

## BLUE OCEAN STRATEGY

### A marketing theory to create uncontested market space and make the competition irrelevant

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#### Abstract

*In the 21<sup>st</sup> century the world is changing; dramatic shifts in technology and the global marketplace are having a profound impact on organizations. Whether they operate in the private, public or non-profit sectors, organizations in every continent need to rethink the way they do business. Organizations can no longer afford to build a strategy on existing environmental and industry conditions, but instead shape them in their favour.*

*Blue Ocean Strategy is a marketing theory by [W. Chan Kim](#) and [Renée Mauborgne](#), professors at [INSEAD Business School](#), in their 2005 book - *Blue Ocean Strategy*. Based on a study of 150 strategic moves spanning more than a hundred years and thirty industries, Kim and Mauborgne argue that companies can succeed by creating "blue oceans" of uncontested market space, as opposed to "red oceans" where competitors fight for dominance. They assert that these strategic moves create a leap in value for the company, its buyers, and its employees while unlocking new demand and making the competition irrelevant*

**Keywords :** *marketing theory, value, demand, competition, strategy*

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## Introduction

Supply is overtaking demand in more and more industries. As technology continues to improve industrial productivity, suppliers are producing a greater range of products and services than ever before. The result is that supply is overtaking demand in more and more industries, leading to greater commoditization of products and services. As brands become more similar, people increasingly base their purchase decisions on price, leading to shrinking profit margins. And so it becomes harder for brands to differentiate themselves, leading many companies to compete principally on cost.

Healthcare, education, financial services, energy— these industries and sectors matter to every one of us. However, as demand continues to grow, budgets diminish and pressures increase. Now, more than before, the players in these and other industries and sectors need to find creative solutions, ie, a shift in thinking that achieves innovation at lower costs.

Companies from China, India and Latin America are changing the economic landscape. They are competitors with global ambitions as big as any American, European or Japanese company. In addition, players from all corners of the world can participate in global markets through the internet at low cost. To stand apart in these overcrowded markets, you need to be creative through value innovation.

The big emerging economies – China, India, and Brazil – are not like the developed economies the world has counted on in the past to consume its goods and services. The new, developing markets are the product of low, but rising, per capita income for very large populations. To respond to the huge potential demand in these countries, companies need to offer affordable goods and services. These same populations also have increasing access to the internet, mobile phones, and TVs with global channels that raise their sophistication, demands, and desires. To

capture these increasingly well-informed customer markets, companies need to offer both differentiation and low cost.

The surge in social network sites, user-driven content, and internet ratings have become ubiquitous around the globe, shifting the power and credibility of voice from organizations to individuals. Today's buyers broadcast their opinions, and share their experiences on Twitter, Facebook, YouTube and elsewhere online. Today's organizations can't afford to be another me-too offering when their competitors have the same access to huge audiences online. Hence there is a need for a disruptive strategy for businesses to be innovative and re-define their market.

### **Literature review**

Professor Chan Kim and Professor Renée Mauborgne introduced the concepts of Red and Blue oceans in their 2005 book - Blue Ocean Strategy. As per their theory, the market universe is composed of two types of oceans – Blue and Red.

**Red oceans** are all the industries in existence today – the known market space. In red oceans, industry boundaries are defined and accepted, and the competitive rules of the game are known. Here, companies try to outperform their rivals to grab a greater share of existing demand. As the market space gets crowded, profits and growth are reduced. Products become commodities, leading to cutthroat or 'bloody' competition. Hence the term - red oceans.

**Blue oceans**, in contrast, denote all the industries not in existence today – the unknown market space, untainted by competition. In blue oceans, demand is created rather than fought over. There is ample opportunity for growth that is both profitable and rapid. In blue oceans, competition is irrelevant because the rules of the game are waiting to be set. A blue ocean is an analogy to describe the wider, deeper potential to be found in unexplored market space. A blue ocean is vast, deep, and powerful in terms of profitable growth

Companies traditionally work in a "Red Ocean" environment, where businesses compete each other to grab a bigger piece of the pie. Conversely, in "Blue Ocean", the aim is not to win over

the competitors, instead to make the competition irrelevant. The authors suggested a “Four Actions Framework” for businesses to discover a blue ocean.

Blue ocean strategy is the simultaneous pursuit of differentiation and low cost to open up a new market space and create new demand. It is about creating and capturing uncontested market space, thereby making the competition irrelevant. It is based on the view that market boundaries and industry structure are not a given and can be reconstructed by the actions and beliefs of industry players.

Red Ocean Strategy	Blue Ocean Strategy
Compete in existing market place	Create uncontested market space
Beat the competition	Make the competition irrelevant
Exploiting existing demand	Create and capture new demand
Make the value-cost trade-off	Break the value - cost trade-off
Align the whole system of a firm's activities with it's strategic choice of differentiation or low cost	Align the whole system of a firm’s activities in pursuit of differentiation and low cost

### The Impact of Creating Blue Oceans

Kim and Mauborgne studied 108 new businesses across 30 different industries to quantify the impact of creating blue oceans on a company’s growth in both revenues and profits. 92 of those businesses adopted a red ocean strategy and aimed at outperforming the competition. The remaining 16 businesses adopted a blue ocean strategy and avoided competition in search for a new category that they could dominate. When looking at the collective profits of all 108 companies across several years the 92 red ocean businesses only accounted for 39% of the total profits. That meant 61 % of the profits were generated by just 16 blue ocean businesses. Upon further study the authors discovered that the blue ocean businesses went on to dominate their respective markets for ten to fifteen years after their initial launch

Let's understand Blue Ocean strategy with the help of an example. Apple ventured into digital music in 2003 with its product iTunes. Apple users can download legal and high-quality music at

a reasonable price from iTunes making traditional sources of distribution of music irrelevant. Earlier compact disks or CDs were used as a traditional medium to distribute and listen to music. Apple was successful in capturing the growing demand of music for users on the go. All the available Apple products have iTunes for users to download music.

### **How to shift from red to blue oceans?**

A **blue ocean shift** means moving an organization from cutthroat markets to wide-open new markets in a way that the organisation's employees own and drive the process.

To successfully shift from red oceans of bloody competition to blue oceans of new market space depends on three key components: **having the right perspective**, a clear roadmap with **market-creating tools**, and **building employee confidence** at every level to drive and own the process.

#### **a) Having the right perspective**

##### **1. Re-shaping the industry**

When business leaders develop strategy, they nearly always begin by analyzing the environment: Is the industry growing or shrinking? Is customer demand up or down? Most business leaders build their strategies based on such assessments. In other words, structure shapes strategy.

Blue ocean strategy does not take industry practices as a given, when faced with intense competition, declining demand and increasing costs. It recognizes that while the industry conditions exist, individual firms created them. Industry boundaries are not fixed. A blue ocean strategist doesn't let the structure of the industry shape his strategy because, just as individual

firms created existing industry conditions, individual firms can shape them too. Examples include Apple in the consumer electronics industry and Oyo Rooms in the hospitality industry.

## **2. Make the competition irrelevant**

Most organizations are stuck in the trap of competing. Having accepted the industry structure as a given, business leaders benchmark their rivals and focus on outperforming them to achieve a competitive advantage. However, focusing on building a competitive advantage leads to imitative, not innovative, approaches to the market. In other words, more the focus on benchmarking and outpacing the competition, the more the organizational strategy will look like the competitor's

Every successful company, by definition, has a competitive advantage. The problem is that when managers are urged to secure a competitive advantage, they automatically look to the competition. Rather than looking at what buyers' value, managers end up defining the strategy based on the competition.

A blue ocean strategy, on the other hand, doesn't focus on benchmarking or imitating competitors, or on trying to improve on their best practices. Instead, they focus on how to make the competition irrelevant.

## **3. Focus on creating and capturing new demand**

Customer satisfaction and understanding customer needs are a priority for any organization. Most organizations regularly monitor customer satisfaction scores through customer satisfaction surveys, for example. This can lead to finer segmentation and greater customization to meet your customers' specialized needs.

A blue ocean strategy does not just focus on satisfying existing customers; since focusing on existing customers keeps a company anchored in the red ocean of existing market space. In most industries, organizations converge around a common definition of who their customers are. This prevents companies from seeing the wider potential of new demand outside their industry that

they could tap into. In many industries, existing customers are just a drop in the bucket, compared with all the non-customers who can be reached through market-creating strategies.

Instead of fighting to win a greater percentage of existing customers, blue ocean strategy looks to non-customers, uncover the pain points their industry imposes on buyers and why many refuse its offerings.

#### **4. Pursue differentiation and low cost instead of a value-cost trade-off**

A differentiation strategy often amounts to little more than adding bells and whistles to the industry's current approach. On the other hand, pursuing a low-cost strategy often means cutting back the industry's existing competing factors without creating anything new to stand apart. To offer buyers a quantum leap in value and break the value-cost trade-off, blue ocean strategy focus as much on what to eliminate and reduce as it does on what to raise and create.

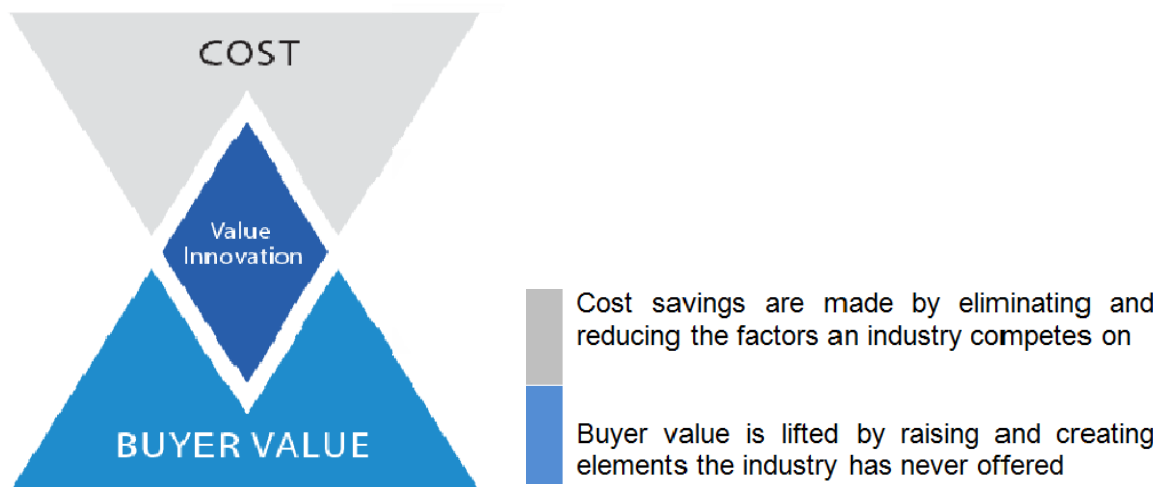
#### **b) Blue Ocean Tools**

Professors Kim and Mauborgne have created a comprehensive set of analytic tools and frameworks to create blue oceans of new market space. In their book, *Blue Ocean Shift* (2017), Kim and Mauborgne share how to put these practical market-creating tools into practice. A few of these tools re discussed below.

#### **1. Value Innovation**

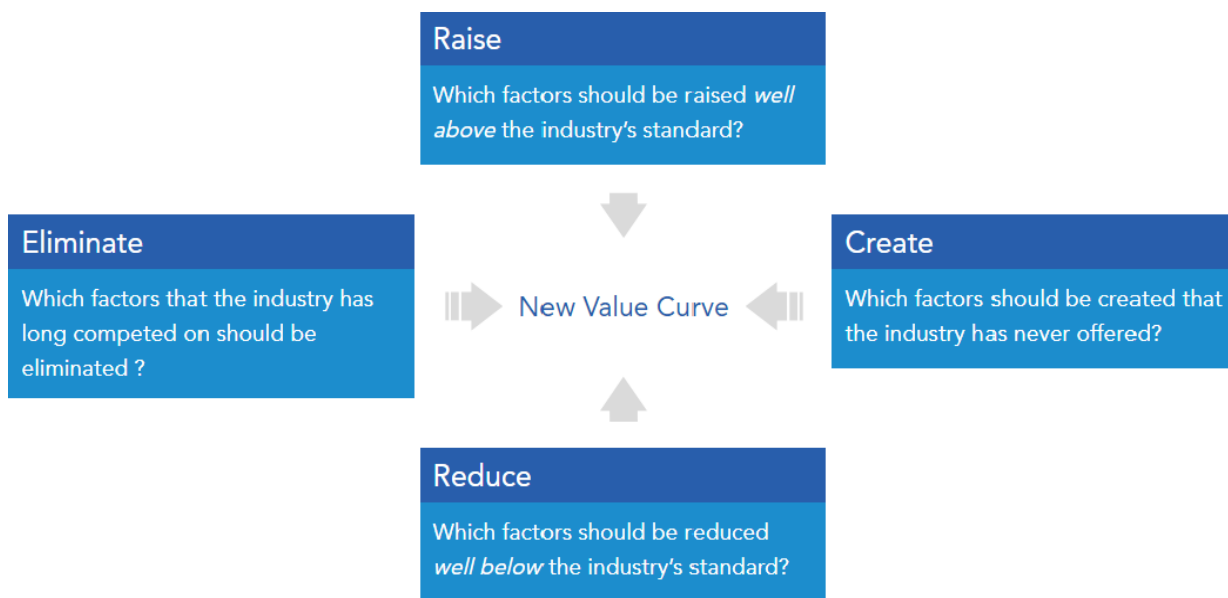
Value Innovation is the simultaneous pursuit of differentiation and low cost, creating a leap in value for both buyers and the company. The concept of Value Innovation developed by W. Chan Kim and Renée Mauborgne is the cornerstone of market-creating strategy. Because value to buyers comes from the offering's utility minus its price, and because value to the company is

generated from the offering's price minus its cost, value innovation is achieved only when the whole system of utility, price, and cost is aligned.



## 2. The four actions framework

The four actions framework aids in eliminating the trade-off between differentiation and low cost within a company. It poses four key questions, shown in the diagram, to challenge an industry's strategic logic





### 3. Six Paths Framework

The Six Paths Framework allows managers to address the search risk many companies struggle with. It enables them to successfully identify out of the haystack of possibilities that exist, commercially compelling blue oceans by reconstructing market boundaries.

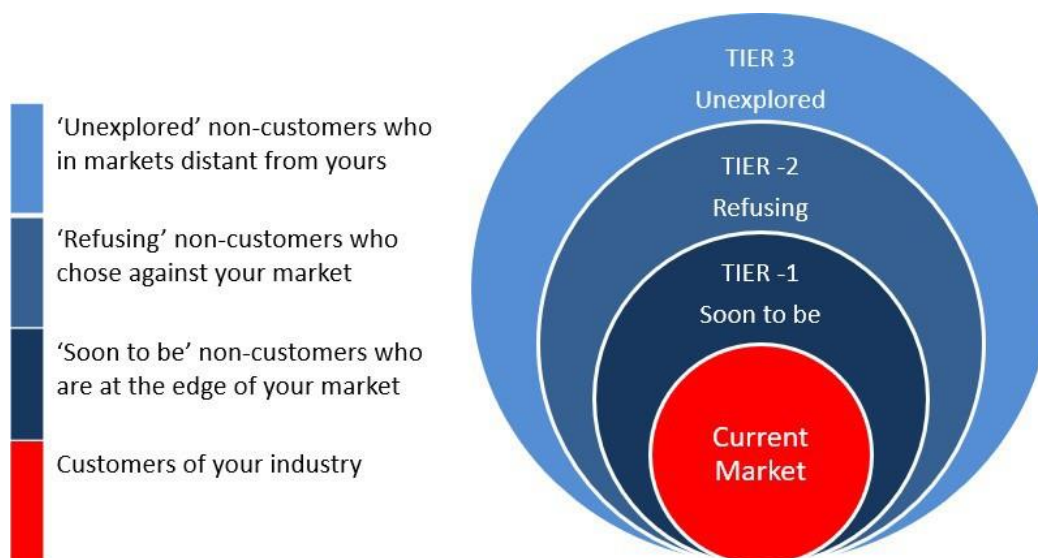
	Head to Head competition	Blue Ocean Creation
Industry	Focuses on rivals within its industry	Looks across alternate industries
Strategic Group	Focuses on competitive position within strategic group	Looks across strategic groups within industries
Buyer Group	Focuses on better serving the buyer group	Redefines the industry buyer group
Scope of product or service offering	Focuses on maximizing the value of product and service offerings within the bounds of its industry	Looks across to complementary product and service offerings
Functional – Emotional orientation	Focuses on improving the price performance within the functional – emotional orientation of its industry	Rethinks the functional – emotional orientation of its industry
Time	Focuses on adapting to external trends as they occur	Participates in shaping external trends over time

### 4. Three Tiers of non-customers

To grow their share of a market, companies strive to retain and expand their existing customer base.

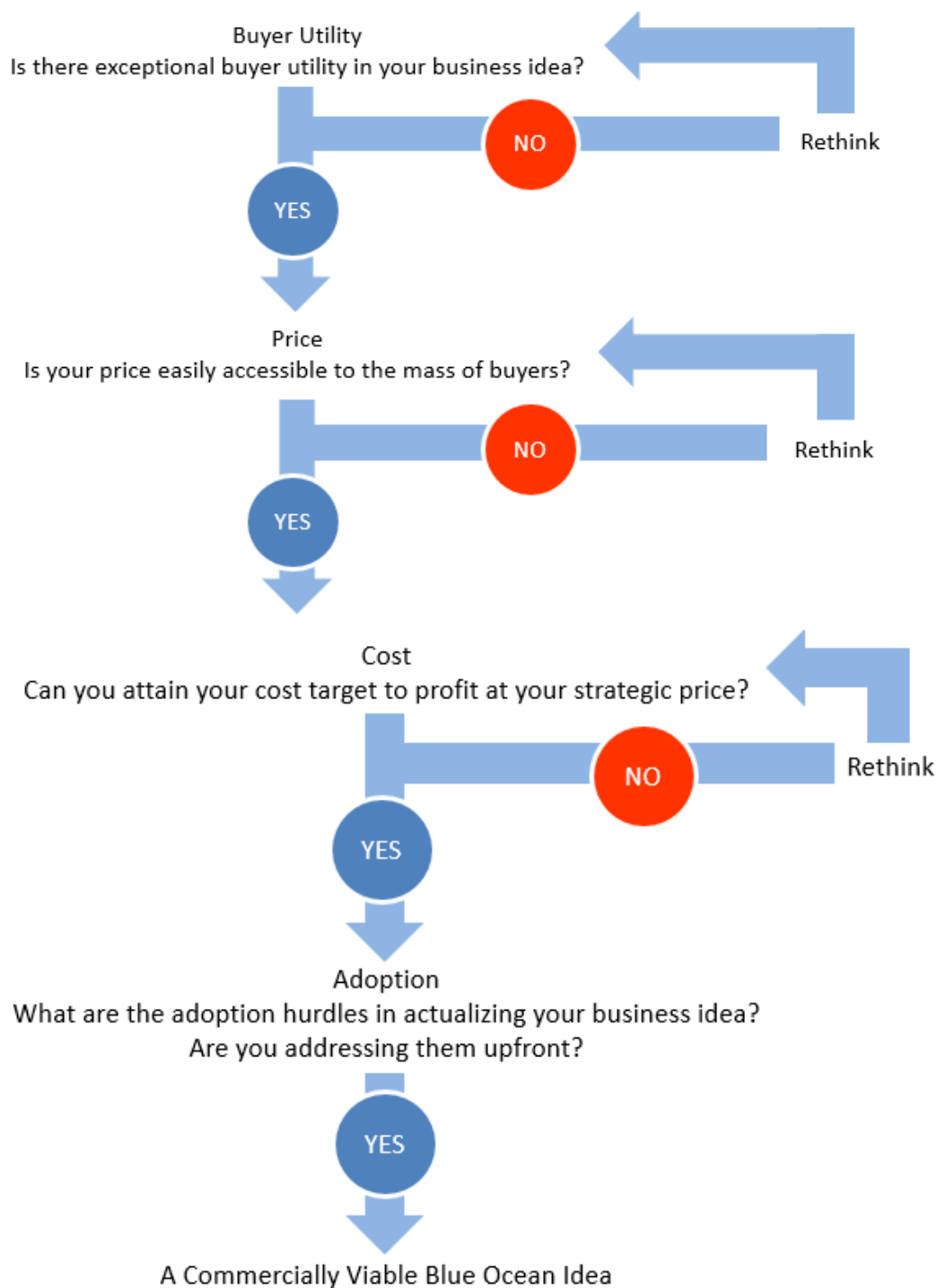
Although the universe of non-customers typically offers blue ocean opportunities, few companies have keen insight into who non-customers are and how to unlock them. To convert this huge latent demand into real demand in the form of new customers, companies need to deepen their understanding of the universe of non-customers. By focusing on key commonalities across these non-customers and existing customers, companies can understand how to pull them into their new market.

The first tier of non-customers is closest to the current market, sitting just on the edge. They are buyers who minimally purchase an industry’s offering out of necessity but are mentally non-customers of the industry. The second tier of non-customers is people who refuse to use an industry’s offering. These are buyers who have seen the current offering as an option to fulfill their needs but have decided against participating. The third tier of non-customers is farthest from the market. They have never considered the market’s offering as an option.



## 5. Sequence of Blue Ocean Strategy

Companies need to build their blue ocean strategy in the sequence of buyer utility, price, cost, and adoption. This allows them to build a viable business model and ensure that a company profits from the blue ocean it is creating. Kim and Mauborgne argue that with an understanding of the right strategic sequence and of how to assess blue ocean ideas against the key criteria in that sequence, companies can dramatically reduce business model risk and ensure that both the company and its customers win as it creates new business terrain.



**Recent examples of Blue Ocean Strategy execution:**

There are several businesses who have used this strategy to dominate their market

**a) Starbucks:**

Starbucks entered a historically crowded marketplace - the coffee shop industry. However, Starbucks redefined highly competitive coffee shop business and successfully created an uncontested market by turning the simple coffee drinking experience into a way of life experience by drastically redefining the coffee shop environment by adding music, Wi-Fi, relaxed seating and luxurious interiors. Till Starbucks disrupted the traditional coffee shop market most of the focus was on the price, location and quality of coffee shops. Starbucks innovative value proposition includes wide variety of mostly coffee based menu along with other types of drinks that catered to wide range of audience who are willing to pay top buck for the luxurious and relaxed interiors that are perfect environment for socializing with friends and relax.

Professor Kim has said that Starbucks combined the Mom & Pop Coffee shop with the comfort of a modern five-star hotel lobby which is the most suitable environment for relaxing and socializing with friends. While it is true that Starbucks sells coffee, “what they are really selling is atmosphere,” he said. “By changing the atmosphere in which coffee is sold, Starbucks created an uncontested market and made the competition irrelevant. Starbucks created and captured new demand.”

In order to hold onto its competitive advantage and create new value proposition for its customers Starbucks focused on the use of IT, mobility and social media. One such innovative value proposition by Starbucks is the Mobile Payments Application. Starbucks launched its mobile card app in 16 stores in early 2009 and after customer’s adoption increased, Starbucks expanded it countrywide in United States and the mobile app allowed customers to pay by displaying a barcode that will be scanned in the store.

The innovative mobile app has digital tipping options, dashboard showing the current reward or loyalty points level, points available with current transaction, pick of the week coffee, recent transactions and messages. The App can also integrate with social media sites like Facebook,

Twitter, etc. where customers can proudly show case their reward level milestones with their friends and family. This will further add up to their brand reputation and brand loyalty. By simply shaking the phone customers can choose the barcode of the coffee drink they want to buy and pay accordingly.

Starbucks' disruptive mobile strategy integrated its highly successful loyalty program called My Starbucks Rewards with payments by customers. Starbucks further incentivizes the customers who habitually buy and pay through mobile app and more reward points are awarded that are redeemed for free drinks and food. "Customers can pre-order their coffee ahead of arriving at a store using the mobile app and pick up the coffee later" Howard Schultz, Starbucks CEO has said.

Through its mobile payment system Starbucks eliminated the need to carry cash, coin change issues, tipping problems, reduced the time spent on ordering and making coffee, understanding the menu and coffee types, offers and rewards available, raised the customer delight, loyalty and rewards, number of visits, new customers and created a new revenue source for the company, helped in acquiring new customers and also created a uncontested space in the digital wallet market. The Eliminate, Raise Reduce and Create gird and value proposition proves the fact that Starbucks is successfully defending its blue ocean market and using strategy to maintain its competitive advantage and dominant position in the industry

**b) OYO Rooms- an Indian example:**

Ritesh Agarwal founded OYO Rooms, a hotel aggregator in the year 2013. This 5-year-old start-up has already disrupted the Indian hospitality segment with the use of technology. It eases travelers to find budget hotels which are on par with star hotels in value offering. Today, OYO Rooms has its presence in 234 cities with 8500+ hotels in India, Malaysia, Nepal, China and Indonesia, offering standardized stay experience.

