (5.60)	9 (3.60)
₹ 20001 to ₹ 25000	9 (3.60)	12 (4.80)
₹ 25001 to ₹30000	5 (2.00)	9 (3.60)
Above ₹30000	0 (0)	3 (1.20)
Total	250(100)	250(100)
Df	**06**	
Critical value	**12.592** **Significant**	

Source: *Field survey*

Figures in parenthesis show the percentages to the total

Table 5 revealed that the percentage of entrepreneurs spending less than ₹5000 p.a has decreased from 73.60 to 36.80. The percentage of entrepreneurs spending in between

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₹5001 to ₹10000 has increased from 14.80 to 46. The reason for this may be increased income after joining SHG and due to the increased price level. Further, it is evident from chi-square test that the calculated chi-square value is 83.715 and its critical value is 12.592 at 5 per cent level of significance for 6 degrees of freedom. Hence, it is concluded that the expenditures on food consumption has significantly improved after joining SHG.

Table 6: Savings of SHG Entrepreneurs

Amount of Savings p.a.	No. of SHG Entrepreneurs	
	Before	After
Less than ₹ 15000	206 (82.40)	179 (71.60)
₹ 15001 to ₹ 30000	24 (9.60)	19 (7.60)
₹ 30001 to ₹ 45000	3 (1.20)	23 (9.20)
₹ 45001 to ₹ 60000	4 (1.60)	5 (2.00)
₹ 60001 to ₹ 100000	7 (2.80)	11 (4.40)
Above ₹ 100000	6 (2.40)	13 (5.20)
Total	**250 (100)**	**250 (100)**
Df		**05**
Critical value	**11.070 Significant**	

Source: *Field survey*

Figures in parenthesis show the percentages to the total

From table 6, it is observed that the percentage of

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entrepreneurs whose savings were less than ₹15000 has decreased from 82.40 to 71.60 after joining SHG whereas after joining SHGs, the entrepreneurs have started saving beyond ₹ 30000. Since the calculated value of chi-square is 21.4384 and its critical value is 11.070 at 5 per cent level of significance for 5 degrees of freedom, there has improvement in savings after joining SHG. It is evident that the savings habit among the entrepreneurs has considerably increased. It is inferred that formation of SHG has made an effort to come out of vicious circle of poverty.

Suggestions and Conclusion

The Government of India has been making significant provision of financial of resources out of annual budget to address the problems of poverty. As a part of poverty alleviation, the Governments at the centre and at the state have adopted strategies to finance the members of SHGs to carry out their economic activities on small scale. The programme of Micro Finance should be revised by the Government of India, State Government and Apex in the Banking system not only to extend timely credit but also to ensure repayment without coercion and influence. Microfinance institutions target the poor; with the aim of empowering the weaker sections particularly women.

The Governments have launched a number of schemes for removal of poverty and unemployment but the SHGs have almost replaced the same. In the fast, women were restricted to the four walls of kitchen but of late things have changed and they are participating in all economic activities due to their awareness their rights and duties and skill. They are participating at par and even more than their

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counterparts. Empowering women is a prerequisite for development of a good nation. When women are empowered, society with stability is assured. Empowerment of women is essential as their thoughts and their value systems lead to development of a good family, good society and ultimately a good nation. The confidence of women has increased due to participation in formation of SHGs and by undertaking entrepreneurship.

The present study reflects that the SHG entrepreneurs have significantly improved their occupation and family properties. They have determination to improve their financial conditions. Their entrepreneurial skills have harvested with internal lending of loan among the group entrepreneurs. The hidden talents of the entrepreneurs of SHGs have given exposure and have become instrumental in alleviation of poverty. The development of entrepreneurship not only increases the rate of employment but also the status of women and ultimately leads to women empowerment. The NGOs have been playing their own role in discharging of social responsibilities by joining their hands with the governments. They need to identify the real beneficiaries and train them to bring to main streamline. The morale is to be built up among the entrepreneurs of SHGs to enable them to avail financial assistance from the funding agencies. The potentials of the underprivileged sections have to be tapped in achieving the millennium development goals. The formation of SHGs is boon for under privileged sections of the society. The SHGs are instrumental in bringing the people to formal channel of banking. It is win- win situation for both the banks and people. They create a sense of independence among the

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entrepreneurs of SHGs through the process of empowerment. The Government can make use of the SHGs model to reach everyone in the society along with the existing measures of welfare. If India to be the super power of 2025, it has to give prime importance to women who has been neglected earlier. Nobel Laureate Amartya Sen has emphasized that unless women are empowered, issues like health, literacy and population will remain unsolved problems of the developing countries in this part of subcontinent. Caution must be taken that these SHGs shall not become the pawns in the hands of politics. Emancipation of women is possible only through the formation of SHGs. People's involvement is also necessary in this direction. The following proper suggestive measures should be taken:

Setting up of a separate cell by banks, counselling to members of family of SHG entrepreneurs, control of multi membership, Increasing revolving fund assistance, proper monitoring of utilization of funds, encouraging Non-farm activities, awareness of training programmes, appropriate training, establishment of B-school, performance based funding, guidance on farm activities, extension of women bank in study area, introduction of certificate courses, improving of packing of products, online marketing, formation of men SHGs, developing leadership among members, women marketing Co-operatives, capacity building programmes.

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