Today OYO is one of the fastest growing hotel chains in China. In the last six months, OYO Rooms has built a base of over 50,000 rooms in China across 26 cities. In terms of overall

number of rooms, OYO Rooms is seven times bigger than other market players like The Taj group of Hotels and Lemon Tree Hotels. At present, the total number of rooms available on OYO is 101,000.

OYO brings 'predictability' as a key value that is usually missing with budget hospitality sector. The network of OYO is guaranteed to provide standardization on various measures in each room including free Wi-Fi, breakfast, flat screen TVs, branded toiletries, 6-inch shower heads, a beverage tray and so on. The predictable and quality experience is assured by performing an audit of these standards on a regular interval. Oyo also have room recommendations for solo travelers, couples, business travelers, and women.

We can attribute the triumph of OYO to the successful execution of Blue Ocean Strategy in the hospitality sector. Value innovation, the cornerstone of Blue Ocean Strategy, by offering superior customer value and concurrently reducing the cost of the business. The business concept of OYO Rooms eliminated extravagant features of 3-star and higher hotels, such as stylish lounges, sports club, spa, and so on but, at the same time retaining standardized services and hygiene of sophisticated hotels. As a result, OYO Rooms could significantly reduce the price per room compared to three-star hotels and outperformed in providing superior customer value. Oyo unlocks disproportionate business by attracting 3 star customers to trade down while non-star customers trade up to Oyo Rooms.

### **Conclusion :**

Today, as business leaders are interested in finding blue waters for their next business idea and dominating a market for years, they could start by focusing on the frustrations of customers outside of their current market space then look at existing products or services within the market and look for answers to these four questions - what can I eliminate, what can I reduce, what can I raise and what can I incorporate to create something new and attract infrequent or absent customers by pulling these four levers.

The Blue Ocean strategy can be used by business leaders to gradually develop a product that defies the status quo and creates a new product category that they will dominate. The core message from this strategy is to stop focusing on how you could beat the competition and start focusing on how you can make the competition irrelevant.

### **Limitations:**

While Kim and Mauborgne propose approaches to finding uncontested market space, at the present there are few success stories of companies that have actively applied their theories. Hence, a critical question is whether this theory and its related ideas are descriptive rather than prescriptive. The authors present many examples of successful innovations, and then explain from their Blue Ocean perspective – essentially interpreting success through their lenses.

It has been argued that rather than a theory, blue ocean strategy is a successful attempt to brand a set of already existing concepts and frameworks. The blue ocean/red ocean analogy is a powerful and memorable metaphor, which is responsible for its popularity. This metaphor can be powerful enough to stimulate people to action. However, the concepts behind the Blue Ocean Strategy (such as the competing factors, the consumer cycle, non-customers, etc.) are not new. Many of these tools are also used by Six Sigma practitioners and proposed by other management theorists.

### **Further Directions :Use of data**

Data has become a valuable tool for businesses for their Blue Ocean Shift process. Companies have begun to analyze data to glean insights that can help improve their businesses. That's why more organizations are seeking professionals who can make sense out of the large volume of data. Organisations that can understand their data correctly will be better equipped to sail the Blue Ocean and grow their business smoothly without any challenge. Data science will provide insight and make it easier and process faster to know what all attributes should remain and what

should be discarded in an automated manner. It involves value innovation, which gives organizations the ability to combine differentiation and low-cost at the same time.

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# Impact of Lean Manufacturing in Business Excellence

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## Abstract

*Lean manufacturing was accepted as an innovative paradigm-that eliminates waste in any form, anywhere and at any time, relentlessly strives to maintain harmony in the flow of materials and information, and continually attempts to attain perfection. The objective of this research was to identify the problems associated with the manufacturing processes in different industries using Lean Manufacturing and to prepare guidelines for Indian managers in manufacturing industry. The main impacts found are unwanted wastage of raw materials, increased cycle times and decreased labour productivity.*

*Key words : Lean manufacturing, TPS, Just-in-Time, Kanban, Cycle time, Continuous improvement, labour productivity*

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## INTRODUCTION :

### History and evolution of lean manufacturing :

Japanese structure their development programs tightly and use targets and prototype to keep suppliers in line. Japanese set clear, and understandable goals and communicate them consistently to suppliers, and use schedules and targets as major coordinating mechanism. Toyota and others treat suppliers based on their capability and mutual alignment, not blind trust, is what binds important suppliers to customers. Interestingly, many of lean tools and practices are actually similar to those that US companies employed during their manufacturing prime and, in fact, Toyota imported these ideas from US only and put them into practice. The idea is to link breakthroughs of individual companies, in terms of lean techniques, up and down the value chain to form a continuous value stream.

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In the mid-1980's, U.S. auto industry was in crisis. It was rapidly losing market share to Japanese competitors. The Japanese automakers were able to make better quality cars with fewer defects resulting in better customer satisfaction and thereby creating an image of excellence across the globe. Toyota Motor Company, which despite 1973 oil crisis increased its earnings, was able to continue increase its market share. Even today, Toyota is one of the world's most successful automakers that have perpetually outperformed their competitors in terms of quality, reliability, cost, delivery, after sales service etc. Japanese manufacturing systems have been rigorously researched by global academia. (Monden Y., 1983).

Many of the companies that report initial gains from lean implementation often find that improvements remain localized , and the companies are unable to have continuous improvements going on. One of the reasons, we believe, is that many companies or individual managers who adopted lean approach have incomplete understanding and, as a result, could not be able to gain all the benefits as Toyota enjoys. Frustrated by their inability to replicate Toyota's performance, these companies assume that secret of Toyota's success lies in its cultural roots. But Toyota has successfully introduced its production system all around the world.

The inability of US manufacturers to imitate lean manufacturing approach and failure to match Toyota's performance, prompted new generation of researchers to do in-depth study of TPS in order to decode and uncover the secrets of success.

Some researchers made attempts studying various aspects of TPS in order to identify and uncover basic truths of lean manufacturing. It can be inferred that the innovative aspects of TPS are not merely the use of Kanban , JIT, inventory reduction, setup reduction, or any other individual tool. Rather, the backbone of TPS is the processes by which Toyota designs its production system-that is development by cross-functional product development teams; integration of all ideas in the early design stages, thus reducing time and cost, and optimizing the overall manufacturing process.

This project consists chiefly of the models, methods and techniques, tools, skills and other forms of knowledge that go into making up any practice.

### **LITERATURE REVIEW :**

Shah R., Ward P .T., (2003) studied the impact of three factors plant size, plant age and unionization status which are key elements of lean manufacturing systems. They formed four inter connected and consistent practices; just-in-time (JIT), total quality management (TQM), total preventive maintenance (TPM), and human resource management (HRM). This study collected data from *IndustryWeek's* Census of Manufacturers. They found that there is strong impact of plant size on lean implementation, but the impact of unionization and plant age are not so effective than the existing propositions. Their results showed that the three factors have major contribution to the operating performance of plants.

This paper brings out the relationships between lean manufacturing practices, environmental management and business performance outcomes. The findings suggest that prior lean manufacturing experiences are positively related to environmental management practices. Environmental management practices alone are disproportionally related to market and financial performance. However, improved environmental performance substantially reduces the negative impact of environmental management practices on market and financial performance. They found that environmental management practices became an important factor to resolve the conflicts between lean manufacturing and environmental performance. They also found that gaps existed in terms of the strengths and statistical significance of some of the proposed relationships (Ma Ga (Mark) Yang et all., 2011).

Factor analysis followed by regression analysis carried out by Shahram Taj, Cristian Morosan, (2011) showed that three lean performance factors flow, flexibility, and quality had high relation to operations practice and production system design and the performances of all industries in China was good in quality.

Over the last two decades, many researchers have studied Toyota Production System (TPS) and have documented various principles and practices used by Toyota. Researchers, who studied and documented TPS in the 1980's, termed the total approach as "*lean manufacturing*" although the principles behind lean are not in themselves new; which can be traced back to the work of pioneers such as because of its ability to attain and realize so much more in terms of final outcomes with the deployment of fewer resources. The ideas were adopted because the Japanese companies developed, produced, and distributed products with less human effort, capital investment, floor space, tools, materials, time, and overall expenses . Lean manufacturing was accepted as an innovative paradigm-that eliminates waste in any form, anywhere and at any time, relentlessly strives to maintain harmony in the flow of materials and information, and continually attempts to attain perfection. Stunned by the Japanese growth, many companies in the US and developed countries pursued ways to develop and make products more quickly and efficiently, tried very hard to imitate or implement TPS. These manufactures started using various tools and shop-floor practices identified as key elements of lean approach such as Just-in-time, Kanban, setup time reduction, production leveling, production cells, quality circles etc. Strangely, despite their power and ability to greatly improve operational performance, these tools have not been very effective in lean implementation (Monden Y., 1983).

### **Lean manufacturing**

Lean manufacturing is not a collection of best practices from which manufacturers can pick and choose. It is a production philosophy, a way of conceptualizing the manufacturing process from raw material to finished goods and from design concept to customer satisfaction. Lean is truly a different way of thinking about manufacturing

### **Key principles behind lean manufacturing**

According to Conner G. (2001) the key principles of lean manufacturing are

- **Recognition of waste** – The first step is to recognize what does and does not create value from the customer's perspective. Any material, process or feature which is not required for creating value from the customer's perspective is waste and should be eliminated. For

example, transporting materials between workstations is waste because it can potentially be eliminated.

- **Standard processes** – Lean requires an the implementation of very detailed production guidelines, called Standard Work, which clearly state the content, sequence, timing and outcome of all actions by workers. This eliminates variation in the way that workers perform their tasks.
- **Continuous flow** – Lean usually aims for the implementation of a continuous production flow free of bottlenecks, interruption, detours, backflows or waiting. When this is successfully implemented, the production cycle time can be reduced by as much as 90%.
- **Pull-production** – Also called Just-in-Time (JIT), Pull-production aims to produce only what is needed, when it is needed. Production is pulled by the downstream workstation so that each workstation should only produce what is requested by the next workstation.
- **Quality at the Source** – Lean aims for defects to be eliminated at the source and for quality inspection to be done by the workers as part of the in-line production process.
- **Continuous improvement** – Lean requires striving for perfection by continually removing layers of waste as they are uncovered. This in turn requires a high level of worker involvement in the continuous improvement process.

### Key implications of lean manufacturing

As mentioned by Conner G. (2001) the key implications of lean manufacturing are :

	<b>TRADITIONAL BATCH MANUFACTURING</b>	<b>LEAN MANUFACTURING</b>
Orientation planning	Supply driven	Customer driven
Batch size	Large	Small
Quality inspection	Checking of samples by QC inspectors	Inline inspection by workers
Inventory	Buffer of WIP at each stage	Little or WIP at each stage
Hand-of works	Material after each stage accumulate	Materials handed off directly from one

## RESEARCH OBJECTIVES :

1. To identify the problems associated with the manufacturing processes indifferent industries using Lean Manufacturing.
2. To compare mass production with lean production
3. To prepare guidelines for Indian managers in manufacturing industry

## FINDINGS :

### Major impacts of lean manufacturing

- **Defects and wastage** - Reduce defects and unnecessary physical wastage, including excess use of raw material inputs, preventable defects, costs associated with reprocessing defective items, and unnecessary product characteristics which are not required by customers.
- **Cycle Times** - Reduce manufacturing lead times and production cycle times by reducing waiting times between processing stages, as well as process preparation times and product/model conversion times.
- **Inventory levels** - Minimize inventory levels at all stages of production, particularly works-in-progress between production stages. Lower inventories also mean lower working capital requirements.
- **Labor productivity** - Improve labor productivity, both by reducing the idle time of workers and ensuring that when workers are working, they are using their effort as productively as possible (including not doing unnecessary tasks or unnecessary motions).
- **Utilization of equipment and space** - Use equipment and manufacturing space more efficiently by eliminating bottlenecks and maximizing the rate of production through existing equipment, while minimizing machine downtime.
- **Flexibility** - Have the ability to produce a more flexible range of products with minimum changeover costs and changeover time.
- **Output** – Insofar as reduced cycle times, increased labor productivity and elimination of bottlenecks and machine downtime can be achieved, companies can generally significantly increased output from their existing facilities.

**Manufacturers using lean manufacturing include:**

**Automobile Industry:**

- Toyota Motor Company - Toyota Production System
- Ford Motor Company - The Ford Production System
- Chrysler - Chrysler Operating System
- The Porsche Improvement Process
- General Motors NUMMI joint venture with Toyota

**Other Industries:**

- Pratt & Whitney, United Technologies Jet engine manufacturers
- Showa Manufacturing Radiator and boiler manufacturers
- Lifescan Inc. a subsidiary of Johnson & Johnson Electronic Products
- Lantech Corporation Packaging Machines (stretch wrapping products)
- Wiremold Company Wire management systems (electronic transfer)

**Mass Production Vs Lean Production**

According to Conner G. (2001) :

	<u>MASS PRODUCTION</u>	<u>LEAN PRODUCTION</u>
Basis	Henry Ford	Toyota
People design	Narrowly skilled professionals	Teams of multi-skilled workers at all levels in the organization
People doing production	Unskilled or semi-skilled workers	Teams of multi-skilled workers at all levels in the organization
Equipment	Expensive, single-purpose machines	Manual and automated systems which can produce large volumes with large product variety
Production methods	Make high volumes of standardized products	Make products which the customer has ordered
Philosophy	Aim for 'good enough'	Aim for 'perfection'

## CONCLUSION :

- Over 75 per cent of the companies claimed to have implemented lean manufacturing or similar approaches and around 15 per cent are actively engaged in implementation process.
- Most manufactures are still a long way to go to attain Toyota's level of performance, and literature survey also shows that there are very few companies who have successfully imitated Toyota's lean approach.
- Another interesting observation was that four important lean principles, i.e., teaching and learning, pursuit of perfection, functional expertise and stability, and cultivating organizational knowledge, which are generally considered as building blocks for organizational transformation are not on the high priority and only 60 per cent organizations have recognized their importance.
- To manage outside suppliers, Indians automakers are also trying their best to have very tight relationship.
- The in-depth study reveals that very few organizations claim to have ideal goal set for achieving excellence in world market. Majority of organization are struggling to stay in business by adopting drastic cost cutting measures and frequently changing their business focus rather than setting ideal goals to achieve.

## DISCUSSION

### Learning for Indian companies

In Indian companies, we could observe the following factors as the major impediments in promoting lean manufacturing-

- Power politics between various functional departments
- Low investment in human resource development
- Short term interests of business leaders
- Quick-fix expectations and shallow thinking of most managers

Some well established auto manufacturing companies have achieved the following:

- Reducing cycle time and customer reducing inventory
- Improving productivity



- Reducing material cost
- Improving performance of the employees
- Effective supplier and dealer networking
- Multi-skilled workforce

### **Changes after implementation of lean manufacturing**

#### **Lantech Corporation**

- New product development time reduced from 3 to 4 years to 1 year
- Employee hours per machine reduced by 50 percent
- Defects per machine reduced from 8.0 to 0.8
- In-process and finished goods inventory values reduced from \$2.6 million to \$1.9 million
- Product delivery lead time reduced from 4 to 20 weeks to 1 to 4 weeks

#### **Wiremold Company**

- Product development time-to-market reduced by 75 percent
- Receipt and fulfillment of order time reduced from more than one week to less than one day
- Amount of plant space needed reduced by 50 percent
- Time for raw material to shipping dock reduced from 4 to 6 weeks to 1 to 2 days
- Productivity up 160 percent over three years
- Sales per employee more than doubled from 1990 to 1995
- Number of suppliers reduced from 320 to 73
- Inventory turns increased from 3.4 to 15.0

### **RECOMMENDATION**

- Managers and supervisors need to play role of facilitators, get involved in problem solving projects and work along with subordinates to enhance the learning of whole team rather than demonstrating her/his authority.
- Most companies seriously need to curtail the tendency of making changes for the sake of changing the existing procedures. Companies seriously need to rein in this tendency and

inculcate the scientific methods at all levels of the workforce by involvement of managers and supervisors in problem-solving projects.

- In order to excel in world market, any organization needs to transform itself into a learning organization. The answer is in the professional practice, which requires pragmatic acculturation and corporate discipline by making people capable of and responsible for learning by doing and improving their own work.

### **GUIDELINES FOR INDIAN MANAGERS**

- Establish a clear sense of direction for lean manufacturing
- Open communication and continuing education
- Reduce bureaucracy
- Instill a sense of ownership
- A tolerance for risk and failure

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## Perceived Ecotourism: A Disruptive Practice

\*Sanjana Mondal

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### Abstract:

*Ecotourism is an overall tourism practice that leads to sustainability as discussed, described and proven by the literatures on sustainable tourism development. However, the concept is widely misinterpreted and thus embezzled by the tourism service providers and tourists to a large extent. This paper aims to find out the perceived concept of ecotourism and highlight the gap with reference to actual concept. The paper also intends to highlight the disruptive consequences of such interpretation and leading practice. The study is conducted through online mode from tourists and tour operators located in various parts within four regional parts that is eastern, western, northern and southern parts of India.*

*Keywords: Ecotourism, Perception, misinterpreted, disruption,*

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### Introduction:

Ecotourism is not a tourism type rather it is a form of tourism practice. This tourism practice may redirect towards sustainable tourism development effort. But over and over again ecotourism is misinterpreted as a type of niche tourism. Due to lack of proper knowledge about the concept ecotourism is developed as a tourism offer for those who prefer to visit to virgin natural destinations. To promote ecotourism as a product even some places are artificially being developed creating an effect of natural environment. But this is a disruption towards sustainability. Since tourism industry is extensively dependent on nature and society while contributing towards economy it's sustainability is a mandate and not a choice. Ecotourism is basically a responsible tourism practice that ensures this sustainability. Therefore ecotourism is defined as "Responsible travel to natural areas that conserve the environment and improve the well-being of the local people" by International Ecotourism Society (TIES). Eco-Tourism involves travel to natural destinations, which focuses on building environmental awareness, which must provide direct financial benefits to the host destination and its communities, and look forward towards sustainable use of biodiversity & natural resources that leads to empowerment for local people (Ecotourism and Sustainable Development by Martha Honey)

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Any destination to claim or convert as a preferred destination for eco tourists must have the following features.

- It must have a protected landscape that conserves its natural depository.
- The infrastructural development must be in low density and it should have abundant natural areas for the tourists to endure the natural belongings of the destination.
- The place must offer local food, local handicrafts etc. made by local people for the tourist to enjoy the local setting.
- Locally owned lodges, home stay facilities, restaurants and local businesses with evidence of genuine hospitality and friendly local people must be predominant.
- The destination must showcase their cultural heritage through a variety of local events, festivals and demonstrate a sense of pride for local community in front of its tourists.
- The place must be clean with basic public facilities for its tourists like watchtowers, public toilets
- The place must offer trained and friendly local guides to facilitate the experience of its tourists.
- There must be natural meeting places for interaction between the local people and its visitors like benches near the sea beaches etc.

It is, therefore, a market segment for tourism business based on a concept with a certain set of principles. The Components of Ecotourism are as follows:

- It contributes to the conservation of environment and biodiversity.
- It looks forward to the wellbeing of the local community and people.

- It offers a learning experience.
- It involves responsible action and approach from tourists and the tourism industry.
- It encourages the lowest possible consumption of non-renewable energy source.
- It emphasizes local participation.
- It encourages business opportunities and employment generation for local people specifically for rural people.

**Objective:**

1. This papers aims to find out the perceived concept of ecotourism and highlight the gap with reference to actual concept.
2. It also intends to highlight the disruptive consequences of such interpretation and leading practice.

**Methodology:**

The data is collected for two months period from June 2018 to August 2018 through online mode. The questionnaires were prepared focusing on two different groups (service taker and service maker). The questions were made with an objective to derive the behavioural and attitudinal variables pertaining to ecotourism. It also involves variables that intendeds to understand the perception of the ecotourism concept among the tourism service providers and tourists. The responses were derived from 240 tourists and 28 tourism service providers. Out of 240 tourists we considered the 224 tourists who strongly prefer Nature tourism or are more interested in visiting to natural places unlike the remaining 16 who were keen towards visiting places with historical importance, pilgrimage or other than nature. The group of service providers consisted of different types like tour operators, travel agents, niche tourism service providers, domestic etc.

Type of tourism service providers	Numbers of respondents	% of respondents
Domestic tour operators	9	32
Purely niche tourism service providers	11	39
Travel agents	8	29
Total	28	100

The nature tourists were categorized on the basis of their degree preference for ecotourism .

<b>Type of nature tourist</b>	Number of respondents	% of respondents
Strong inclination towards ecotourism	31	14
Moderate inclination towards ecotourism	35	15
Average inclination towards ecotourism	116	52
Low or very limited inclination towards ecotourism	42	19
Total number of respondents	224	100

**Findings:**

To understand the sample adequacy for Factor Analysis KMO and Bartlett's Tests were computed and was found significant.

As mentioned earlier the researcher here intends to identify the perceived concept of ecotourism while highlighting the gap with reference to actual concept. For doing this the variables that reflect ecotourism need and practice are selected both for service taker and service provider and analyzed. For instance we tried to understand the need for the following attributes among the tourists

1. Mixing with local people at the place of travel
2. Attitude towards supporting local conservation efforts at the host destination
3. Exploring local culture of the host destination
4. Gathering knowledge about the destination they prefer to visit before they travel
5. Visiting unusual destinations
6. Exploring the destination as much possible
7. Staying at local homes or homestay facilities and involvement with host community
8. Local guide's involvement in the travel to enhance the experience
9. Buying local handicrafts or handmade unique products from the place of visit
10. Eating local cuisines or local home made food available at the destination i.e preferred by the local people
11. Traveling in local and public transport available at the host destination during the trip

And presence of the following in the tourism service as offered by the service providers

1. Scope of interaction between the tourists and local community
2. Presence of knowledge sharing about the host destination
3. Providing information about the culture of the local community and host destination
4. Providing facility to explore the local community life style
5. Involving local people in the process
6. Delivering the taste of local food and unique local cuisine
7. Educate tourist about environmental conservation
8. Providing facilities to showcase local handicrafts
9. Scope of community development
10. Facilitating local transport ride as a part of unique experience
11. Arrangement for local homestay as a part of unique experience

The methodology applied to derive the result is cluster analysis. By applying hierarchical

clustering technique on the variables the researcher could confirm that the variables are clustered into two parts. We then applied K means clustering to find the clusters type with reference to the attitudinal variables. The result obtained reflects that the tourists need towards the variables pertaining to ecotourism related variables are either weak or strong that also validates the ecotourism spectrum as described by Weaver (2002) where he named it as hard and soft ecotourist. Here we denote the cluster as strong need for ecotourism attributes and weak need for ecotourism attributes.



We then calculated the number of strong need for ecotourism attributes tourist cluster and weak need for ecotourism attribute tourist cluster. We also calculated the number of tour operators who strongly practice ecotourism and those who practice it at very minimal level.

We then investigated the association between the need cluster (1 and 2) and their conception about ecotourism as nature tourist and presented the result below:

<b>Type of nature tourist</b>	<b>Chi-Square value</b>	<b>Asymp. Sig. (2-sided)</b>	<b>Significance</b>
Strong need for ecotourism attributes	2.29	.130	Not significant
Weak need ecotourism attributes	3.45	.149	Not Significant
Total number of respondents	6.90	.075	Not significant

The result being insignificant confirms that there is no significant correlation between their inclination for ecotourism and their need for ecotourism attributes. Similarly we further investigated the type of tour operators with the ecotourism practice cluster (strong and weak) and presented the result below. Here we have categorized tourism service providers on the basis of the features of the tourism services they provide and their claim in providing ecotourism service.

Relationship between the type of tour operators and presence of ecotourism attributes in their service.

Type of tour operator	Chi-Square value	Asymp. Sig. (2-sided)	Significance
Highly claims in providing ecotourism service	4.39	.000	Not significant
Moderately claims in providing ecotourism	2.29	.130	Not significant
Do not claims in providing ecotourism	29.31	.000	significant

The result derived signifies that their claim of providing ecotourism does not significantly correlate with the presence of ecotourism attributes in the service they provide.

From the above result we may conclude that there is no significant correlation between the actual ecotourism concept and the perceived concept which indicates that it is a disruptive practice.

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## Post-mortem of the Kerala floods 2018 tragedy

\*Pritha Ghosh

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### Abstract

*After more than two weeks of relentless rain, in early August, 2018, Kerala, often referred as 'God's own country' a State at the southern tip of India, known internationally for its scenic green landscapes, tourists spots and backwaters, is left with over 1 million people in relief camps and close to 400 reported dead- the number expected to be much higher as many areas remain inaccessible. The coastal strip wedged between the Arabian Sea and the Western Ghats mountain chain is prone to inundation. Unusually heavy monsoon rains have got the entire State of Kerala in the grip of a massive, unprecedented flood: the last time anything like this has happened was in 1924. Even before the rains, Kerala's economy presented a mixed picture: relatively higher per capita income, but slow growth and high unemployment rates. As torrential rains abated in Kerala, the major question confronting the State and its unfortunate citizens is an assessment of the colossal loss of property, agriculture and infrastructure and the focus has turned towards the short-term negative implications and how will it rebuild its economy. There were evidently many political, economic, social and managerial lessons to take away from the disaster. The paper will describe the magnitude of the disaster in Kerala and the impact on the human population.*

**Keywords:** Kerala floods, Political lessons, Economic lessons, Social lessons, Managerial lessons, Rebuild the economy

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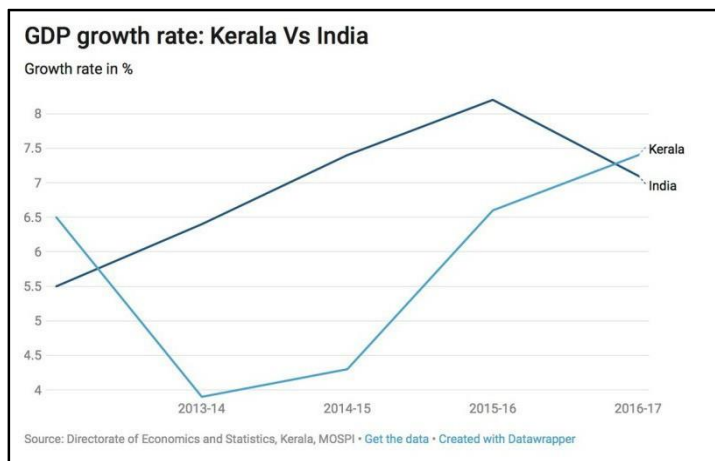
## 1. Introduction:

### How the Kerala economy flared before the floods

Kerala accounts for 2.8% of India's population, but its economy contributes nearly 4% to the Indian economy. Ranked 12<sup>th</sup> in terms of population and 8<sup>th</sup> in terms of economy, Kerala is relatively wealthier than the rest of India on the per capita income basis. The southern State's per capita income is 60% higher than India's average, fuelling internal migration to Kerala for low-end jobs (livemint, 2018). Kerala is estimated to have close to 40lakh migrant laborers, according to a 2017 study and West Bengal is one of the largest suppliers of this workforce (The Economic Times, 2018).

Between 2011-12 and 2016-17, the Kerala economy grew at a much slower rate than India's GDP growth rate. The State grew at a compounded annual growth rate of 5.72% as compared to 6.9% in India. In absolute terms, Kerala's GDP stands at 6.17 trillion rupees (livemint, 2018).

**Figure 1: GDP growth rate: Kerala Vs India**



\*Source: (How the Kerala Economy flared, livemint, 2018)

Kerala has been trying to expand its economy by investing in new sectors, such as information technology and business process management services. Construction and real estate activities

are two major drivers of the economy. Manufacturing accounts for less than 10% of the economy (livemint, 2018).

The services sector accounts for about 63% of Kerala gross State value added and of which tourism alone accounts for about 10%. The other services that are complementary are hotels, restaurants and retail trade, besides transportation (essentially air and rail). Some of the most important tourist spots are located in the districts of Idukki, Wayanad, Kottayam and Alappuzha (livemint, 2018).

The main source of income for the State exchequer is the GST. Kerala is essentially a consumption State. Kerala is considered a large market for both consumer durables and non-durables alike. According to the recently released National Family Health Survey 2015-16, 30% of the households in Kerala have at least six of the following assets- *Pucca* house, electricity connection, mobile phone or a landline, air conditioner, refrigerator, television, washing machine and motorized vehicle (livemint, 2018).

In terms of gross cropped area, the three main crops in the State are coconut, rubber and paddy (livemint, 2018). Kerala has a virtual monopoly in rubber production (approx. 90% production share) in India. In fact, both Muthoot and Mannapuram derive nearly 15% of their total gold loans, business from the State of Kerala alone. There are specific banks like Federal bank, Catholic & Syrian Bank and South Indian bank, which have a strong Kerala franchise. Kerala has witnessed a massive construction boom in the last few years and the major demand for cement and concrete in the South come from the State. Companies like India Cements and Ramco have a successful franchise in Kerala (IIFL, 2018).

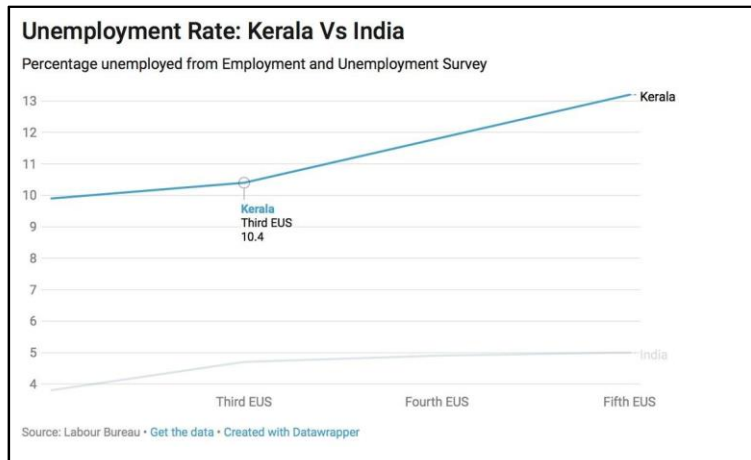
For the FMCG sector, there could be multiple implications. FMCG companies have been talking about

rural demand and companies like HUVR are already deriving 50% of their revenues from rural areas. Higher levels of literacy and a rising middle class have been a major boost for Kerala and that has made the State a key market for most FMCG companies. In fact, for specific products like Parachute hair oil from Marico, companies depend on Kerala for

approximately 30% of their copra procurement. Kerala is also the biggest market for coconut hair oil (IIFL, 2018).

Even with the services sector contributing more than 50% of the economy, unemployment was a major issue in the State, with educated youths unable to find a job (livemint, 2018). Outside of the northeastern States, Kerala suffers from the highest unemployment rate in India with only 20% of all households having availed State-run employment guarantee schemes, according to the latest Employment and Unemployment Survey (livemint, 2018).

**Figure 2: Unemployment Rate: Kerala Vs India**



\*Source: (How the Kerala Economy flared, livemint, 2018)

## Political implications of the floods

### What caused the havoc flood?

The last rival to a flood of this scale and severity in Kerala was in 1924, where the monsoons pelted the hapless State with 3,368 mm of rain. At the time, over, 1000 people have lost their lives with the enormous toll on livestock. In 2018, 2086 mm of rainfall is nowhere as bad, but still 30% above the annual average (FIRSTPOST, 2018).

A controversy has erupted as to what caused the worst flooding in a century, with the opposition leader and several experts calling it a 'man-made disaster' and the Left Democratic Front (LDF) government rubbishing such claims as unfounded and irresponsible (The Times of India, 2018). Cumulative factors of man-made 'hungry water effect' and natural effect of intense rains led to Kerala floods; reason out scientists from the National Centre for Earth Science Studies (NCESS) (Times of India, 2018). Either way, the State will have to implement long-term measures to limit catastrophes of such magnitude (The Economic Times, 2018).

Figure 3: Devastation in Kerala in pictures-Deluge



Submerged temple



Landslide



Washed away road



Brave hearts

\*Source: (Devastation in Kerala in pictures-Deluge, The Economic Times, 2018)



In 2011, the Western Ghats Ecology Expert Panel report urged a number of States, including Karnataka and Kerala, to adopt an approach of thoughtful conservation, limiting activities such as quarrying, dams and construction near protected forests in hilly areas. The report was rejected by the Ministry as well as by both the States (THE CONVERSATION, 2018).

Leading experts suggest a heavy, artificial hand in the latest deluge. The State was forced to throw open the gates of 35 of its 39 dams, being fully aware of its' outcome. The State government has been blamed for the delay in taking prompt action to mitigate floods by opening the dams well in advance, with the damages to the tune of 19000crore recorded in the State (The NEWS Minute, 2018). For the first time in history, Asia's largest arch dam, the Idukki dam, had to open all its five shutters because of the incessant rain (at one point 800,000 liters of water per second poured out of the dam, inundating the downstream) (Rediff.com India News, 2018).

Scientists at Kerala State Council for Science, Technology and Environment (KSCSTE) call for the need to ensure a riparian zone around dams and for timely management of dams to prevent such havoc (Times of India, 2018).

### **Relief works after the flood**

The humanitarian aid that continues to flow into Kerala both from within the country and abroad, particularly from the non-governmental organizations, has been quite phenomenal (Economic&PoliticalWEEKLY, 2018).

The ones, who escaped the worst, stopped their Onam shopping to buy relief materials instead. Thousands donated to Chief Minister's Relief fund. In Sunkoppla, the local church, temple and madrasa turned into relief camps and coordinated with each other to show their religion is their humanity (The Times of India, 2018).

**Figure 4: Kerala Fire and Rescue Services Personnel at work in flood-hit Chengannur**



\*Source: (UAE has not officially announced any financial aid for Kerala relief: envoy, THE HINDU, 2018)

**Figure 5: Army personnel used ingenious ways and used utensils and pipes to rescue women and children**



\*Source: (Kerala floods: 94 lives lost in last 8 days, over 200 people dead since onset of monsoons, TIMESNOWNEWS.COM, 2018)

Army, while the, navy and air force, along with local fisherman communities, activists and volunteers worked tirelessly to rescue people (FIRSTPOST, 2018). Thousands of volunteers from across the country, as far away as Kashmir, came forward to volunteer as relief camps (The Times of India, 2018). Officers of the Kerala Fire and Rescue Department

rescued people from low-lying residential areas using boats as water has entered their houses (Zee Media Bureau, 2018).

**Figure 6: Medical checkups at a relief camp in Chengannur**



\*Source: (Kerala floods: The real challenge is ahead as the water recedes, The Economic Times, 2018)

Social media played an important role in collecting donations and other necessary requirements in camps. Using hashtags like #Kerala floods, #Kerala Relief, celebrities, influencers and people of authority have been raising awareness about the floods by posting important helpline numbers, sharing safe locations and urging people to donate cash and other necessary items. Keralarescue.in, another initiative by the State government, allowed people to seek or offer relief. By visiting the website, one can request for help, make a donation, find a relief center, get important contact information and/or volunteer for their services (FIRSTPOST, 2018).

Chief Minister Pinarayi Vijayan, who has been earning accolades for the manner in which the administration handled the tragedy, has announced a slew of measures towards this. This includes interest-free bank loans to refurbish affected homes and a kit for people who return to their houses (The Economic Times, 2018).

### **Economic implications of the floods**

Their life is safe now, but the livelihood under threat (The Economic Times, 2018). According to a report by CARE Ratings, the rain battered State's GDP is expected to fall to 6.5-

7% of the budgeted 7.6% this fiscal year. The damages to roads, where over 10,000 km of the district, State and National highways have been washed away, will be high as Rs 12,000crore, while the figure for airports is nearly Rs 40 crore. With tens of thousands of homes damaged fully or partially, the average rebuilding cost will amount to Rs 50,000- Rs 1 lakh per unit, which will have to be financed by banks, leading to a double-digit credit growth. The revenue deficit will widen further against the budget estimate of Rs 12,860crore and the fiscal deficit to increase from the budget estimate of 3.1% of State GDP (FIRSTPOST, 2018).

The trail of devastation left by the recent floods in Kerala included 12lakh people rendered homeless and more than 300 dead. According to initial estimates, property worth more than Rs. 20,000crore has been lost and insurance companies have already received claims worth Rs. 1000crore. With insurance claims expected to shoot up could affect the health of insurance companies. However the impact will be limited because most of these policies are already insured with international players (The Economic Times, 2018).

Kerala is a major rubber hub and production has been hit with a loss of 420 crore (FIRSTPOST, 2018). So this will impact the tyre companies, the main users of natural rubber. But, the experts assured that the impact on their companies will be limited because this is a short-term dip and most companies have enough rubber stocks and moreover, many companies can tide over any short-term shortage by importing rubber (The Economic Times, 2018).

As the State-owned Malabar Cement is the dominant player in Kerala, most listed players could only bear an indirect impact. Among the latter, south-focused firms such as India Cements and Dalmia Bharat suffer, while Ramco Cements, which derives a majority of its business from Kerala, could be affected the most. While the shipyard division of Cochin Shipyard may not witness much disruption, the ship repairs (accounting for half of its capacity) could be affected (Rediff.com Business, 2018).

There was a fall in demand for Onam sales and for immediate consumption. Growth in GSDP can be affected up to 1% (THE WEEK, 2018). Jewelers took the biggest hit. However, it had not impact stock investors because most big Kerala-based jewelers like Kalyan jewelers' and

Malabar Gold, among others are unlisted. Durable goods manufacturers were hit. Since the repaying capacity is down in all the big three loan segments- retail, agriculture and SMEs- in Kerala, this negative impact will be applicable to other Kerala-based banks like South Indian Bank and Dhanalaxmi Bank as well (The Economic Times, 2018).

As the focus is on rebuilding and gold loan is an easy way to raise money, gold financiers will benefit from the higher demand. Companies like Muthoot and Manappuram will be the beneficiaries. They may fear the impact of NPA (Non-performing asset) factor, but it will be small as borrowers rarely default on gold loans (The Economic Times, 2018).

The impact on several Kerala-based financiers will be severe. For example, the banks based out of the State will be negatively impacted because the flood had reduced the repaying capacity of borrowers. The Statewide one-year moratorium on repayment was another issue they have to face (The Economic Times, 2018).

The construction activity is likely to slow down for two reasons. First, the State will have to get over its destination. Second, environmentalists are already blaming the rampant construction activity for these floods as it is supposed to have disrupted the delicate ecological balance in the Western Ghats. The tourism sector has also been taking a hit by train and air services being crippled and most places being inaccessible due to rising flood waters (IIFL, 2018).

### **Social Implications of the floods**

Big disasters leave lasting scars on people's minds. Psychosocial care and support should be prioritized. Contrary to general perception, economic resources and government assistance are not the sole drivers of recovery and rebuilding after a major disaster. Recent research has demonstrated that 'social capital'- that is interpersonal relations, social networks, shared sense of identity and trust within a society is crucial to recover from disasters (BusinessLine, 2018).

In Kerala, volunteer groups which include experts in social work, Bioinformatics and psychology have pooled in resources to create the Kerala Floods Mental Health Support Group, to provide emotional support and psychological rehabilitation for the flood survivors (FIRSTPOST, 2018).

The magnitude of the disaster brought together digital giants like Twitter, Facebook, GOOGLE, WhatsApp and Amazon to aid rescue and rehabilitation. Twitter, Facebook and WhatsApp, particularly, have been useful in disseminating emergency contacts, SOS messages and immediate location of those stuck in the calamity (FIRSTPOST, 2018).

The people of Kerala face a long road to rebuild their homes and lives. They are shattered. Floods have played a havoc with their lives and there is a sense of gloom among them (The Hindu, 2018). Kerala's favorite festival, Onam (15 August 2018 to 27 August 2018), fell in the shadow of the floods. But relief camps were doing their best to keep the spirits of the residents up (The Economic Times, 2018).

### **Managerial implications of the floods**

The Keralites have earned accolades for the approach in which they faced the flood fury with the, execution of plans, participation of social groups or local expertise in rescue and relief operations, and roles played by political leaders are lessons in crisis management, which, at some stage, ought to be studied and codified by Management institutions.

Quick decisions and strong leadership can make or break a company. It is important to demonstrate strong leadership to build confidence and trust of the employees, as demonstrated by the cabinet ministers to opposition leaders and bureaucrats of Kerala. They sent out a powerful, reassuring message to those stranded; importantly, it signalled serious intent to the State's machinery.

Strong coordination mechanisms will help to assign roles and responsibilities and avoid duplication of efforts and wastage of resources in a company. A weak coordination fuels

employee's anger and frustration. Information sharing is the first step towards better coordination, not just from managers to employees but vice-versa. Accurate, credible and regular information made a critical difference between panic and relative calm, during the floods. Irrespective of the content on the content on the social media, Chief Minister Vijayan, held a televised news conference every day during the worst days. He spoke directly to people, updated them to the latest operations, redirected resources, kept lines of communication open in his office 24\*7 to receive distressed calls which were passed on to the National Disaster Response Force (NDRF) teams, the army and other defense personnel involved in the operation.

Managers should be empathetic. When employees are disengaged and when their concerns and aspirations are unheard, it leaves a negative impact in their attitude and performance. Managers must remember employees are assets. While implementing any decision they have to keep in mind, the impact of the decision to the employee and secondly, the cost of inaction.

Kerala's strong culture of local self -governance, devolution of powers and decentralization ensured decisions could be taken effectively at local level without waiting for orders from the top. Factories should employ local people. Local people know the lay of the land, have networks beyond those of the government, can prove to be differentiating factor between disorganized and competent rescue operations. During the floods, the fisher folk of Kerala, who negotiate water better than others, turned into unlikely rescuers.

Managers have to take the extra initiative to educate and train their employees to update them with the latest technology and skills. Kerala's literacy and awareness ensured the population used social media effectively and responsibly during the crisis.

In the era of climate change we have just entered, extreme rainfall events are going to become increasingly common. Uncontrolled growth at the expense of the environment will severely exacerbate the impacts of climate change. Managers have to be aware that certain types of infrastructure may be less suitable to some contexts in a changing climate scenario. Pollution control is an integral component of the corporate social responsibility (CSR) policy of an organization.

Risk reduction, preparedness for risk and collaborative actions and prioritizing investments like provident fund or employee stock ownership plan (ESOP) will make a difference to the sense of security and responsibility of the employees towards their company.

## **2 Conclusion:**

During rescue operations, Keralites displayed a high-level of intra- and inter-community trust and networking. The tech-savvy coordinated the rescue works through social media platforms across the globe, saving thousands of lives and mitigating the sufferings of others. The State administration has commenced the complex and challenging task of rebuilding the ruined regions in such a way that the lives, livelihoods and the economy recover steadily. Keeping in view the solidarity developed during the disaster, Chief Minister Pinarayi Vijayan has announced a 'salary challenge'- an appeal to Keralites all over the world to donate a month's salary for rebuilding the State. Apart from financial support, communitarian and interpersonal ties are crucial for bringing the beautiful State of Kerala back to life.

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# Using Disruptive Innovation for Disaster Mitigation and Ensuring Supply Chain Continuity

\*Shouvik Chattopadhyay

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## Abstract

*Supply chains are a network of intertwined nodes and routes that are normally expected to operate smoothly and allow for seamless movement of material, documentation and information two and fro its entirety. Such large networks spread over a wide area on a global scale are bound to be affected by disruptive factors both natural as well as man-made.*

*Though some amount of research has been done on supply chain disruption, mitigation efforts, risk management, etc. a proper linkage is normally missing. Also very little research has been done on continuity. This paper does a selective literature review of selected papers covering various areas of supply chain disruption management under exogenous shock conditions like natural disasters and solutions and links the recent innovation of drone technology to disaster recovery and mitigation efforts and ensuring supply chain continuity. While commercial drones are under test usage by variety of organizations, this paper also assesses certain selected drone types for their compatibility and future modified usage in disaster recovery and supply chain continuity after natural disasters.*

**Keywords:** *supply chain disruption, disaster recovery, supply chain continuity, disruptive innovation, disruption, drones*

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## Introduction

Globalization has allowed organizations to tap into cheaper resources from as well as access markets in other countries. Increasing needs of competitiveness in the face of global competition has further forced them to move forward to having integrated supply chains, lean inventory management and demand driven supply chain management. Organizations following the concept of using single source of procurement for maximum number of requirements are heavily dependent on few suppliers for all their needs. These suppliers are normally spread over a large area sometimes spanning countries.

Similarly the Organizations focus on using single or few production units to produce and deliver products to consumers spread across various countries. These many-to-one Inbound to Manufacturing [I2M] and one-to-many Outbound to Consumer [O2C] strategies have been so designed so as to allow for seamless movement of material, documentation and information flow.

This widespread network of suppliers, manufacturing points and consumer base has increased the level of vulnerability of the supply chains getting affected by variety of disruptive factors both internal and external. In reality, facilities and the links connecting them, fail from time to time due to poor weather, natural or man-made disasters, or a combination of any other factors (Shukla et al., 2011)<sup>1</sup>. Even the routes used for movement are vulnerable to disruptive forces normally external in nature because different types of risks are associated at different areas.

Disasters can happen anytime and anywhere putting supply chains at risk of partial or total failure. Fridgen, G. et al. (2015)<sup>2</sup> also lays stress on the fact that external shocks to the supply chain can threaten the entire supply chain, including all its partners.

The supply chain normally consists of three parts – (a) Source, (b) Logistics and Manufacturing, and (c) Consumers. Because of globalization the spread of each of these parts of the supply chain has increased. The source or suppliers, irrespective of the tier, whether immediate or not, can be spread over various geographical regions or countries. Similarly the logistics may encompass storage and movement of goods whether raw material, work-in-process or finished products, through multiple countries. Similarly manufacturing operations may also be spread over multiple

countries. Globalization has opened up global markets and customers will be spread across countries.

While natural disasters may also entail loss of lives, infrastructure destruction and spatial disfigurement, this paper puts particular focus on the supply chain part only and takes into account all parts of the supply chain, i.e. source, logistics and consumption points.

This paper aims at doing a literature review of the published papers on the topics of supply chain risk management, disaster mitigation and recovery and then discusses the use of drones for disaster mitigation and supply chain continuity efforts

### **Methodology of study**

To facilitate the discussions highlighted in this paper and to come to a common understanding of using drones at high risk areas of the supply chain network, we do a literature review of available research papers on the subjects of disruption management, disaster recovery and supply chain continuity and also do a comparative analysis of certain types of drones available in the market to understand their suitability for ensuring continuity after a natural disaster.

For the purpose of this literature review, Abstracts of 1853 relevant research papers were studied for selection of most relevant research papers numbering over 120. Preference has been given to research papers having a focus on natural disasters or supply chain continuity.

### **Supply Chain Failures**

Normally supply chains are designed to ensure that the facilities, links and the operational processes will always work as planned. A supply chain is an intertwined network of nodes and routes that is normally spread over a large area and is affected by various disruptive factors on a regular basis. These disruptive factors may be internal to the nodes or external to the nodes and routes. Shukla et al., (2011)<sup>1</sup> in their paper said that in reality, facilities and the links connecting them, fail from time to time due to poor weather, natural or man-made disasters, or a combination of any other factors.

Internal disruptive factors may include strikes, accidents, and all other incidents affecting a particular node which may be a warehouse, a factory or a point-of-sale. External disruptive factors on the other hand will include floods, epidemics, landslides, earthquakes, war, etc., that may affect one or more nodes and routes. These factors may come into force randomly, individually, in group or concurrently. The combination of factors can further intensify the spread and depth of supply chain disruption, and making supply chain recovery either a long term process or a herculean task. In certain cases the entire or a part of the supply chain may need to be remodeled with new nodes and routes. Fridgen, G. et al. (2015)<sup>2</sup> also lays stress on the fact that external shocks to the supply chain can threaten the entire supply chain, including all its partners. Abe, S. (2014)<sup>3</sup> also confirms about the impact of blackout of a part of the supply chain on the entire chain and lays stress on disaster mitigation efforts to plan out the continuity of the entire chain when a certain portion becomes inaccessible. Penchev, G. (2016)<sup>4</sup> says that even limited damage to physical assets and infrastructure can play havoc with the regional supply chain.

With increasing globalization and focus on cost reduction, supply chains are becoming increasingly vulnerable to disruptive factors. Cost reduction methods such as single point of sourcing and lean inventory management, and increasing shift to pull-method of supply chain, further increase the chances of even a small disruptive shock creating a domino effect and become catastrophic for the entire supply chain system. Han, J., & Shin, K. (2016)<sup>5</sup> discussed on the impact of disruption propagation on the structural robustness of a supply chain using propagation. Also as Świerczek, A. (2014)<sup>6</sup> discussed not only on disruption propagation but also on increasing magnitude as the disruptive ripple spreads across the supply chain in the case of integrated supply chains.

Supply chains irrespective of being organization or region specific, has to normally contend with 2 kinds of risks i.e. supply risk and environmental risk. Supply risk normally affects a single supplier and the factors can be both internal as well as external. Environmental risk affects on a broader scale wherein all suppliers of an entire area or region is affected. Environmental risk is exogenous in nature, widespread and may affect supplies from or supplies to the affected area.

Kamalahmadi, M., & Parast, M. M. (2017)<sup>7</sup> in their paper on “An assessment of supply chain disruption mitigation strategies” discusses the risks that a firm’s supply chain is exposed to. The environmental risk is actually on a wider scale and affects all suppliers in the affected area. As such environmental risk has a wider scope of affecting people and installations along with suppliers. They also discuss the interdependence of suppliers in a supply hierarchy and effects of disruptive factors on one supplier along the entire chain. Ivanov, D. et.al. (2016)<sup>8</sup>, Świerczek, A. (2014)<sup>6</sup>, Tokui, J. et.al. (2017)<sup>9</sup>, Fridgen, G. et al. (2015)<sup>2</sup>, Abe, S. (2014)<sup>3</sup>, Penchev, G. (2016)<sup>4</sup>, and Sahu, A K. et.al. (2016)<sup>10</sup> also laid the stress on interdependence of suppliers and the risk of failure of the entire supply chain. Tang, C. S. (2006)<sup>11</sup> is also of the same view that outsourced product manufacturing wherein the manufacturing is done by a third party at a different location increases the vulnerability of the supply chain at the cost of reducing manufacturing costs. However Todo, Y. et al. (2015)<sup>12</sup> shows the positive effect of an extensive supply chain due to localized impact of a natural disaster leaving some partners out of the affected area.

Supply chain failures whether on Firm level or Region level, have a wide ranging effect on flow of goods and provisions from and to the affected area. These failures are on variety of supply chains when the region is affected by a natural disaster or calamity.

### **Impact of Supply Chain Failures**

The Japanese earthquake and the consequent tsunami and nuclear crisis of March 2011 created a massive supply chain disruption and the global economic effect (in terms of value added) of this disruption amounted to US\$139 billion. The most affected (groups of) countries were Japan (39%), the USA (25%), China (8%) and the European Union (7%). The most strongly affected industries were transport equipment (37%), other business activities (10%), basic and fabricated metals (8%), wholesale trade (7%) and financial intermediation (4%) (Arto, I. et al. 2015)<sup>13</sup>.

The production loss caused by the supply chain disruption was 0.35% of the GDP of Japan (Tokui, J. et al 2017)<sup>9</sup>.

The Taiwan Earthquake of 1999 showed that pull type supply chains are more prone to onset of losses when the earthquake disrupts the single source of supply.

### **Supply Chain Disaster Mitigation & Recovery**

As discussed above, natural disasters may affect any part of the supply chain and at any time. Whether it is the point of source, the nodes and routes, manufacturing plants or customer base, ensuring continuity throughout chain is critical.

Mitigation is the effort to reduce loss of life or property by lessening the impact of disasters. Supply chain disaster mitigation will therefore address the efforts to reduce the impact of disasters whether natural or man-made, whether caused due to internal or exogenous shocks, on the entire supply chain.

Though good amount of research has been done on supply chain disaster mitigation strategies, we find that some of them won't stand in the face of widespread natural disasters like earthquakes, tsunamis, super storms, etc.

While (Habermann, M. et al.,2015)<sup>14</sup> found out that co-location with the supplier base is beneficial to reduce the disruption risk in terms of duration, they did not consider the expected impact of natural disaster leading to flooding or spatial disfigurement if it occurs in the area where they are located. This is also true for positioning of resources in or very near to disaster prone areas. As (Kamalahmadi, M., & Parast, M. M., 2017)<sup>7</sup> also divided the supply chain risk a firm will face into supply risk with one supplier getting affected and environmental risk wherein a large number of suppliers get affected due to natural disaster. So co-location with the supplier base will be the worst supply chain design when the area falls under high risk zone for natural disaster. Also any disruption to a supplier or a supplier base used as a source by the firm's supplier will also become a disruption.

(Su, P and Liu, S., 2015)<sup>15</sup> found out the improvement in redundancy by dual sourcing after studying a US OEM. Having a dual source will also help in case one of the sources become inaccessible due to a natural or man-made disaster. (Todo, Y. et al. 2015)<sup>12</sup> shows the positive effect of an extensive supply chain in the face of localized impact of a natural disaster leaving some partners out of the affected area.



(Kumar, S. and Havey, T., 2013)<sup>16</sup> prepared a decision support risk assessment and mitigation framework for disaster relief supply chain and applied the same to example of March 2011 disaster in Japan for a scenario assessment and found out that the development of a robust communications plan and system will help coordination of all groups, prior to, during, and after a disaster, and will provide a more effective response. The same also holds true for a firm or a supply chain suffering from the effects of a natural disaster.

Usage of flood modeling and tsunami modeling for land use planning and evacuation routes is another method of disaster mitigation that can be used by governments and has a direct impact on reducing supply chain disruption risks (Saunders, A. et al. 2015)<sup>17</sup>.

Roads getting affected by floods, forest fires or spatial displacement are also a major disruptive factor both for supply chains as well as disaster recovery. A model designed by (Freiria, S. et al., 2015)<sup>18</sup> represents an innovative approach for prioritizing roads and routes for channeling resources to the affected areas, and allows for selective risk management of such roads and routes.

### **Supply Chain Continuity and Innovation in Drone Technology**

Advances in Drone Technology and the move from being a military stronghold to commercial and personal usage, has created lots of opportunities for usage during natural disasters. Whether the routes are blocked or the humanitarian supply chain is affected, drones can help mitigate the risk of a total failure and also aid in fast recovery or ensuring continuity.

Natural disasters like earthquake, flooding and tsunami normally causes spatial disfigurement and makes large tracts of land inaccessible for long periods of time. This may result in either closing down a source of material, non-availability of motor-able roads, or destroying the connectivity to end consumers. Another important aspect of most natural disasters is the loss of communication capabilities in the affected area. This is in addition to the human population stranded in the affected area.

Most of the commercially available drones have a maximum flight time of 30 to 45 minutes with a max payload capacity between 12 to 30 Kilograms. Unmanned aerial vehicles, or drones, have the potential to significantly reduce the cost and time of making last-mile deliveries and

responding to emergencies (Dorling, K. et al, 2017)<sup>19</sup>. Though this gives good room for material movement over disfigured or flooded roads but will normally require large deployment of drones, making it unviable. More so when the routes fall in the disaster affected area and stops transportation of material at either end.

This paper selected two types of drones shortlisted for their usability in terms of various capabilities of payload, airtime / flight time, radio range, thermal imaging, etc for use in ensuring supply chain continuity as well as effective disaster response.

1. GRIFF SAVIOUR S2 – From Griff Aviation has a lifting capacity of 200 Kgs, Air time approx – 30 – 45 mins, is capable of moving material over 7 kilometers in flood affected area. (GRIFF has higher range of drones that can be modified from battery to petrol engines with payload capacity of up to 800 Kg).
2. SKYF – 2 machines can be easily put in a standard 20ft container. Maximum load capacity is 400 Kilograms with flight range of up to 350 km and is petrol operated.

## **Conclusion**

Currently in absence of economies of scale the cost of such drones are very high at about USD 250,000 and may be a limiting factor in their usage. With economies of scale the cost of such drones will fall and be within range of even small transport and logistics companies.

GRIFF models can have similar range with petrol engines instead of batteries further reducing their cost of operation. Normally with a range of even 250 km such heavy duty drones can be easily used to move material deep within or over the affected area, maintaining supply chain continuity.

Except in the case of earthquakes, most natural disasters can be predicted nowadays and the time window of detection will allow for deployment of such drones in the concerned zones. For earthquake prone zones such drones may be pre-deployed in certain areas and in countries like

Japan and Indonesia they may be pre-deployed at safe zones. Safe zones will be facilities like a bunker over land high enough to be out of reach of most tsunami waves.

### **Future Research Potential**

There is a lot of research potential in designing a drone operated operational theater for disaster mitigation and recovery activities or even drone controlled battlefield theaters.

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## Conceptualizing Irrationality as an Implicit Economic Variable

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### Abstract

We review the necessary concepts of irrationality that emerged in economics over the last few decades. In this paper we propose irrationality as an implicit economic variable with the irrational customers as economic agents. The theory of Utility maximization and Bounded rationality along with social welfare is kept as the building block of the new conceptualization. The discussion centers around the commodity market alone, however, the basic concept is applicable to any economic transaction. If a decision is irrational, the transaction shifts away from equilibrium in a macroeconomic setup.

**Keywords:** Irrational Behavior, Utility Maximization, Bounded Rationality, Commodity Market equilibrium

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## **Introduction**

Modern economic researches, with an emphasis to behavioral economics, are keen towards modeling irrationality in economic theories which seem to be more logical and useful in predictive analysis. Rational choice has never been practical even where the product is homogeneous and the customer willing to make rational choice. The reasons shall be discussed later but it can be well understood that customers themselves are not aware always whether they make rational choice or not. In this paper we first try to collate various angles from which irrationality is studied or can be studied. Perspective of Utility maximization, theories of search cost, bounded rationality, rationality and social welfare are briefly elaborated.

Thereafter, we conceptualize irrationality as an implicit economic variable. As per (Kahneman, 1994), assumption of rationality is just a useful approximation sometimes and not a practical situation and hence can be studied at its face value. So instead of putting irrationality as something exogenous we propose it as an implicit correction factor in macroeconomic models.

Finally, the correction is extended to choice in general. It is not only about product or service choice, which gets restricted to the commodity market only; we extend the discussion to any choice encompassing labor or financial market. The issue that is most thought provoking is that whatever decision is taken at whatever level of the economy it has a direct or indirect impact on economic stability. Any decision is an economic transaction and hence can be well correlated with our previous study, that it can create a ripple in the economic space. Hence, irrational decision or choice is that which causes the ripple and rational decision is that which subsides or nullifies a previous ripple.

## **Literature Review**

Agent-based models in economic theory are quite useful in framing complicated structures where assumption of rationality is relaxed. Irrational agents are basically the customers making an incorrect choice (Mandler, 2014). What is an incorrect choice is a debatable question which we shall address later in the paper. But we must appreciate that agent based models are becoming an important tool in studying irrational behavior.

One thought is the utility maximization models where the perceived utility of the customer is assumed to be the maximum utility possible. Restricting ourselves to a single purchase, this is where the assumption of rationality holds. The reverse is irrationality. Economists had been strongly of the opinion that rationality is never a practical assumption. With these factors in mind, bounded rationality emerged as a concept which worked as a substitute to pure irrationality.

As per Bounded rationality when individuals make decisions, their rationality is bounded by the tractability of the decision problem (how easily the problem can be understood), the cognitive limitations of their minds (how much information can the mind process), and the time available to the decision maker (Gigerenzer et al, 2002). Tisdell in Part I of the book first discusses what is bounded rationality which according to him is essential for decision making. In Part II he talks about decisions by individuals including planning and learning by doing. Next in Part III he dwells on group decisions, discussing group rationality, information transmission and transfer pricing. In Part IV he deals with wider economic and social issues. We encompass social issues and social welfare also in the sense that rationality should always pave the path for higher social welfare measurable in terms of Human Development Index. HDI is a composite index of general well being, knowledge of life expectancy, per capita income, etc. It is based on two primary aspects whether people are able to exist or they are able to do some that they desire beyond just survival. It can be leisure or actualization. Whether their choice in doing is rational or irrational is therefore governed by whether ultimately it increases or decreases the welfare.

According to Taylor (1975), the cognitive strain is important for decision making to be effective. The author makes an attempt to study these in his paper. He tries to review the psychological processes of the decision makers which are affecting the operation of cognitive strain. He also ponders on how the impact of cognitive strains constraints or bounds the rational decision making. Lastly he discusses how the complex decision problems of decision makers are handled. Rational decisions of individuals are affected by whether the decision problem can be tracked or not, limitations of cognitive development of their minds and the time available to make these decisions. The individuals as decision makers have to face three inevitable problems: one, only partial information is available to them; two, any human being has a limited information processing capacity; and three, the time available to the individuals for making the decisions is also limited. So individuals tend to make choices by compromising in complex situations.

Because of these bounds/limits on rationality, the individuals find it impossible to make an efficient decision.

Now the question is whether Bounded Rationality in any form of decision is bad for Social Welfare? Gal (2016) in his research suggested that Tor actually identified certain parameters whose role is immense when bounded rationality is facing economically irrational entry decisions. Tor (2016) also made certain observations about regulations and the effect of algorithmic applications on decisions by entrepreneurs with respect to Bounded rationality.

### The Initial Model

To begin with, let us consider the commodity market equilibrium  $Q_d = Q_s$  and let the current demand be at the point  $Q_d^*$ . We shall focus only on the demand side of the economy, since the supply side has nothing to do with customer choice. Hence the supply curve is assumed to be constant.

At the micro level, let there be a commodity bundle  $C_1$  to  $C_n$ , out of which  $C_i$  maximizes the customer utility. The Perceived Utility function  $U_P$  be:

$U_{Pi} = U_{ti} - (P_i + S)$ , where  $U_{Pi}$  be the perceived utility of the  $i$ th commodity,  $U_{ti}$  be the total utility of the  $i$ th commodity,  $P_i$  be the unit price of the  $i$ th commodity and  $s$  be the search cost. Considering the search cost to be function of the perceived utility itself, we get the implicit function:

$$U_{Pi} = U_{ti} - (P_i + \phi(U_{Pi}))$$

Now from the commodity bundle  $C$ , if the customer encounters products  $m$  to  $n$  (suppose), the search cost becomes:  $\sum_{i=m}^n S_i$

With abundantly large group of products, we integrate the function:  $\int_{i=m}^n \phi(U_{Pi}) dU$ , so the perceived utility can be thought of as  $\int U_{ti} - (P_i + \int_{i=m}^n \phi(U_{Pi}) du) du$

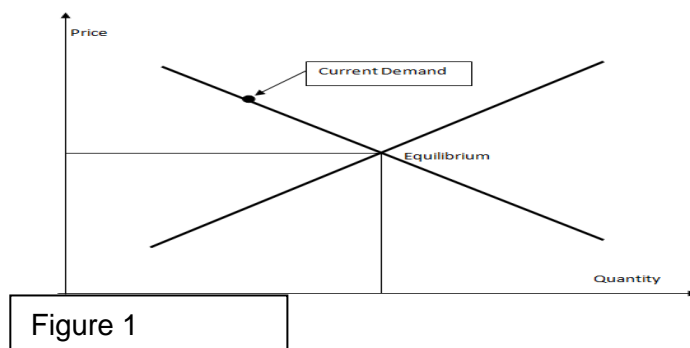


Now this perceived utility is not same as the maximum utility possible from the product bundle. The difference between the two is:  $Max(U_i) - \int U_i - (P_i + \int_{i=m}^n \phi(U_{pi}) du) du$ . As per the utilitarian view the foresaid component is the level of irrationality of a single customer.

### The Equilibrium and Irrationality

Equilibrium can be static as well as dynamic under the neo-classical model (Solow, 1956), where the temporal aspect is given prominence but is mostly studied under partial equilibrium models involving a single market. Hence, here we shall deal with a single market only. There can be multiple equilibrium models too. In a game set up the culture and historical trends seem to be decisive factors in the market choosing one of the equilibrium points (Schelling, 1960). In the foresaid game setup Haltiwanger and Waldman (1985, 1989) consider various games where the main motive is to see how irrational agents and their degree of irrationality affect equilibrium outcomes. The results stem from the fact whether strategic complements or substitutes are present. Further research was carried out to carefully study this analysis [Fehr and Tyran (2005) and Camerer and Fehr (2006)].

We first do away with the assumption that market operates at the equilibrium. Let the following figure 1 denote the equilibrium and the current demand point. The discussion follows from what we had assumed in Section 3.



The definition of irrationality that we propose is when any choice made by a customer governed by the utility maximization principle discussed in the previous section, the current transaction point may get shifted towards the equilibrium or away from the equilibrium. This incident is shown in figure 2a and 2b.

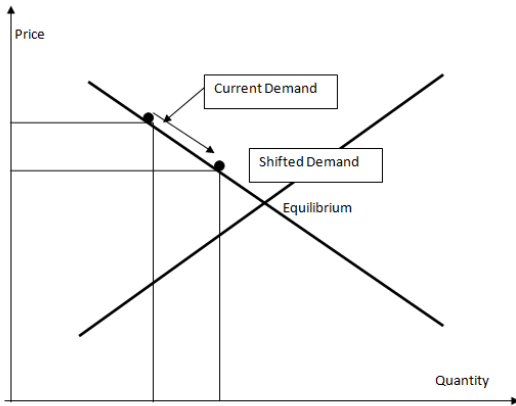


Figure 2a: Rational Choice

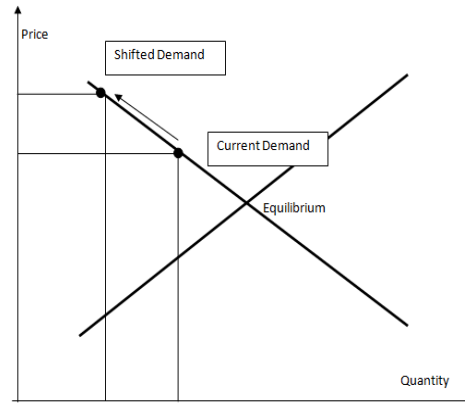


Figure 2b: Irrational Choice

In the next figure (3), we propose the equilibrium structure with the irrationality correction. The movement of the point on the demand schedule makes the demand curve shift to correct for the irrational aspect of individual decisions. For group decisions however, the effect needs to be studied under experimental set up.

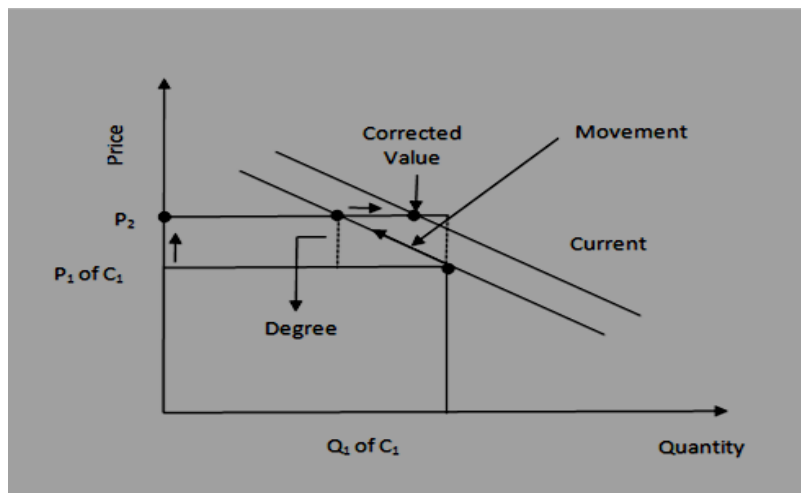


Figure 3

## Conclusion

In this paper, we propose that irrational choice is not something exogenous to economic models. The fundamental assumption of rationality has the scope of encompassing irrationality in it. Rather, rationality is just a special case where the customer choice is somehow bounded by cognitive factors. Furthermore, any decision can be thought of as irrational that shifts the market

operation away from the equilibrium. Assuming that the equilibrium point is never stable and the market forces helps the economy to move towards equilibrium, we can safely say that, irrational decisions are implicitly defined in the economy. The factor for consideration hence is only the degree of irrationality. A strong footed research can now be carried out to differentiate the perceived irrationality and the actual irrationality. Customers are always not aware of the irrational decisions they take. At the macro level, it can be judged using the notions developed in this paper, but at the micro level, it is a lot more personalized. Unless the degree is known to the decision maker, the utility of the choice will also be misleading. We shall in future attempt to study this facet in details.

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## GST in Play Alters the Taxation Rules for the Indian Business Game

Pritha Ghosh\*

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### **Abstract**

With the dream to be positioned as the most preferred global destination for investment, Indian Government made one of the most significant reforms in the country's history in the midnight of June 30, 2017, through the implementation of the new indirect tax regime GST (Goods and Service Tax) from July 1, 2017, after a thirteen-year journey, overcoming many administrative and political hurdles. GST started with a slogan of 'One Nation, One Market, One Tax'. GST promise to change the manner in which business is carried out and bring a predictable tax regime which is at par with other developed economies. GST is not simply a tax change, but a business change that will affect most functional areas. Each industry needs to understand the impact and opportunities offered by this crucial indirect tax reform. This paper includes the basic changes involved in the taxation structure fundamentals in business.

**Keywords** Indirect tax reforms, Goods and Service Tax (GST), Taxation structure fundamentals

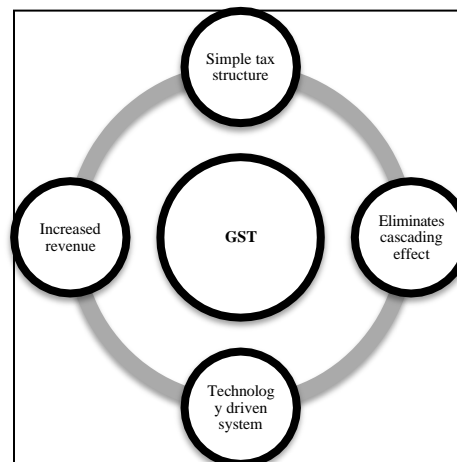
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## Introduction

GST is a digital, online destination-based taxation system which eliminates the complex cascading structure into a unified value added system of taxation. Tax will accrue to the jurisdiction, where goods and services will finally be consumed (Goods and Service Tax: Industry Insights Impact on the Retail industry, Deloitte, 2017). The impact of cascading taxes will be reduced significantly as credit flow through across the entire supply chain and across all State/Union territories. As the single rate for each category of goods and services, there will be a significant redistribution of taxes across all categories, which has resulted in reduction in taxes on manufactured goods and hence impacting the price of the product.

Figure 1: Benefits of GST



### GST in other countries in the world

France was the first country to implement GST in 1954 (India Today, 2017) to reduce tax-evasion and since then more than 140 countries have implemented GST in some form, with few countries having dual GST, for example Brazil and Canada (Business Today 2017). Malaysia was the most recent country to implement GST before India on April 1, 2015 (India Tax Insights, EY, 2014). India has chosen the Canadian model of dual GST as she is a federal country (Taking advantage of GST- Critical impact areas and implications, Redseer, 2015), where the Centre and States have the power to levy and collect taxes. European countries have one rate of GST as they

do not have poor families and can be burdened with the same tax as the rich (Business Today 2017). The GST rates of few countries have been tabulated below.

**Table 1: GST rates of few countries**

Country	GST rates
Canada	13 to 15%
France	20%
United Kingdom	20%
New Zealand	15%
Malaysia	6%
Singapore	7%

\*Source: (India's GST highest in the world: Here's what some other countries charge, Business Today, 2017)

### **Legislative route to GST**

Before the commencement of GST in India, there were different tax laws and tax rates from State to State. It did

not provide tax credits for Interstate transactions, leading to distortion in the allocation of resources and indirect

taxes, becoming a major concern for business decision makers (The Times of India, 2017). In India, GST was conceived in 2004 by the Task Force on the implementation of the Fiscal Responsibility and Budget Management Act, 2003 (Kelkar Committee) while analyzing the prevailing indirect tax system both at the Central and State level. The Kelkar Committee observed that a tax reform would comprehensively tax the consumption of almost all goods and services in the economy and achieve a common market, widen the tax base, increase the revenue collected by the Government and also enhance the welfare of the society through efficient resource allocation (Goods and Service Tax in India: Trading Stock and setting Expectations, Deloitte, 2014).

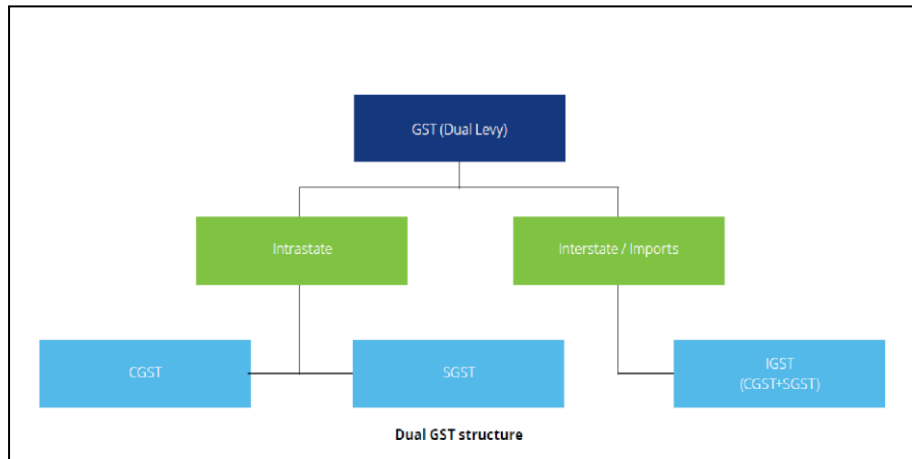
In 2006, the Finance Minister announced in his Union Budget speech that India would introduce GST by April 1, 2010. This process involved intensive groundwork by the Finance Commission, the Joint Working Group constituted by the Empowered Committee (EC) of State Finance Ministers, the Standing Committees and Study Groups, Information Technology (IT) teams and all other stakeholders, including India Inc. The amendment of the Constitution for implementing GST before legislating associated provisions was a big challenge for the Government. But unfortunately, lack of consensus between the Centre and State and a few other practical difficulties resulted in deadlocks and delay in implementation of this much needed reform (India Tax Insights, EY, 2014).

In the old tax regime, Center had no right to tax the sale of goods, except in case of Interstate sale and the States could not levy tax on services. Finally, the amendments to the Constitution (122<sup>nd</sup> Amendment) Bill 2014 led to roll out of GST (The Hindu 2016). The Constitutional Amendment act provided a clear division of powers mentioned in Article 246 in respect of taxation between the Centre and the States in respect of GST, a single tax on goods and services (The Economic Times 2016). The Constitution, by design, enlists heads of legislations, including taxing heads, in the Seventh Schedule. Post the Amendment, most heads dealing with indirect taxation have been removed from the Seventh Schedule and consolidated into a head titled Goods and Services Tax, levied on the supply of goods and services by both the Centre and the States by Laws passed by their respective legislatures under a newly added Article 246A. To decide on a unified GST rate and the rate at which taxes would be split between the Centre and the States, a GST council has been constituted to give recommendations to the Centre and the States on these issues.

### **Dual GST structure**

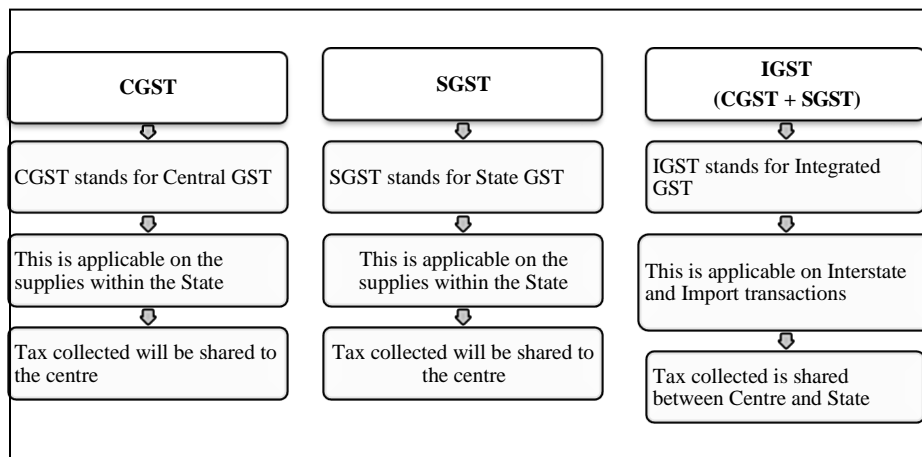
With the advent of GST on July 1, 2017 in India, Central and State Governments abolished all multiple taxes (except customs duty) (The Times of India, 2017).

Figure 2a: Dual GST structure



\*Source: (Goods and Service Tax: Industry Insights Impact on the Retail industry, Deloitte, 2017)

Figure 2b: CGST, SGST and IGST

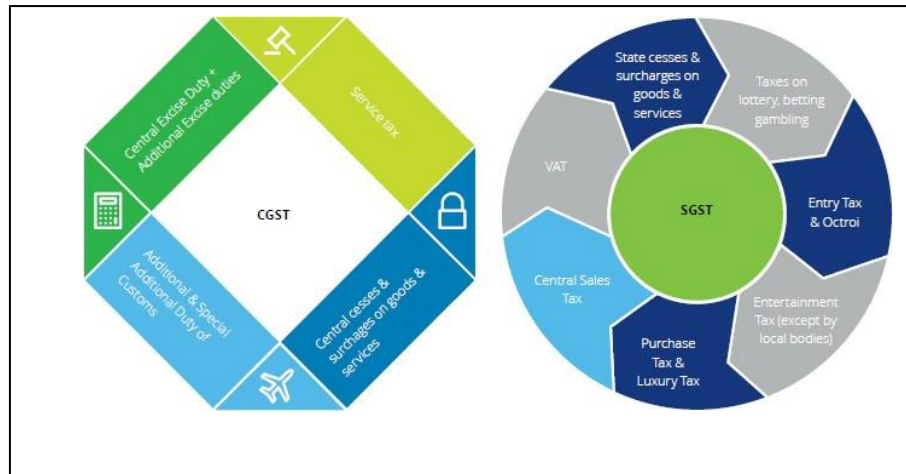


GST is levied simultaneously by the Central and State (CGST and SGST respectively). Every Intrastate transaction of supply of goods and services would be liable to CGST and SGST concurrently (Goods and Service Tax: Industry Insights Impact on the Retail industry, Deloitte, 2017).

As shown in the image below, all the Central taxes are subsumed under CGST, State taxes under SGST.



Figure 3: Taxes subsumed under CGST and SGST



\*Source: (Goods and Service Tax Industry Insights Impact on the Retail industry, Deloitte, 2017)

Also, (The Times of India, 2017) if the supply is an Interstate, a single integrated GST (IGST), is levied on all supplies. Interstate transactions, including stock transfers and imports will become liable to IGST and the Central Sales tax (CST), Countervailing Duty (CVD) and SAD (Special Additional Duty) applicable on imports are subsumed under the IGST (Goods and Service Tax: Industry Insights Impact on the Retail industry, Deloitte, 2017).

### Input credit Mechanism

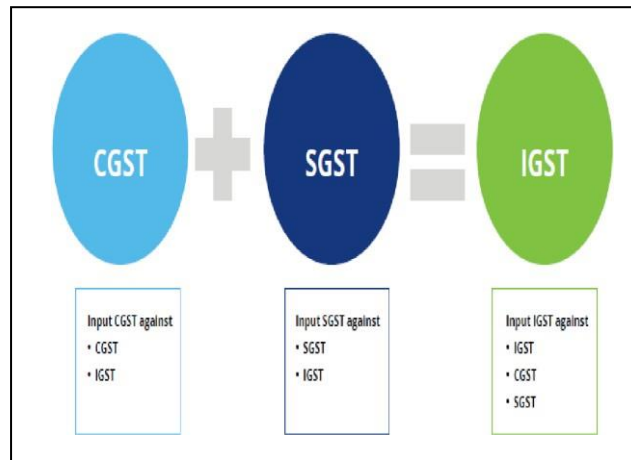
A business can claim the Input Tax Credit (ITC) to recover the tax they pay for the incremental value they add to a product or service, so the tax is ultimately borne by the final consumer (India's New GST, KPMG International, 2017).

Set off mechanism (Goods and Service Tax: Industry Insights Impact on the Retail industry, Deloitte, 2017) of credit of CGST, SGST and IGST suggests that the dual GST will be a State-specific levy where the credit will accrue to the registered taxpayer at the place of supply and will be required to be accounted separately as CGST, SGST or IGST

- a. IGST credit can be utilized against IGST, CGST and SGST liability to supply

- b. CGST credit can be utilized against CGST and IGST, whereas SGST can be utilized against SGST and IGST
- c. Cross Utilization of CGST and SGST is restricted

**Figure 4: Input Credit Mechanism**



\*Source: (Goods and Service Tax: Industry Insights Impact on the Retail industry, Deloitte, 2017)

**Numerical examples illustrate the comparison of tax calculated under the old regime and GST**

**Table 2a: Comparison of the tax calculation under the old regime and GST for Intrastate supply**

	<b>Intrastate supply</b>	<b>Current tax</b>		<b>GST</b>
<b>Manufacturer</b>	Product sale price	1000		1000
	Excise duty at 12%	120	CGST at 9%	90
	VAT 14%	157	SGST at 9%	90
	<b>Dealer invoice</b>	<b>1277</b>		<b>1180</b>
<b>Dealer</b>	<b>Dealer cost (1000 +120)</b>	<b>1120</b>		<b>1000</b>
	Margin	100		100
	Sale price of the dealer	1220		1100
	VAT at 14%	171	CGST at 9% SGST at 9%	99 99

	<b>Price to the customer</b>	<b>1391</b>		<b>1298</b>
	<b>Dealer's tax liability</b>			
	Net VAT/GST after set-off	14		18
<b>Customer</b>	Saving to the consumer			93

**Table 2b: Comparison of the tax calculation under the current regime and GST for Interstate supply**

	<b>Interstate supply</b>	<b>Current tax</b>		<b>GST</b>
<b>Manufacturer</b>	Product sale price	1000		1000
	Excise duty at 12%	120	IGST at 9%	180
	CST at 2%	22		
	<b>Dealer invoice</b>	<b>1142</b>		<b>1180</b>
<b>Dealer</b>	<b>Dealer cost (1000 +120+22)</b>	<b>1142</b>		<b>1000</b>
	Margin	100		100
	Sale price of the dealer	1242		1100
	VAT at 14%	174	CGST at 9%	99
			SGST at 9%	99
	<b>Price to the customer</b>	<b>1416</b>		<b>1298</b>
	<b>Dealer's tax liability</b>			
	Net VAT/GST after set-off	174		18
<b>Customer</b>	Saving to the consumer			<b>118</b>

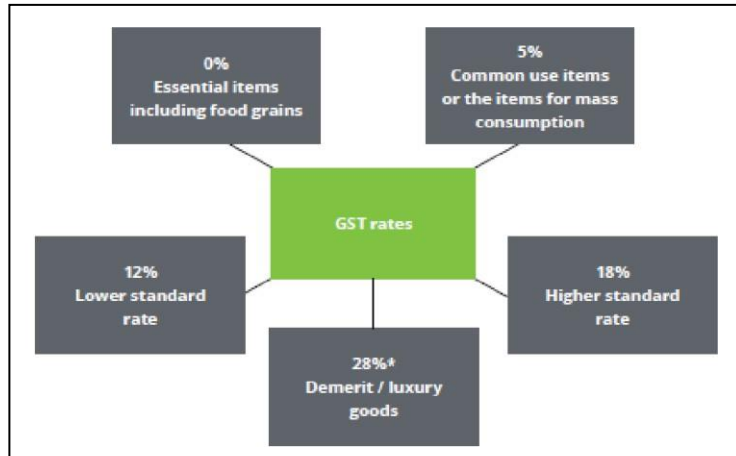
### GST rate structure

-The GST will apply at five basic rates (India's New GST, KPMG International, 2017):

- I. -The 0 percent rate will apply to essential food items, exports and supplies to Special Economic Zones (SEZ)
- II. -The 5 percent rate will apply to some mass consumption items (e.g. Spices, tea)
- III. -The 12 percent standard rate that will apply to other commonly used items (e.g. Soap, cell phones, processed phones)
- IV. -The 18 percent standard rates that will apply to most products and services
- V. -The 28 percent rate will apply to consumer durable goods (e.g. Televisions, cars)

A surcharge on top of the 28 percent rate will apply to luxury items, such as high-end cars and 'Sin tax' items such as tobacco.

Figure 5a: Five basic rates applied by GST



\*Source: (Goods and Service Tax: Industry Insights Impact on the Retail industry, Deloitte, 2017)

The GST Council at its 23<sup>rd</sup> meeting on 10 November 2017 recommended widespread changes in which it has been decided to keep the highest 28% tax on luxury and sinful items as a result, 177 items were shifted to 18% bracket (The Economic Times, 2018). In the 25<sup>th</sup> meeting on 25 January 2018 and 26<sup>th</sup> meeting on 10 March 2018 further GST rates have been altered to meet the needs of the people.

Figure 5b: Few rates mentioned in the 26<sup>th</sup> GST Council meeting



\*Source: (cleartax)

Though GST has replaced most of the previous taxes in India, following items are kept outside the purview of GST in India like (Times of India 2017):

**a. Alcohol**

**b. Petroleum products**

Petroleum products such as petroleum crude, motor spirit (petrol), high speed diesel, natural gas and aviation turbine fuel, etc. are kept outside the purview of GST in India.

**c. Electricity**

However, taxes applicable at present for these products will continue as per the structure before the implementation of GST.

**GST registration**

A business whose aggregate turnover in a financial year exceeds 20 lakhs has to mandatory register under Goods and Services Tax. This limit is set at Rs 10 lakhs for North Eastern States flagged as special category States. The special category States include Arunachal Pradesh, Assam, Jammu & Kashmir, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Himachal Pradesh and Uttarakhand (cleartax).

GST registration is a tedious 11-step procedure which requires submission of many business details and scanned documents. Documents required for GST registration are Permanent Account Number (PAN) of the applicant, Aadhaar card, proof of business registration or Incorporation Certificate, identity and proof of address of Promoters/Directors with photographs, proof of address of the place of business, bank account statement/cancelled cheque, digital signature and letter of authorization/board resolution for authorized signatory (cleartax).

Penalty for not paying taxes or making short payments for genuine reasons is 10% of the tax amount due, subject to a minimum of Rs. 10,000. The penalty will be at 100% of the tax amount due, when the offender is deliberately evading paying taxes (cleartax).

A business that operates in more than one State has to do a separate GST registration in each State and also a business with multiple business verticals may obtain a separate registration for

each business vertical (cleartax).

The GST Council in its 23rd meeting has decided to increase the threshold for composition scheme to 1.5 crore and also decided to amend the law to increase the statutory threshold to 2 crores (The Economic Times, 2017), enabling them to pay tax at a flat rate without input credits (NDTV PROFIT, 2017). Small businesses can now pay tax at a prescribed percentage of the turnover every quarter, instead of paying tax at a normal rate. In the Service sector this scheme is available only for restaurants and is unavailable for tobacco and manufactured tobacco substitutes, pan-masala and ice-cream and other edible ice, whether or not containing cocoa (NDTV PROFIT, 2017). In the composition scheme (cleartax):

-Composition dealers are required to file only one quarterly return (instead of three monthly returns filed by normal tax payers).

-They cannot issue taxable invoices, i.e, collect tax from customers and are required to pay the tax out of their own pocket

-Businesses that have opted for Composition Scheme cannot claim any input tax credit

Composition Scheme is not applicable to (cleartax):

-Service Providers

-Interstate sellers

-E-commerce sellers

-Supplier of non-taxable goods

-Manufacturer of notifying goods

A special registration procedure is prescribed for (India's New GST, KPMG International, 2017):

- a) Businesses required to deduct or collect tax at source
- b) Taxable non-residents
- c) Businesses supplying online information and database access or retrieval services from a place outside India to a non-taxable online recipient

### **GSTN (Goods and Service Tax Network)**

Union cabinet (Goods and Service Tax in India: Taking Stock and Setting Expectations, Deloitte, 2015) approved a proposal to set up the SPV (Special Purpose Vehicle), namely GSTN, as an exclusive nodal agency for enabling IT infrastructure for the smooth introduction of GST. GSTN was incorporated on March 28, 2013 under Section 25 of the Companies Act, 1956 (as non-Government, non-for-profit, private limited company) promoted jointly by Central and State Governments. GSTN has a self-sustaining revenue model, based on a levy of user charges on taxpayers and tax authorities availing its services. GSTN has been set up with the following objectives:

1. Integration of the common GST portal with the existing tax administration systems of the Central/State Governments and other stakeholders
2. Facilitation, implementation and setting standards for providing services to the taxpayers through the common GST portal, State Governments and other stakeholders
3. Building efficient and convenient interfaces between taxpayers to increase tax compliance
4. Carrying out research, studying best practices and provide training to the stakeholders

### **Technical glitches and teething problems post GST**

As complaints of technical glitches in the GST network mount like the bandwidth capabilities of the network, robustness of the software, security aspects and the architecture of the entire system, the Comptroller and Auditor General (CAG) is expected to look into these issues to make it ready to handle enormous amounts of transactions (The Hindu 2017).

Other teething problems of GST includes understanding of the new laws/procedures or taxpayers' reluctance/apprehension. The problems have just started pouring in - be it technical glitches, understanding of the new laws/procedures, or taxpayers' reluctance/apprehension. Forgetting of passwords is a trivial issue, but resetting it consumes 4-5 working days, but risky is sharing the passwords with advocates as it has security threats. Registering a digital signature is also a cumbersome process (Business Today, 2017).

The industry faced major issues in meeting compliances with the GST portal not functioning and deadlines being extended at the last minute. The return file process of GSTR1, GSTR2 and GSTR3 should have been postponed till the portal is fully stable. Also, the facility of revising GSTR3B should be allowed, given the assessment were not fully ready with data meeting GST compliances (Analysis and Findings from GST survey 2018-19, KPMG, 2018).

Anti-profiteering provisions are not clear and the Government should have laid down clear guidelines on how to calculate the profit on account of GST, much before GST was implemented (Analysis and Findings from GST survey 2018-19, KPMG, 2018).

GST has impacted their procurement and supply chain, with decisions now being taken largely on the basis of commercial aspects rather than tax, as was done earlier. But a reduction in the number of depots for pan India operations are yet to become a reality (Analysis and Findings from GST survey 2018-19, KPMG, 2018).

Refunds on exports have not been processed till date, leading to blockage of working capital. Withdrawal of exemptions on procurement for export purposes has further increased the strain on working capital (Analysis and Findings from GST survey 2018-19, KPMG, 2018).

With respect to the transition, problems still persist around carry forward of credits of cess and the eligibility to carry forward credit on stock lying at different locations (Analysis and Findings from GST survey 2018-19, KPMG, 2018).

### **Revamp of GST**

The Government has been proactive in ensuring that the rollout of GST is smooth without leading to speculation, panic or profiteering by controlling rumor mongering, clarifying ambiguities/confusions and resolving taxpayers' issues. In order to achieve that it has set up facilitation centers in all sales tax and excise offices, organized interactive sessions with industry and traders and come out with Frequently Asked Questions FAQs to clear confusion. Also, there is an incident that unscrupulous elements are trying to fleece shopkeepers and customers for



which the finance ministry has barred tax officials from paying an unauthorized visit to any business premises (Business Today, 2017).

After the GST council's 24<sup>th</sup> meeting, there was a revision of rates on 29 items and 53 categories of services, ahead of the Union Budget. The new rates have been applicable from 25 January 2018 (The Economic Times, 2018).

Figure 6: Revamp of GST



\*Source: (GST Council rejijs rates of 29 items, 53 services, The Economic Times 2018)

The Council also included cuts in 20-liter packaged drinking water, biodiesel, diamonds and precious stones, sugar candies, tailoring services, amusement parks and low-cost housing construction services (The Economic Times, 2018).

The GST Council meeting on 10 March 2018 decided that the E-way bill will be implemented from 1 April 2018 (Economic Times, 2018). Under the reverse-charge mechanism, a person receiving goods or services collects the GST levied and deposits the tax to the Government. The provision was only meant for unregistered entity supplying goods or services or both. In such instances, those taking goods or services levy and collect taxes on a reverse-charge basis, ensuring its payment (Economic Times, 2018). The liability to pay tax on reverse-charge basis has been deferred till 30 June 2018. In the meantime, a group of Ministers will look into the modalities of its implementation to ensure that no inconvenience is caused to the trade and industry (Economic Times, 2018).

## **Union Budget 2018-2019 on 1 February 2018**

In Indirect Taxes (Hindu Times, 2018), there is not much the budget can do and contained numbers for the old indirect taxes that existed up to June 20, 2017. Any decision regarding the changes in GST rates is taken by the GST Council apart from changes in the basic custom duties which is outside the arena of the GST (Business Standard, 2018). ~~This year's~~ The 2018-2019 budget has been the most awaited announcement since the introduction of GST and the incumbent Government's last budget of this term.

On 1 February 2018 Finance Minister's fifth and last full budget came in the Loksabha in which the name of the Central Board of Excise and Customs is proposed to be changed to Central Board of Indirect Taxes and Reforms.

The expectations of the industry from the budget were with respect to the amendments required in the GST Act

arising out of the last six months of implementation. The GST rate related amendment has been constantly made. With the consolidation of Excise Duty and Service Tax under the GST, the changes are expected to focus on the import of goods in India and Central Excise Duty applicable on petrol and diesel (India Forbes, 2018).

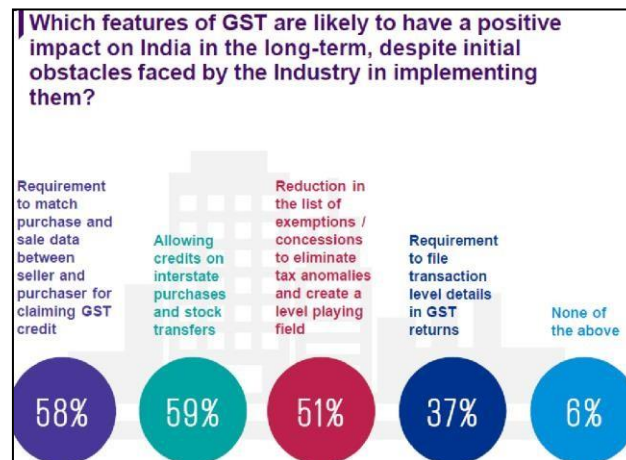
Against the backdrop of consistently rising oil prices and cut in the excise duty for fuel but there was no sign of relief as petroleum taxes are specific in nature and also there are problems with the revenue buoyancy. Since the GST council could not approve the changes they were not introduced on the first day of the budget session and likely to be done on the second-half of the Budget session in March 2018 (Hindu Times, 2018).

## **Conclusion**

As per a report based on analysis of a survey on GST (Analysis and Findings from GST survey 2018-19, KPMG, 2018):

- 93% of the respondents agreed that GST would have a positive impact on the Indian economy, especially with the availability of full credits on procurement and requirement of matching of sale and purchase data for claiming credits. 68% agreed that the Government is taking all the adequate steps to make the industry experience of GST as convenient as possible for the people.

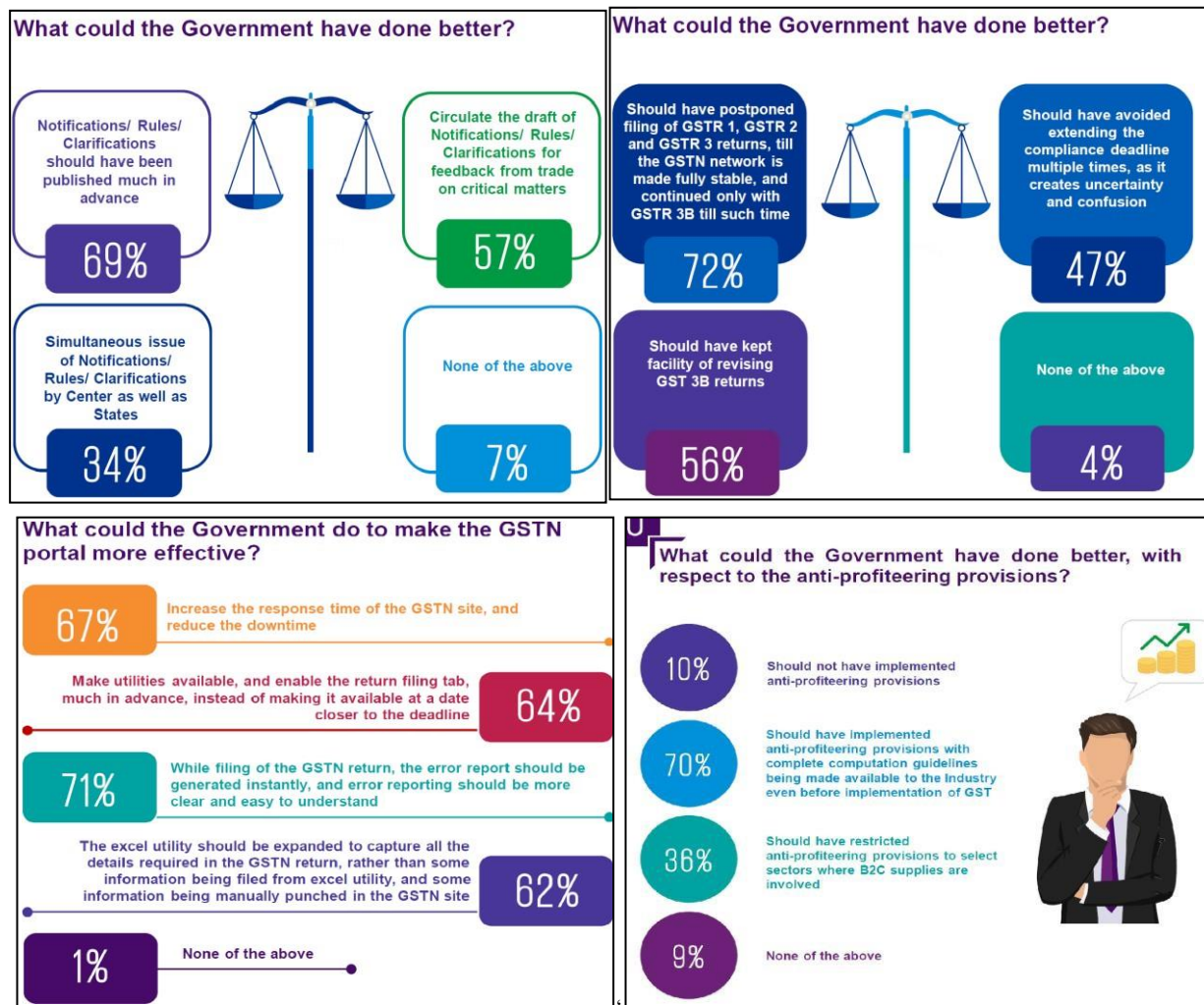
Figure 7: Features of GST likely to have a positive impact in India



\*Source: (Analysis and Findings from GST survey 2018-19, KPMG, 2018)

- Almost all the respondents felt that the GSTN portal can be made more effective, by making the return filing utilities available much earlier rather than closer to the deadline and the error report being generated instantly in a clear manner.
- The industry expects further rationalization of GST rates and simplification of compliance with 55% of the respondents saying they are unsatisfied with the time given to assess to implement the GST Council's decisions, few adequate steps that can be taken by the Government are suggested by them represented through the images given below:

Figure 8: Adequate measures that can be taken by the Government to make GST easier in India



\*Source: (Analysis and Findings from GST survey 2018-19, KPMG, 2018)

GST claims to ease the process of doing business in India by widening and expanding the marketplace and reducing the tax compliance burden (The Economic Times, 2017). For businesses in India, the GST entail a distinct move from an origin-based taxation to a destination-based tax structure, with significant potential impacts on cash flow, pricing, working capital, supply chain and IT systems (India's New GST, KPMG International, 2017).

With the onset of GST, many businesses in India were not much prepared with the new obligations, but the transition, it offers an excellent opportunity for organizations to take a transformative approach, assessing and realigning business models to drive efficiencies and gain

competitive edge (India's New GST, KPMG International, 2017). The implementation of the GST was chaotic with various industries seeking for several clarifications, frequent revision of rates and other teething troubles. The traders and businesses took their time to adopt the technologies to be GST compliant.

In retrospect, the implementation of the GST was not easy for micro, small and medium enterprises (MSME) sector, which struggled with cash flows and GST compliance. The situation has improved with the 48 lakhs MSMEs registered with the Udyog Adhaar Memorandum (UAM) Portal as of July 2018, mostly credited to the "Make in India" initiative. Further, the replacement of as many as 17 levies and numerous cesses with a single tax has simplified tax filing and further streamlined processes (The Economic Times, 2019).

The real impact of the lockdown of the pandemic on GST revenue, will be reflected in the revenue collections of May, 2020 (for business activity in April, 2020) as the country was in complete lockdown in April, 2020 with permission of essential services only. Experts said that the GST mop up in May, 2020 would be primarily from sectors like telecom, FMCG, food processing and pharma. The Central Board of Indirect Taxes and Customs (CBIC) had launched a Special Refund in April, 2020 to clear pending GST and drawback refunds to help businesses tide over the liquidity crunch amid COVID-19 crisis (The Economic Times, 2020).

The efforts of the Government of India are being hindered by unexpected challenges and hopefully all these problems are solved so that the country can continue to celebrate the triumph of GST and achieve the purpose of the slogan of 'One Nation, One Market, One Tax'. The Government is trying to ease the GST rates, providing clarifications on various issues, simplifying the return filing process and providing relaxation on operational aspects. The GST is not simply a tax change, but a business change that will affect most functional areas.

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## **Investigating Learner Centered Approach towards teaching of Effective Communication skills: An ‘adaptable’ methodology for Management Education**

**\*Sohini Datta**

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### **Abstract**

A long discussed, long researched domain in the field of Education in general and ‘English Language Teaching’ in particular has perhaps remained unanswered, that is, how to make teaching a language ‘interesting’ and how to become an ‘innovative facilitator’ rather than a ‘teacher’? In order to answer this question the outcome of the whole activity called ‘teaching-learning’ needs to be addressed.

The present paper attempts to suggest certain ‘creative’, ‘adaptable’ and ‘flexible’ teaching methodologies for Management Education in West Bengal, India to highlight that there is now a need for a ‘paradigm shift’ in the way learners are taught.

The paper begins with several background information about this area and then proceeds towards various types of ‘enthusiastic’ and ‘fun-filled’ teaching techniques along with ‘case study’ justifications.

The paper finally concludes with recommendation that the focus of teaching and learning should now be on ‘learner-teacher’ and not on ‘teacher-learner’ relationship. Students must be taught not in the literal sense of the term ‘teaching’ but they need to be ‘facilitated’ always to learn by themselves especially when being dealt with the Management students.

**Keywords:** Interesting, Innovative, Facilitator, Flexible, Adaptable, Fun-filled, Learner-Teacher, Creative.

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## **Introduction:**

Several psychologists and educationists have lead different studies in this quest of finding out the interesting methods for teaching. The question of how to make language teaching ‘interesting’ and how to become an ‘innovative facilitator’ rather than a ‘teacher’ has remained a long discussed and long researched domain.

The primary goal of a teacher traditionally was to ensure that the students are taught the subjects that are prescribed for each class. Many teachers, along with this set of goal, understand that they have another long target of molding the career and future of the student. This perceived role of a teacher is what actually helps them to put in that extra effort in teaching and helping the student develop their intellectual abilities. Apart from this, there can be other short term goals like, helping the student achieve the required success in the examinations. However all these perceived and set of goals are weighed differently by different teachers according to their level of interest and passion towards this Management profession. The point is that it is these goals and the means to achieve them that can be considered as the ways to make teaching interesting and to become an interesting teacher. But in many cases, though the teachers aspire for higher goals, the means to achieve them is unclear. Many teachers try to bring in different styles of teaching and also try to control, coax and cajole the students to be attentive in the class. But again the problem is that, the results may not be very impressive. The long term learning part is also a matter under question. All these mean that there is a need for a paradigm shift in the way students are “taught”.

Most educational theories were developed exclusively to educate students whether child or adult. The prominent question in the field of ‘language learning’ in particular and education in general is whether we need to believe a continuum ranging from ‘teacher-driven’ to ‘student-driven’ learning or a ‘new’ shift in the structure that would be wholly ‘student-directed’ learning depending on the ‘learner’ characteristics learning settings, constraints on time and several other factors before finally choosing the ‘flexible’ methodology.

## **Background:**

Every generation, according to Zemke (2000) has specific specific preferences for the arrangement of the learning environment, type of instruction and learning activities. The generations have been called traditionalists (those born between 1920-1944), Baby boomers (those born between 1945 and 1960), Gen Xers (those born between 1961 to 1980), Milleniums or Nexters (those born after 1980). A traditional training room with a stable, orderly learning environment was preferred by the ‘traditionalists’.

Baby boomers respond well to interactive training /teaching activities-they like group activities. They like well organized training materials which are easy to access. Compared to other groups, they are especially motivated to learn if they believe training content will benefit them personally.

Gen Xers prefer a self-directed learning environment. They respond best to training methods that allow them to work at their own pace: videos, CD –ROMs and web based training.

Nexters prefer a learning environment that includes team work and technology. They like to learn by both working alone and helping others. Nexters (like Gen Xers) prefer entertaining training activities. Training needs to be interactive and enthusiastic.

It is clearly evident from the above discussion that the present generation needs a pleasure–filled, entertaining teaching and training methodology which will also be giving the necessary information along with usage of latest technology. This also means a radical shift of focus from the teacher to the learner. But the interesting fact is that we are living in an era of different generations, in which the teacher belongs to Baby boomers or GenXer and the student belongs to Nexter! Is that why, we face so much of problems in the teaching-learning environment? Considering all the above factors, it is now imperative that the traditional teaching methodologies used in technical and management education needs a thorough revamping. This shift although happening in many places, needs to be extended to become an inbuilt teaching

methodology. The following areas of changes are identified which will cater to the need of the hour.

*A. From Teacher Centered to Learner Centered*

The teaching –learning process should now focus more on the student and get more involvement and participation. The methodology used should be interesting and appealing to them. Students should learn by their experience.

*B. From Subject orientation to Personal development orientation*

The focus of teaching and learning should now be on the total personal development which includes behavioural skills, values and attitudes of the student along with the subject knowledge. For this, the teaching methodology should also help the student gain the necessary behavioural and personality skills apart from the subject knowledge gained in the process. Daniel Goleman , the famous psychologist , who write the book “Emotional Intelligence” says that emotional skills needs to be incorporated in the school and college education.

*C. From Teaching to Facilitation*

The age old concept of the teacher, who teaches with the help of a board and chalk, now, must be shifted to a role of the teacher in which, the teacher acts as a motivator and a facilitator in the process of learning. Facilitating is helping the student learn and not in the literal sense of “teaching”. Students must be taught, but need not be “taught,” always. They need to be facilitated to learn by themselves. All this requires the teacher to use innovative methods of teaching especially when dealing with technical and management students.

**Methodology:**

The following different innovative methods have been tried on an experimental basis among various groups of students ranging from first year to final year Management students. The age group of the participants ranges from 21 - 25 years; certain exceptional cases may include 26-30 or more (mainly for career advancement). The methods are listed with an example or an experience or case study.

However, the teachers when adopting these methods should also consider its relevance for use in a particular context. The time required for the activity is also given, which needs to be calculated further, considering a batch size of 60 students (common classroom size in a school or college). In some cases, the activities can be given as an assignment with prior notice, so that the students come well prepared. The benefit of using these techniques is also listed, based on the experience and observation of the experimenter and also by the feedback of the students.

### **Findings & Analysis:**

Through the given ‘methodologies’ and ‘case studies’ underneath about Management education, this present paper tries to analyse learner centered approach towards teaching of English communication skills.

#### ***Method 1: “Train the Trainer” - Senior students teach Junior students***

<i>Time required</i>	Based on the subject and topic, one to two hours.
<i>Tools required</i>	Facilities for Audio and Video.
<i>Preparation time</i>	Sufficient preparation time must be given based on the capability of the students.
<i>Benefits</i>	<ul style="list-style-type: none"> <li>• Team work,</li> <li>• Responsibility,</li> <li>• Subject knowledge,</li> <li>• Presentation skills,</li> <li>• Confidence,</li> <li>• Application of skills/subject already learnt.</li> </ul>
<i>Flexible Factor</i>	Medium
<i>Knowledge Transfer</i>	Immediate and Direct

***Principle:***

Many previous researchers found that (Astin, 1993; Simpson & Frost, 1993) involvement and commitment are two important attributes of successful students, and willingness to take responsibility for the future is a third. Involved, committed, and responsible students seem to know where they are going, spend whatever time and energy it takes to achieve their goals, and access the resources they need to help them along their way. Inculcating the values of shouldering responsibility is therefore an important factor for development of the student.

***Methodology:***

Selected Senior students (E.g.: Second year students) are given a topic for taking a training session for the junior students (E.g.: First year students). The topic and session timings are fixed based on mutual discussions between the teacher and students. The teacher should facilitate and provide the necessary support for the group in the preparation of the content, schedule and others.

***Case Study:***

The second year MBA students will be asked to prepare and deliver a training session on “Communication skills” to the first year MBA students. The session is planned for two hours. The team size of the trainer team will be sixteen (16). The trainer group will be subdivided into pairs and each pair will be given various sub topics and areas of training delivery. There are several sessions of planning and each aspect of training had to be taken by the students themselves. The teacher’s role is to support when required and provide the overall guidance. On the particular day of the training, a group of junior students (30 in numbers) were given as “trainees”. The trainers then will handle the session for two hours, playing the role of a “trainer” in pairs. After the training session is over, a feedback from the trainees was collected and the program was rated “very good”. A post training analysis will also be done along with the teacher and the students who undertook this assignment. The post training analysis will help the students to understand the nuances behind organizing and conducting a training program. The senior students could understand the difficulties of a teacher and the junior students could become a good listener.

***Method 2: Creative Song composition***

<i>Time required</i>	5 minutes presentation time per group
<i>Tools required</i>	Paper , Pen
<i>Preparation time</i>	15 minutes for each group
<i>Benefits</i>	<ul style="list-style-type: none"> <li>• Team work,</li> <li>• Subject knowledge,</li> <li>• Presentation skills,</li> <li>• Creativity,</li> <li>• Aids in better understanding of the subject learnt already,</li> <li>• Decision making</li> </ul>
<i>Enthusiastic Factor</i>	High
<i>Knowledge Transfer</i>	Immediate and Indirect

***Principle:***

According to the results of recent researches using music in the educational process not only makes it livelier, enjoyable but stimulates "right" brain learning. Several years ago one research showed that people listening to Mozart scored better on a standard IQ test. ("Mozart Effect"-studied by Dr. Alfred A. Tomatis). Listening to Mozart also reduces severity of epileptic seizures and Alzheimer's disease. People often use music to relax after exhausting day, to get rid of stress or to prepare for tests. So it is logical to listen to music in order to make students study better. Using famous songs is an efficient method to activate and interest the students. Not just listening to music, but also making them involved in composing music would be a better activity that will trigger the creativity hidden among the peers.



***Methodology:***

The students are divided into small groups and asked to prepare a song or poem about the subject already taught. This way, the difficult concepts, especially those which are difficult to memorise can be easily learnt by the student. For e.g: Definitions, lists, theories etc can be converted to popular film songs and be presented by the group members themselves. The teacher must conduct this activity without prior information and the activity becomes interesting when it is done spontaneously.

***Case Study:***

The first year MBA students will be given this activity and they could come up with very interesting songs and poem related to several management principles. The songs were presented by the group members in front of the classmates. The groups will present several topics like definition of Accounting, Fourteen principles of H.Fayol, Functions of managers etc in the form of songs and poems. Some songs were formed on popular film songs, which helped the students to easily memorise their subjects.

***Method 3: Role-play***

<i>Time required</i>	10- 15 minutes per group
<i>Tools required</i>	Nil (when organized spontaneously otherwise as per the requirements of the team)
<i>Preparation time</i>	Sufficient preparation time must be given based on the capabilities of the group
<i>Benefits</i>	<ul style="list-style-type: none"><li>• Team work,</li><li>• Subject knowledge,</li><li>• Presentation skills,</li><li>• Creativity,</li><li>• Aids in better understanding of the subject learnt already,</li></ul>

	<ul style="list-style-type: none"><li>• Decision making,</li><li>• Communication skills,</li><li>• Confidence</li></ul>
<i>Flexible Factor</i>	High
<i>Knowledge Transfer</i>	Long term and Indirect. In some cases, based on the program, the learning can be direct and immediate also

***Principle:***

Role-play has been considered as a very effective means of training and teaching in management education. Several previous researches have proved its usefulness in professional and behavioural trainings. However its use has not been fully tapped in technical education. This role-playing when done in tune with TV or similar media programs is much more interesting for the students.

***Methodology:***

The entire class is divided into smaller groups. Each group is given the task of preparing and presenting a TV show /radio program based on the subject already discussed or taught in the class. Of course, the idea and type of program can be made contemporary or can be original, based on the creativity and decision of the group members. However, each group member must participate in one or the other way while the show is presented before the audience. The topic can be either given by the teacher or asked to voluntarily select. Once the group is given enough time for discussion, they can be asked to present it in front of the remaining classmates. The teacher must provide the rules and regulations for the program with regard to the time slot, the content and the subject coverage. These groups can be evaluated on the basis of their creativity, their communication skills, the content coverage and their presentation.

***Case Study:***

This activity will be given to the First year MBA Students. They will be asked to present any television show based on any subject that they have learnt. This activity was tried out both as a

spontaneous activity, in which the topic is given and the presentation done during the same session as well as a prepared activity with sufficient preparation time. Both the cases produced excellent results, as the students came up with very interesting and informative “TV Shows” on subjects related to Science, Commerce, English Communication, Management Skills etc. Some of the programme names were “Coffee with Bill Gates”, “Super Salesman-Reality show”, “English For all” etc. Each of these shows was presented within 10-15 minutes and the audience rated the programs based on their content coverage, presentation style, creativity etc.

***Method 4: Peer Group –Learning method with Student Teachers***

<i>Time required</i>	15-30 minutes per group based on the topic
<i>Tools required</i>	Nil
<i>Preparation time</i>	Sufficient preparation time must be given. Topics must be allotted sufficiently advance
<i>Benefits</i>	<ul style="list-style-type: none"> <li>• Subject knowledge,</li> <li>• Presentation skills,</li> <li>• Communication skills,</li> <li>• Confidence,</li> <li>• Responsibility ,</li> <li>• Listening skills,</li> <li>• Interest towards the subject,</li> <li>• Understands the subject better</li> </ul>
<i>Enthusiastic Factor</i>	Medium
<i>Knowledge Transfer</i>	Immediate and direct

***Principle:***

The basic principles of this activity are somewhat the same as that of the “train the trainer” activity, already shown above. This activity also highlights the need for giving more responsibility for the students, which would help to learn themselves, rather than the teacher lecturing the complete subjects.

***Methodology:***

This method is to be organized prior to the session. The entire class is divided into small groups of 6-8 members each. On a particular day, one group will come prepared with a topic assigned to them at least one week in advance. Then each of the group members is sent to the remaining group and asked to teach the portion to the small group before them. This way the entire groups get one teacher each and the lesson is taught to them by “student teacher”. After giving the necessary time for the student teacher to teach, the teachers are interchanged and each group gets a new teacher. The new teacher asks question to the group and evaluates the group members for their knowledge.

***Case Study:***

This activity has to be given to a class of Final MBA students for the subject called “Industrial organization and Management”. This method actually helped the students in learning the subject better, especially the theories and other contents related to management. Though the fun factor is mainly because of the different styles of “student teacher”, the other advantage is that each student will get a chance to become the “teacher of the day” and in the process will become more confident and smart.

***Method 5: “Sell your product”***

<i>Time required</i>	3-5 minutes per group /individual
<i>Tools required</i>	Any product related to the topic/subject
<i>Preparation time</i>	Sufficient preparation time must be given within the same session. Topics can be also allotted sufficiently advance

<i>Benefits</i>	<ul style="list-style-type: none"> <li>• Application of Subject knowledge,</li> <li>• Presentation skills,</li> <li>• Communication skills,</li> <li>• Confidence,</li> <li>• Listening skills,</li> <li>• Interest towards the subject</li> <li>• Creativity,</li> <li>• Research skills,</li> </ul>
<i>Fun Factor</i>	High
<i>Knowledge Transfer</i>	Long term and direct

***Principle:***

“Sale” or “Selling” is a social process which requires extreme communication and convincing skills. It also requires that the sales person is clear and well knowledgeable about the product or service which he is trying to sell. All this means that the salesperson knows the product in and out and is able to answer any question that the prospect is asking.

***Methodology:***

This method is another innovative teaching –learning process. This is highly useful when learning scientific products or tools. The student can be asked to study the features of the tool that is taught in the class and then they can be divided into small groups. Each group has to make a “Sales presentation “of the product they have learnt.

***Case Study:***

Some of the final year students of MBA can be given the task of selling a new generation Laptop. The group will make a presentation and demonstration of the features of the laptop.

The group members in turn will learn the features of the laptop and the subject learnt can be connected very well to this practical method. The audience as feedback will ask questions related to purchase decisions and could very well understand the features and the technology behind.

***Method 6: Using examples from Animal kingdom***

<i>Time required</i>	Based on the content and coverage.
<i>Tools required</i>	Research and reference materials from library , internet , observation method
<i>Preparation time</i>	At least two weeks for each group /individual
<i>Benefits</i>	<ul style="list-style-type: none"> <li>• Application of Subject knowledge,</li> <li>• Presentation skills,</li> <li>• Communication skills,</li> <li>• Confidence,</li> <li>• Interest and higher level thinking of the subject</li> <li>• Creativity ,</li> <li>• Research skills,</li> <li>• Observational skills ,</li> <li>• Negotiation and Analytic skills</li> </ul>
<i>Fun Factor</i>	Medium –High
<i>Knowledge Transfer</i>	Immediate and indirect

***Principle:***

Giving examples from animal world is yet another innovative method. Every animal can be used as an example for delivering concepts of team work, management theories, leadership theories etc. These examples will help the students to absorb the principles and theories in a simple manner. For Management classes, there can be discussions based on managerial phenomenon and animal behavior for proving or disapproving various management events.

**Methodology:**

The students can be divided into various groups and given a task of observing a particular animal behavior for some time. About two weeks time could be given after selecting a particular animal. After that, the groups make a presentation of their observations.

**Case Study:**

This exercise was given to certain groups of MBA Students. One such group can make a presentation on “Management lessons from Ants”. Another group on “Management lessons from Elephant” and the other will present on “Management lessons from Spider” etc.

**Method 7: Cartoon Video Analysis / Cartoon Drawing**

<i>Time required</i>	5-10 minutes per group/individual
<i>Tools required</i>	Audio and Video facility
<i>Preparation time</i>	15-30 minutes for discussion
<i>Benefits</i>	<ul style="list-style-type: none"> <li>• Application of Subject knowledge,</li> <li>• Presentation skills,</li> <li>• Communication skills,</li> <li>• Confidence,</li> <li>• Interest and higher level of thinking of the subject</li> <li>• Creativity ,</li> <li>• Observational skills</li> </ul>
<i>Fun Factor</i>	High
<i>Knowledge Transfer</i>	Immediate and indirect

**Principle:**

Cartoons are a very interesting and fun filled method for teaching scientific concepts and in some cases management concepts. There are many cartoon characters like Tom & Jerry, Mr. Bean, Chota Bheem, which bring out many scientific principles and management principles in a lighter vein. It has also been proved that using cartoons for teaching helps in not just making the session interesting, but also better understandable for the students.

***Methodology:***

Cartoons can be used as a tool for explaining certain aspects by the teacher himself/herself. Alternately, after showing a cartoon picture or video, the students can be divided into small groups and asked to discuss the aspects expected and present. The video may need to be played twice or thrice, as the students may or may not be able to grasp the details in the first view. But a second or third view will help them analytically think and present. Another version of this method is that the students themselves can be divided into small groups and each group can be given the task of developing a good cartoon picture /video relevant to the subject and explain why they made that, the relevance and subject learnt out of it.

***Case study:***

The first year MBA students were divided into small groups of 4-5 members and were asked to draw a cartoon showing any management or organizational principle. The groups were given around 1 hour of time for discussing and drawing the cartoons. In some cases, since the group members were not confident of drawing, they were given the liberty of cutting and pasting pictures from newspapers if required.

***Conclusion:***

This paper is an attempt to introduce various original, enjoyable and “adaptable” teaching methods for Management education. Technical education in general and Management education in particular which has been long considered as one that can only be taught using the “chalk and talk” method, can now become more interesting and activity oriented instruction.

Management education try to incorporate many of these factors like student participation and responsibility sharing, however, the “pleasurable factor” may be missing in many of the methods. This paper tried to introduce certain methods which are fun filled and at the same time “knowledge filled”, i.e. ensuring of knowledge enhancement transfer among the peer. In today’s world, where information is available freely at the click of a button, the role of a teacher becomes less significant, unless necessary poignant and affecting aspects are built in the method of teaching and learning. This “human touch” is what that is going to be the most important



factor in teaching and learning. Gone are the days when teachers were very strict and carrying a cane to classroom lectured for an hour. Today, teachers are expected to be friendly and create a fun filled atmosphere for learning.

This paper is also an attempt to make all the teachers understand the necessity of improving their “facilitating” skills through creative methods. We can therefore say thinking creatively is an important skill for a teacher.

To conclude: “*Creativity is contagious. Pass it on.*” — Albert Einstein.

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## Investors' Perception about Investment in Mutual Funds: A study in Kolkata

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### **ABSTRACT:**

The present study is based on the savings and investment practices of the investors and preferences of the investors for investment in Mutual Funds in Kolkata. An attempt has been made to understand the investors' preferences in mutual fund investments. It is found that majority of investors are graduate and above and within age group of 30 to 40 yrs. It is surprising that majority investors are from the lower middle income group having income from 1 lakh to 5 lakhs and the most preferred Portfolio is Equity showing high risk appetite of the investors.

**Keywords:** Mutual Funds, Asset Management Company, Systematic Investment Plan, One Time Investment, Equity, Debt, Net Asset Value, Securities.

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## **Introduction:**

A mutual fund is a collective pool of fund which is managed professionally by fund managers and the pool of money are then engaged in different forms of investments like bonds, stocks, short term money market instruments and other forms of securities in a view to appreciate the value of the investors' pool of fund. The main aim of a fund manager, who is also called a portfolio manager, is to trade the funds' underlying securities, realizing capital gains/losses, and is able to collect the interest income or dividend. The proceeds of the investments are passed on to the investors proportionately as per their invested capital. The NAV which is the dynamic value of a share of a specific mutual fund is calculated daily based on the total valuation of the fund divided by the number of shares currently issued and outstanding.

The mutual fund is a financial instrument put in place for the common aim of multiple number of investors who share a common financial goal among themselves. This pool of money is invested in order to meet a fixed objective. The word "Mutual" in mutual fund denotes the joint ownership of the pool of money invested by several investors. The majority of the portfolio of the mutual funds basically is distributed among equity (shares), debentures and other securities. This in turn involves certain amount of financial risk involved in different funds along with probability of getting to the financial goal on that specific time frame. Thus, a Mutual Fund is the most suitable form of investment for investors having different risk appetite and are looking for appreciation of the value of their money spent in the long-term. There are different strategically oriented funds which cater to the needs of the risk appetite of every individual investor. The probability of getting a higher return of the fund is directly proportional to the amount of the risk appetite of the investor.

This is an opportunity for the common man to invest in a professionally managed, diversified pool of securities at a relatively very low cost. A Mutual Fund is an investment tool that allows everyone from very small investors to billionaires to access a well-diversified portfolio of equities, bonds and other securities as per their specific financial goal. The gain or loss of a specific fund involves the pool of money for that specific fund and thus all shareholders are affected by the same financial position. Units that are issued can be redeemed as needed apart

from a few exceptions where a specific time limit is in place for redeeming the fund. Investments in securities are well-spread across a wide range of industries and sectors resulting in reduced risk. The main aim of diversification is supported by the fact that all stocks involved in the portfolio will not move in the same direct and in the same proportion at a particular time. The allocation of units to the investors is done specifically based on the quantum of money spent by them.

The 'unit holders' are the current investors of the mutual funds. A mutual fund unit holder is a person who has subscribed for certain number of units of a specific fund and he becomes part-owner of the assets of that fund in the same proportion as to the amount of contribution he has made with respect to the total corpus of the fund. The NAV of a particular scheme will be affected by any change in the value of the investments that has been made into capital market instruments (such as shares, debentures, etc.). Net Asset Value is defined as the current market value of a Mutual Fund scheme's assets' net of its liabilities. NAV of a particular scheme is calculated by dividing the market value of that scheme's assets by the total number of units issued to the investors in respect to that specific scheme.

### **Literature Review:**

The Indian Mutual Fund has three phases. The 1<sup>st</sup> phase started from 1964 and went on till 1987, and the Unit Trust of India was the only player, which had a total asset value of Rs.6700 crores by the end of 1988. The 2<sup>nd</sup> phase lies between 1987 and 1993, during which 8 Funds came into existence (6 by different banks and also 1 each by LIC and GIC). The total assets under management (AUM) had grown to Rs.61028 crores by the end of 1994 and the number of schemes was 167. The 3<sup>rd</sup> phase began with the entry of private and foreign sectors in the Mutual Fund industry in the beginning of 1993. Kothari Pioneer Mutual Fund was the first Fund house to be established by the private sector in association with a foreign Fund. By 31<sup>st</sup> March 2000, 32 Funds were functioning with Rs.113005 crores as total AUM. As of end of August 2000, there were 33 Funds having 391 schemes and AUM worth a staggering Rs.102849 crores. The Securities and Exchange Board of India (SEBI), determined to control the inflow & outflow of the money that the mutual fund industry was operating, came out with comprehensive regulatory provisions in 1993 which defined the Structure of Mutual Fund and Asset Management Companies for the very first time. Mutual Funds operated by several private sectors launched in

1993 and 1994. From that time the share of the private players experienced a rapid raise. Currently, there are 44 Mutual Fund organizations in India managing 20.59 lakh crores (Bhagvandas, 2014).

Guha et al. (2007) evaluated the performance of mutual funds and identification of successful fund managers. They emphasized that market timing and stock selection for a portfolio of Remove different mutual fund schemes are essential factors for the high valuation of the fund. Nilsson et al. (2009) explained in their survey how social responsibility and financial returns influence the investment decision of investors. They surveyed 563 SR-investors and classified them in groups that dealt with the level of influence that enhances the chance of an investor investing in current schemes of different mutual funds. Rouwenhorst (2004) did a study of the emergence of mutual funds in the current economic market and traces back the history of different mutual funds. In this study, it is observed that mutual funds have evolved over the last few decades and is the primary option for small investors. The findings of this study also emphasize the fact that in the current financial market mutual funds are treated as a major investment tool. Tripathi et al. (2013) conducted research relating to the growth of different mutual funds and observed that different types of mutual funds have evolved themselves during the different phases of development of mutual funds. Also, the private sector mutual funds had developed far better than public sector mutual funds based on Net Asset Value (NAV).  $NAV = \frac{\text{Total market value of all MH holdings} - \text{All MF liabilities}}{\text{No. of MF units or shares}}$ .

Vyas (2012) has stated in his study different investors have different perceptions about different schemes of mutual funds. It has been found in the study that investors have different areas of focus for investing in financial securities. Thus investors always have the view that the funds should match their scheme of future planning. Only then will the investors decide to invest in certain schemes of mutual funds. Prabhavati et al. (2013) researched the preference of mutual fund investors in different asset management companies. Their study of investor has provided some specific views of different investors who were willing to invest in regular growth as compare to risky growth. Most of the investors preferred systematic investment plans over a one-time investment. Agarwal et al. (2013) found that a common man is willing to invest in mutual funds when other types of fixed and assured returns are available from the market only when the advantages of investing in riskier mutual funds outweigh the advantages. They found that the

common man is prepared to invest in mutual funds when he has a record of the performance of those specific mutual funds and when the funds are giving constant higher returns. Prabhu et al. evaluated the behavior of investors taking into mind the preference of individuals with regards to their future planning. It was seen that an individual will invest in mutual funds when other securities are underperforming. When fixed returns are available in the financial market such as savings a/c, fixed deposits, etc. but mutual fund being riskier than this securities gives the prospect of higher returns in long term: the investors are willing to take that risk. Singh (2012) conducted a study where he found that there are different factors for investments by different institutional investors. He surveys different factors from investors and performed chi-square test and other weighted score tests to conclude that some major factors like higher returns, tax-free schemes, etc. attract more number of investors.

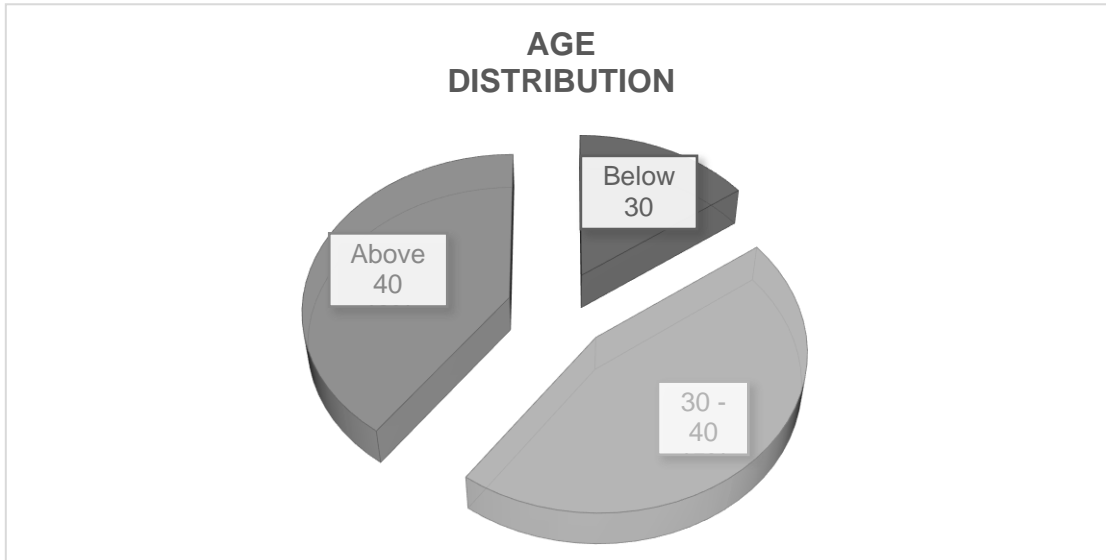
### **Research Methodology:**

The study is made using questionnaire method and the samples were collected mainly from customers visiting different bank branches. The questionnaires were distributed to 200 samples in Kolkata. The scale used is mainly nominal scale.

### **Findings:**

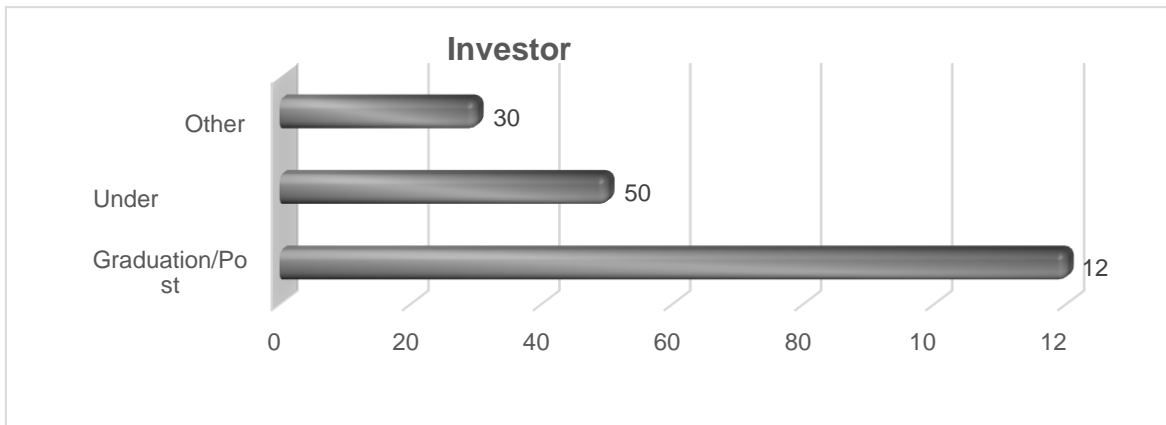
#### Age distribution:

According to the study carried out in Kolkata in 2017, the maximum number of investors falls in the age group of 30-40 years. The second most Investors were in the age group of above 40 years and the least were in the age group of below 30 years.



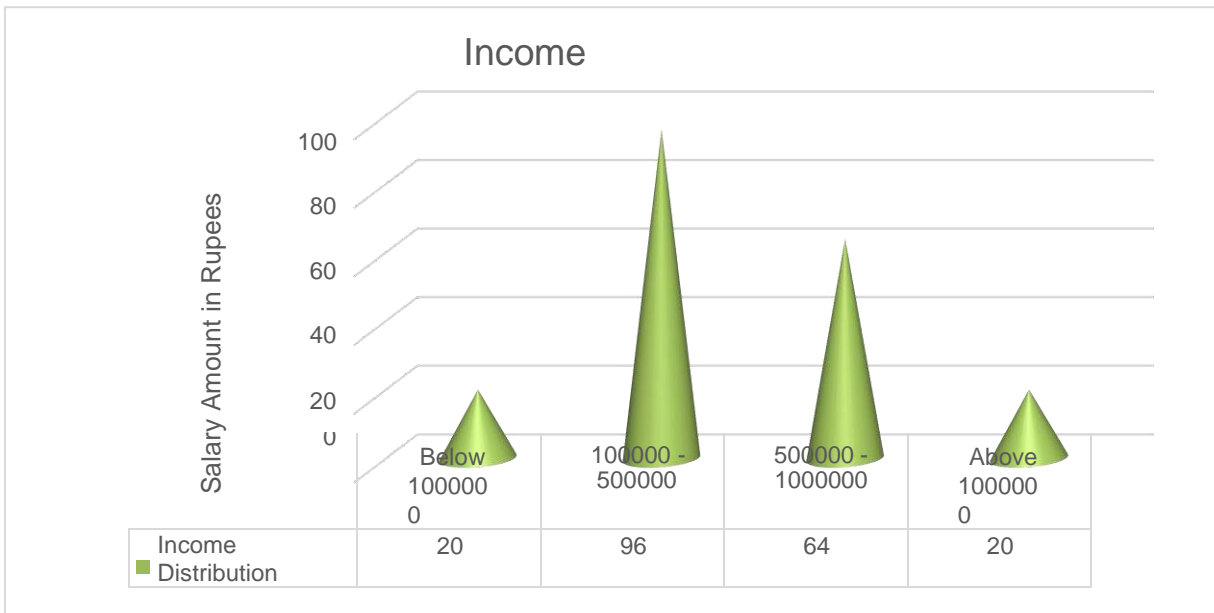
Educational background of the investors:

A Large percentage of the investors were educated with graduation and masters while below HSC were rarely found.



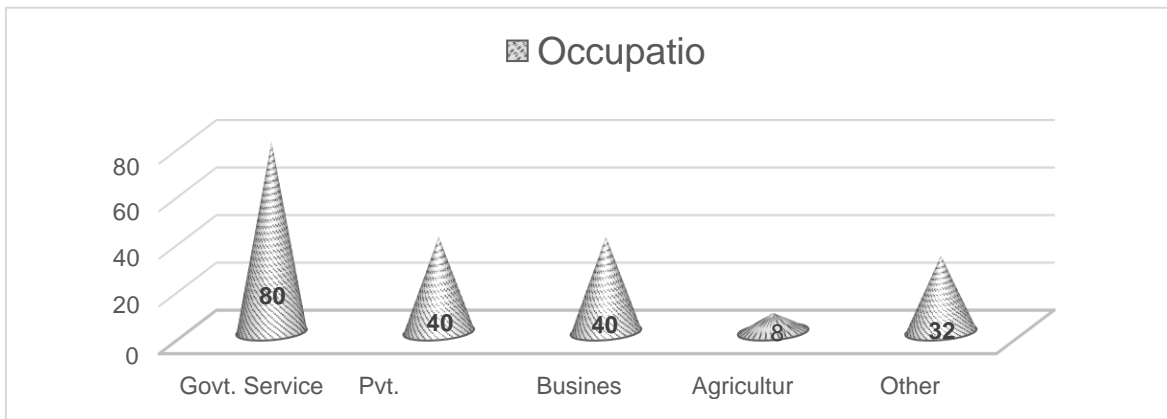
Income distribution of the investors:

In the annual Income group, between Rs.100,000 - Rs.500,000 were more in numbers invested in a mutual fund, the second most were in the Income group between Rs.5-10lakh while remaining were in the range of below Rs. 1lakh.



Occupation of Investors:

Out of 200 investors, 80 were in service with the Government sector, 40 were into Private sector companies, 40 had their own business, 8 were involved in agricultural activities, 32 investors were from other various sectors.

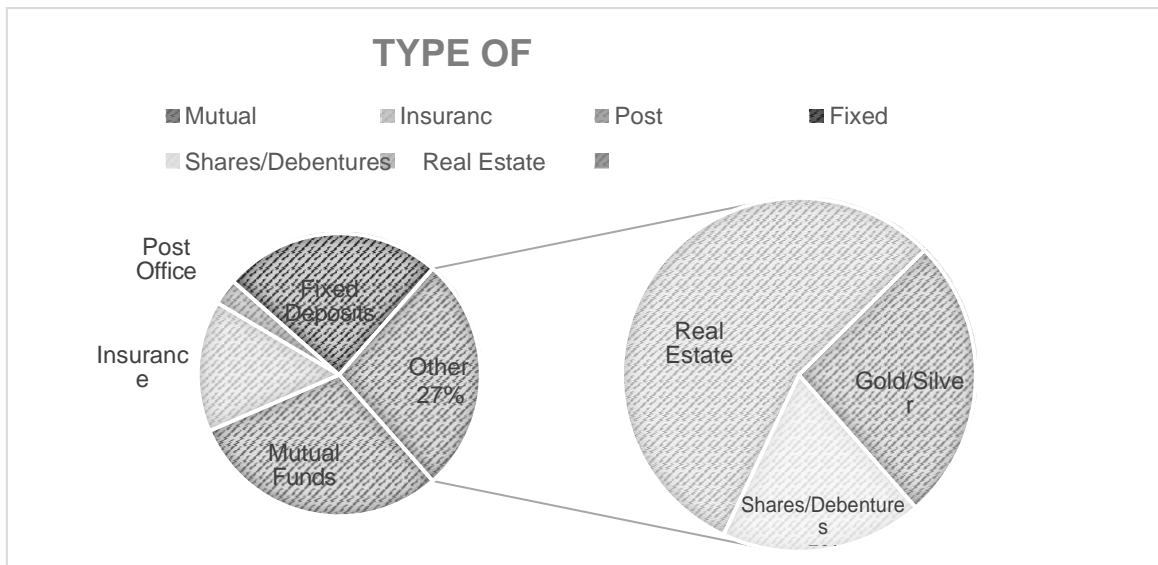


Customer preference for type of investments:

Out of 200 investors, 30% were already investing in different Mutual fund schemes, 15% were investing in Insurance products, 25% were investing in fixed deposits at different banks, 3%

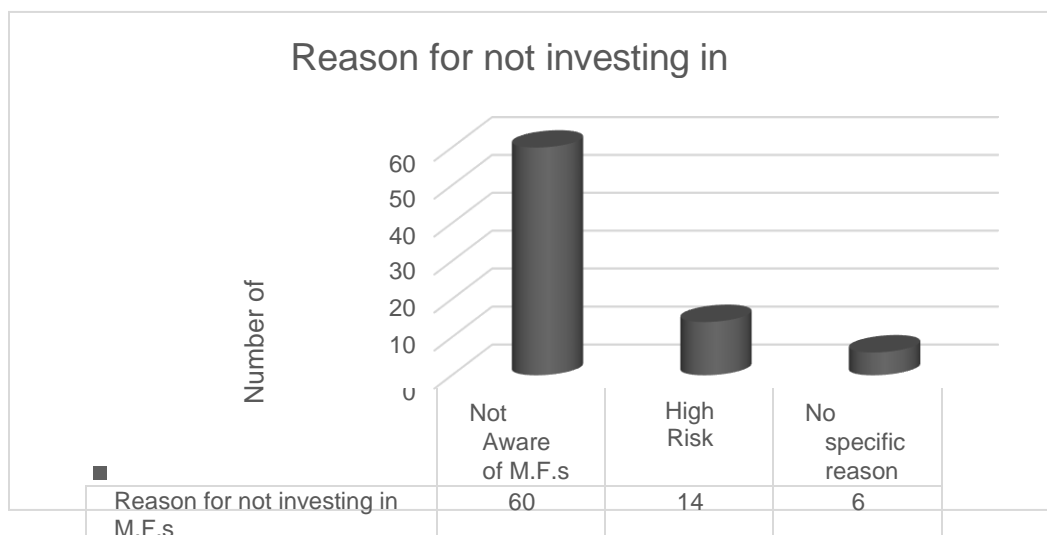


were investing in Post Office deposit schemes, 7% were in investing in gold assets, 15% were investing in real estate, 5% were investing in shares and debentures.



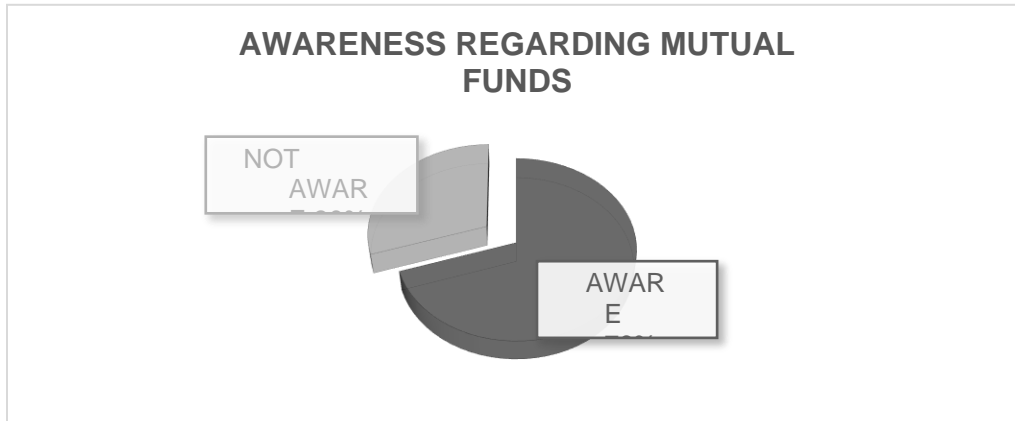
Reasons for not investing in mutual funds:

Only 70% of respondents were aware of mutual funds and out of that only 43% invested in Mutual funds. Mostly Respondents preferred High Return while investing, the second most preferred was Low-Risk funds and then liquidity and the least preferred was 'Trust'. Among 200 Respondents only 30% had invested in Mutual Fund and 70% did not invest in Mutual fund. Out of 140 people, 39% preferred One Time Investment, and 61% preferred SIP out of both types of Mode of Investment.



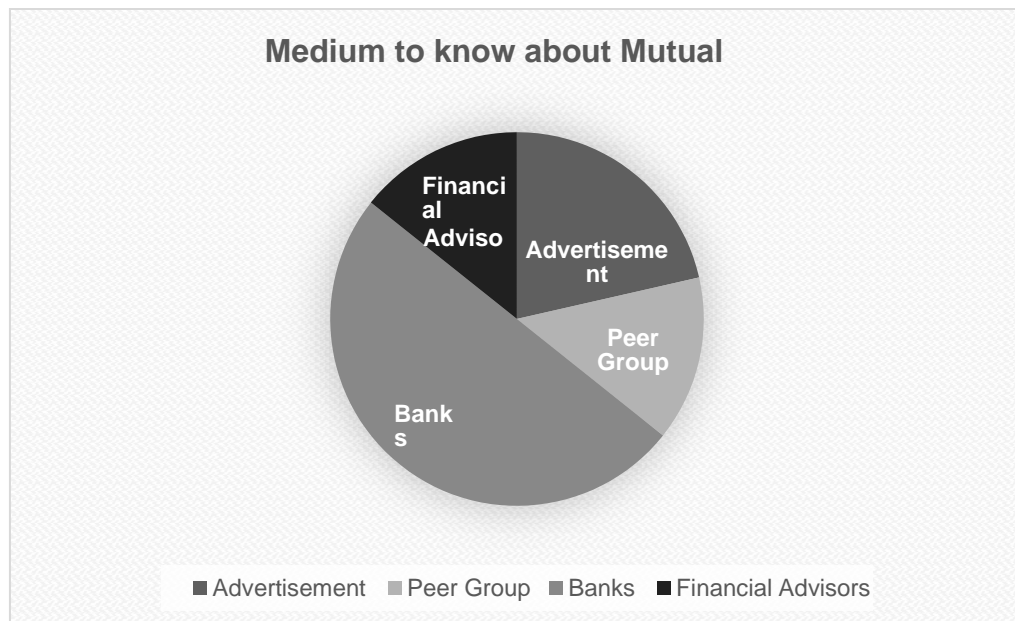
Awareness regarding Mutual Funds:

Out of 200 customers surveyed, 70% were aware of mutual funds but 30% had no idea of the existence of mutual funds.



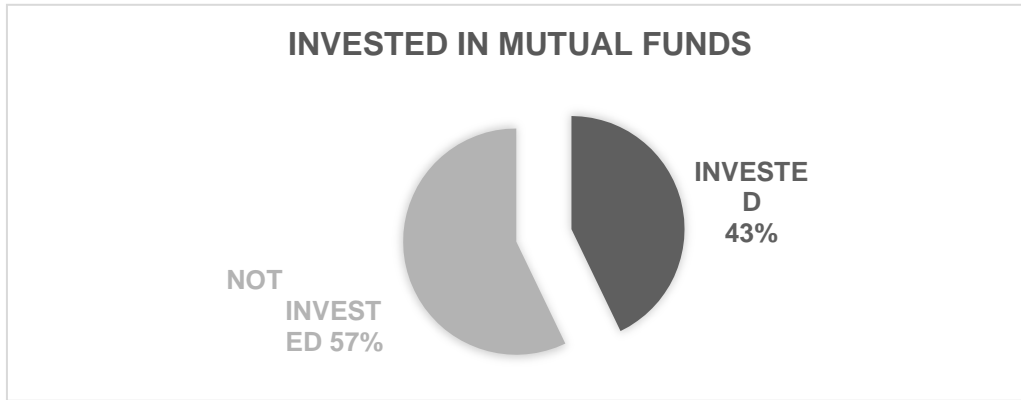
Medium to know about Mutual Funds:

Out of 140 investors who were aware of mutual funds, 30 (22%) of them knew about Mutual Funds from advertisements, 20 (14%) of them knew from their peer group, 70 (50%) came to know about M.F.s from banks and 20 (14%) knew from their Financial Advisors.



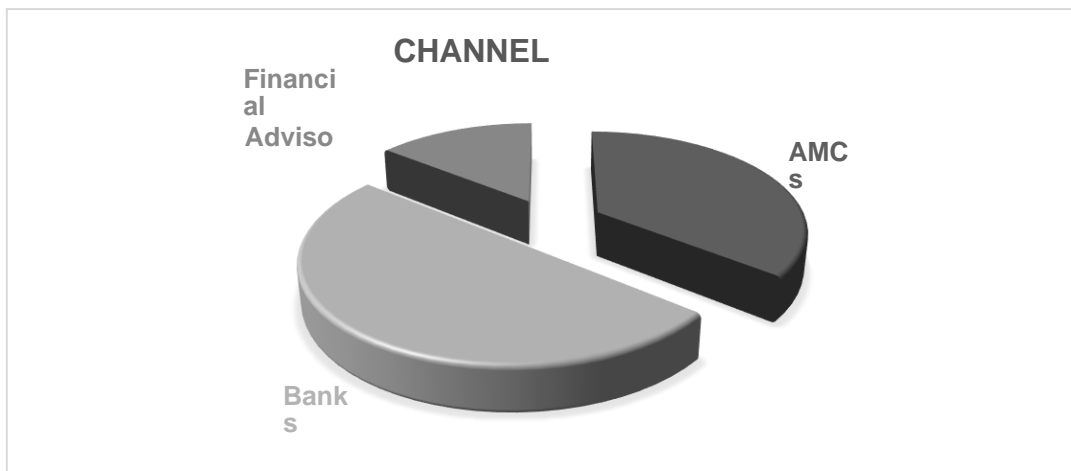
Invested in Mutual Funds:

Out of 140 customers who were aware of mutual funds, only 60 (43%) of them actually invested in Mutual Funds but 80 (57%) of them were reluctant to invest in Mutual Funds.



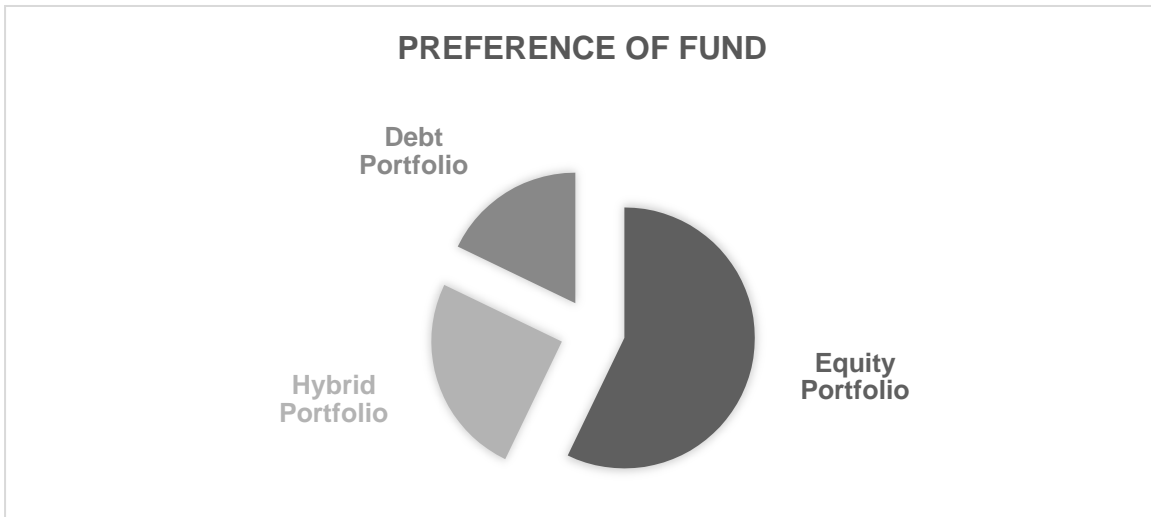
Preference of channels for investment into Mutual Funds:

Out of 140 customers who were aware of mutual funds, 50 (36%) will prefer AMC's, 70 (50%) will prefer Banks & 20 (14%) will prefer Financial Advisors.



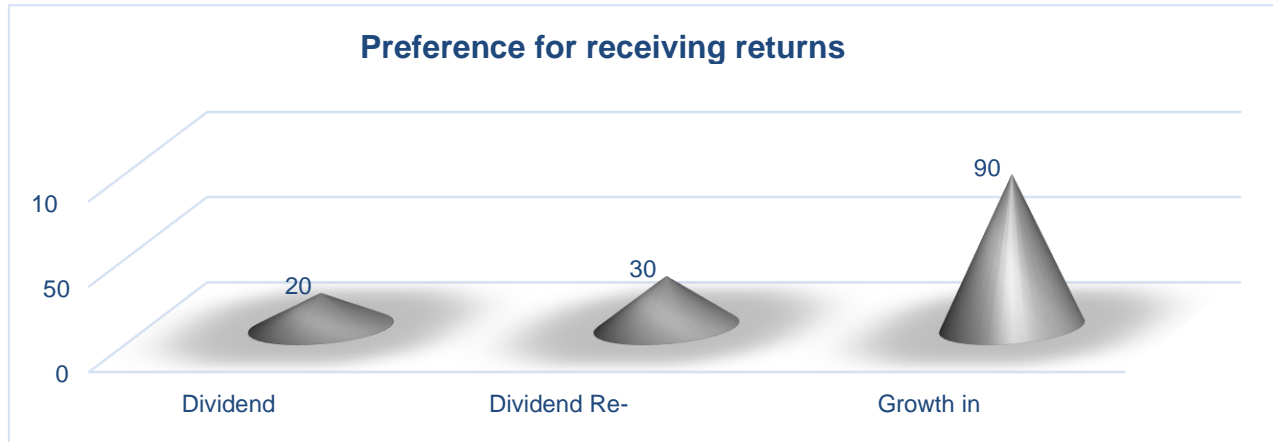
Preference for type of fund in selecting a Mutual Fund scheme:

Out of 140 customers who had either already invested or were willing to invest, 80 (57%) preferred equity based portfolio, 35 (25%) preferred hybrid funds which have a mix of equity & debt; and 25 (18%) preferred debt based portfolios.



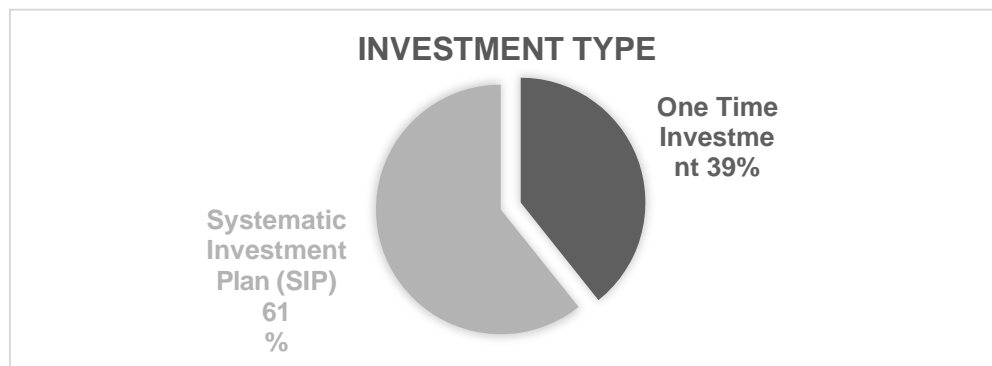
Preferences for type of returns:

The most preferred Portfolio was Equity, the second most was Balance (a mixture of both equity and debt), and the least preferred Portfolio was Debt portfolio. Out of 140 customers who had either already invested or were willing to invest, 20 preferred Dividend Pay-out option, 30 preferred Dividend Re-investment; and 90 would prefer Growth in NAV. Thus, the maximum number of Investors preferred Growth Option for returns, the second most preferred was Dividend Pay-out and then Dividend Reinvestment.



Preference for type of investment:

Out of 140 customers who had either already invested or were willing to invest, 55 (39%) preferred One Time Investment options whereas 85 (61%) preferred Systematic Investment Plans (SIPs).



Discussion:

Mutual funds offer a lot of benefits that no other single option could offer. But most people are not even aware of what a mutual fund is? For them it is just a secondary investment option only. So it's a huge chance and challenge for the advisors to put a try on them and make them aware about mutual funds. The young investors should be the main target for the advisors. The young investors and the persons at a height of their career mostly look after a good and knowledgeable advisors due to lack of expertise and time. Mutual Fund Companies must be assure that their Financial Advisors are well trained and fully sound about the Fund/Scheme and its objects along with the track record of different fund performance because they are the main source to influence and convince the investors.

Over the last decade, Mutual Funds have emerged as a tool for ensuring one's financial well-beings. Mutual Funds have not only contributed to India's growth story but have also helped general people tap the success of the Indian Industry. As information and awareness of mutual funds are rising, more and more people are availing the benefits of investing in mutual funds. The main reason for which the number of retail mutual fund investors remains small is that nine out of ten people with incomes in India do not know that mutual funds exist. But once people are aware of mutual fund investment opportunities, the number of people who decide to invest in mutual funds increases by 10%. The way to convert a person with zero knowledge of mutual funds to a new Mutual Fund Investor is to educate them by make them understand about the various mutual fund schemes and their track record till date.

### **Conclusion:**

It is observed that majority of investors are graduate and above and within age group of 30 to 40 yrs. It is surprising that majority investors are from the lower middle income group having income from 1lakh to 5 lakhs followed by income group between Rs.5-10 lakh. The most preferred Portfolio is Equity showing high risk appetite of the investors followed by balanced portfolio. Only 70% of respondents were aware of mutual funds and out of that only 43% invested in mutual fund. The most important reason is lack of proper knowledge about the mutual funds. They require education about various aspects of mutual fund.

The results of this study will help the organizations to design certain strategies for the funds which are still underperforming and are in their nascent stages. It would help the organization, the financial consultants, and the marketing team to provide a strategy for the investors who can now easily decide where to invest and where not to. The Research performed gave an insight into the actual investors, their investment behavior, and their investment trends which would again help the company to make correct strategies to attract more customers and provide them with what they are comfortable with. The most vital problem spotted is of ignorance. Investors should be made aware of the benefits. If the investors are not satisfied or not been convinced with a proper investment scheme, then they might not invest. Investors should be made to realize that the delay of time may result into lesser return and early investment gives more returns for a

longer span of investment. Young educated investors between 28 to 35 age group will be a key new customers for future, so putting more efforts on young investors who show some interest in investing may give good results. SIP is easy for a monthly salaried person as it provides the facility to do the investment in EMI. However, most of the prospects and potential investors are still not aware of the different schemes of SIP, which provides a large scope for the companies to convince the salaried persons.

### **Limitations and Future Directions:**

This study was confined to Kolkata. The results are based on convenience sampling and therefore has certain limitations. An empirical study using simple random sampling may be conducted to find the detailed behavior and perception of mutual fund investors throughout India. The study can be made to find out what innovative schemes and products the company should offer to expand over the largest customer base. The other research questions that can be raised are: Do the investor's preference depends upon any particular Asset Management Company (AMC)? Why has mutual fund become one of the largest financial instrument? How much influence has the mutual fund industry in India has affected on the economy compared to the influence of foreign mutual funds on the economies of their respected countries from which it belongs? Should the inflow of offshore mutual funds be allowed in India to boost the Indian economy? How much competent are the existing mutual fund schemes with the upcoming schemes?

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## The World Supply Chain Disruption in the perspective of Covid-19 outbreak from China

Dr. Debasri Dey\*, MdShakibur Rahman\*\*

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### **Abstract:**

The new coronavirus, first emerged in the Chinese city of Wuhan last December, has infected more than 30,00,000 people in at least 206 countries and territories globally, according to the WHO, till date. The virus outbreak has become one of the biggest threats to the global economy and financial markets. Major institutions and banks have cut their forecasts for the global economy, with the Organization for Economic Co-operation and Development being one of the latest to do so. Meanwhile, fears of the coronavirus impact on the global economy have rocked markets worldwide, with stock prices and bond yields plunging. The supply chain management system is also affected by the same phenomenon worldwide. Based on the aforesaid perspective the disruption of World Supply chain due to the outbreak of Covid-19 from China is discussed in this paper.

**Keywords:** Covid-19, Disruption, Supply Chain Management System, etc.

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## **Introduction:**

The COVID-19 pandemic represents a major shock to the global economy. Most of the countries will need to take bold quarantine and lock-down measures, as has been done in Italy, Spain, Germany, France, UK, USA, UAE, Iran, Malaysia, Singapore and almost every country in the world to prevent an explosion of the epidemic which would lead to many deaths and the collapse of healthcare systems.

The economic consequences of such measures are major, and are felt through both supply and demand-side channels. A coordinated and bold response by authorities' is necessary. First, ample national funds need to be provided to national health services. Second, targeted measures to support individuals (such as the self-employed), companies and the local communities most affected should be put in place or reinforced. Third, broad macroeconomic insurance needs to be provided because targeted measures will not cover the many second-round effects of the shock.

To alleviate financial and cash-flow constraints, and to provide incentives to preserve employment, it is recommended to the Government to halve companies' social security contributions for at least three to six months, or cut the payroll tax. Such measures could amount to support of some 2.5 percent of GDP and would be funded by increased national deficits. Last but not least, the Central Bank should provide abundant liquidity, increase swap lines to ensure sufficient dollar liquidity and increase its sovereign-bond purchase programme to prevent distress in sovereign bond markets. Whatever it takes needs to be the motto to preserve lives and reduce the impact on the economy of the epidemic.

## **Research Background:**

China has been a major beneficiary of global economic development since few decades. The COVID-19 pandemic has resulted in an unprecedented situation in the world. Supply chains in major industries such as aviation, pharmaceutical, medical equipment, etc. have got disrupted. One reason for this is because China is a major center in the global value chains for these industries. The role of China as the central hub in many GVS has brought losses of about \$50 billion in global exports. Chinese suppliers are crucial for many industries that operate globally. The long-term effect on the supply chain is hard to predict. But two major changes may be anticipated going forward, namely vertical integration and geographic diversification. For

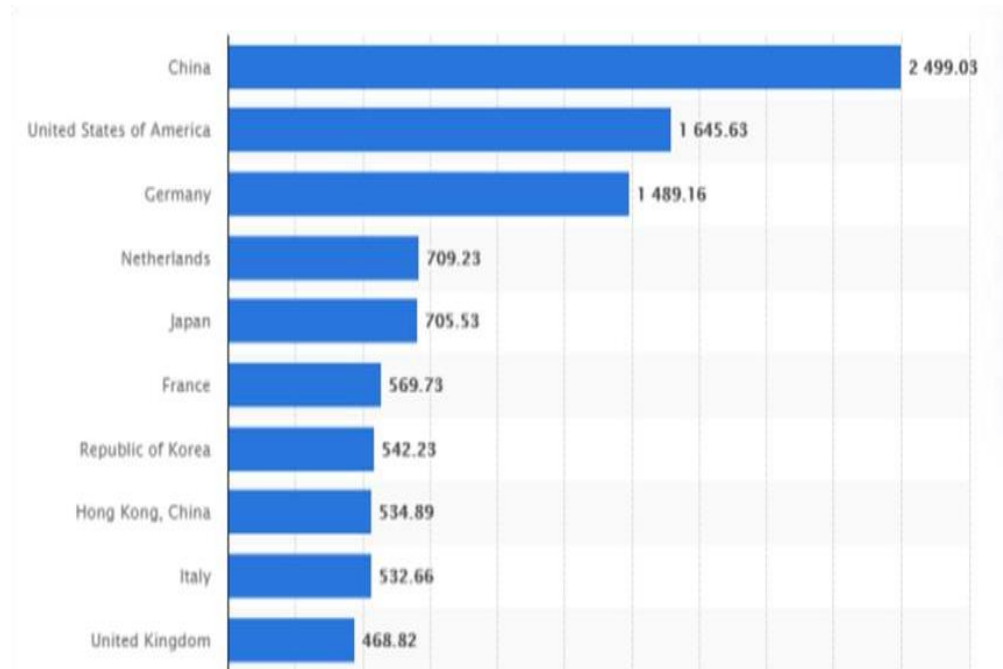
example, India obtains China which are valued at billion and meets 90% of all API requirements from imports. Further, India's dependence on API imports has increased over which stood at 0.3 % in 1991. The current economic situation has been termed as the worst since 1939. The IMF projects global growth in 2020 to fall by 3 percent. Global trade is expected to fall due to the pandemic crisis and the decline may be greater than the one experienced after the financial crisis of 2008.

Supply Chain around the world is already beginning to be impacted negatively. In the short run, to lower dependence on global value chains, significant investments would be required, which may not be feasible due to lack of funds. In this regard, the role of the policies of governments may provide some direction, Japan, for example, has taken measures to reduce its reliance on China as a manufacturing hub. It is willing to relocate back to Japan. Japanese firms themselves are making future plans to diversify production across Southeast Asia.

#### **China Plays the Vital Role in Covid-19 Situation:**

China is critical to the global economy and flow of goods across the world.

China is likely to be considered as a heaven to outsourcing of raw materials and spare parts at unbeatable quote. Thus, the importance and the acceptance of China to global trade have grown magnificently. Moreover, they own almost 36% of total shipping line round the globe including COSCO, CSG, OOCL. Apart from that, China has 34 major ports and more than 2000 minor ports round the country which are playing an positive role for the economic development of the country and turns china as one of the major hub of logistics. Shipping companies that carry goods from China to the rest of the world say they are reducing the number of seaborne vessels, as measures to stop the spread of the corona virus crimp demand for their services and threaten to disrupt global supply chains. About 80% of world goods trade by volume is carried by sea and China is home to seven of the world's 10 busiest container ports, according to the United Nations Conference on Trade and Development. Nearby Singapore and South Korea each have a mega port too.

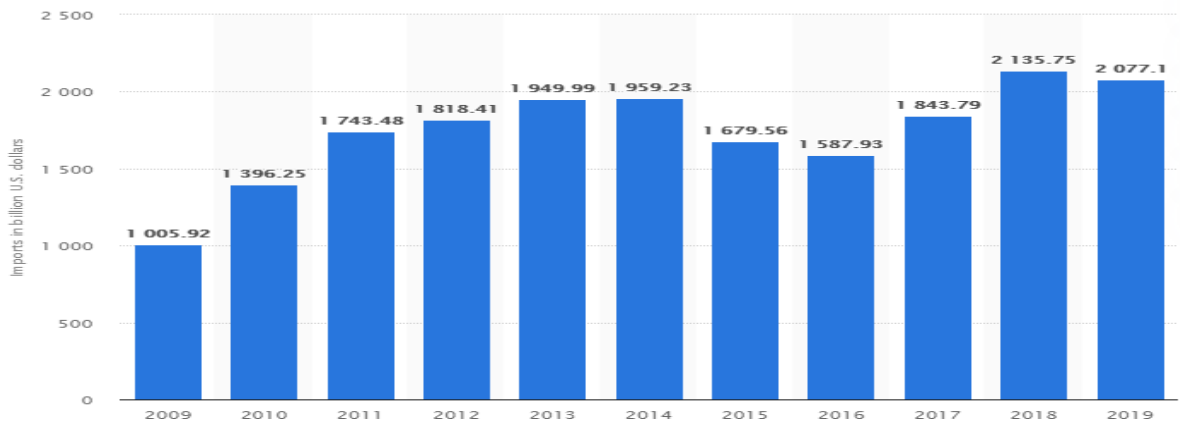


**Figure-1: China's Exporting Status in the World**

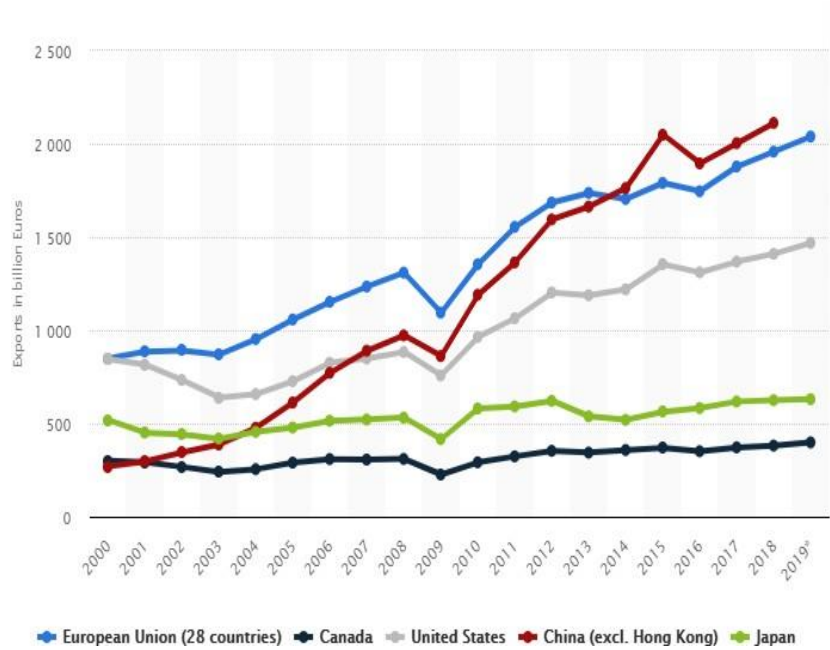
China led the world in exports in 2019. China was followed by the United States, with exports valued at 1.64 trillion US dollars, and Germany, with exports valued at 1.49 trillion US dollars. The value of goods exported from China grew immensely between 2002 and 2014. In 2002, China's exports were valued at about 327 billion US dollars. China's export value grew to 2 trillion US dollars in 2012, the first year in which China exported more than 2 trillion US dollars' worth of goods. Year over year export growth remained above 17 percent between 2002 and 2012, except in 2009 and 2012. In 2010, export value grew by over 30 percent. By 2018, China accounted for about 12.8% of global merchandise exports and about 4.6% of global service exports. China's greatest export product category in 2014 was machinery and transport equipment, of which they exported one trillion US dollars' worth.

### **China: The mother Hub of the World's Supply Chain:**

China, key trading partner for over 100 countries, has become a hub of global supply chains. Reports on how the COVID-19 outbreak is affecting global supply chain and disrupting manufacturing operations around the world are increasing daily. But the worst, many fear, is yet to come.



**Figure-2: China: import of goods from 2009 to 2019**



**Figure-3: Export Comparison between different countries**

In 2019, the total value of Chinese imports and exports amounted to about 31.55 trillion yuan. This indicated approximately 3.4 percent growth compared to the previous year. In 2012, China surpassed the United States to become to the world’s largest trading country in terms of exports and imports of goods. While the United States remained the largest import nation with an import value of around 2.4 trillion U.S. dollars in 2017, China ranked first in global exports with an export value of some 2.5 trillion U.S. dollars in 2018. The second statistic shows the value of exports of

selected countries from 1999 to 2019. In 2019, the United States exported goods worth approximately 1.47 trillion Euros where china exported more than 2.2 trillion Euros.

According to the National Bureau of Statistics of China, the European Union was the most important export partner of China as of 2019. Exports to the EU are dominated by industrial and consumer goods such as machinery and equipment, as well as footwear and clothing. Chinese imports from the EU are mainly machinery and transport equipment, chemical products and miscellaneous articles. In 2019, the United States was the second most significant export partner of China with a share in total exports of about 17 percent. China is also one of the United States' most potential markets for exports. As of 2019, exports from the United States to China had expanded more than fivefold since China joined the World Trade Organization in 2001.

China's position at the heart of many GVCs is illustrated by the fact that the production decline is also associated with major contractions in international trade flows. The country's imports decreased by 4% in US dollar terms in January and February combined from the same period a year earlier, while exports dropped by 17 per cent over the same time period. Wuhan specifically is very important to many global supply chains. While it has been a traditional base for manufacturing for decades, it has also become an area of modern industrial change. Major industries include high technology (opto-electronic technology, pharmaceuticals, biology engineering, and environmental protection) and modern manufacturing (automotive, steel and iron manufacturing). 163 of the Fortune 1000 have Tier 1 suppliers (those they do direct business with) in the impacted area,<sup>2</sup> and 938 have one or more Tier 2 suppliers (which feed the first tier) in this same impacted area. Just because you don't have any direct suppliers in the impacted areas in China, does not mean that they are safe from disruption. Visibility to only Tier 1 suppliers will likely be insufficient for most organizations looking to manage supply disruption risks. However, very few organizations can trace their supply chain beyond their Tier 1 suppliers, and advanced digital solutions are generally required to trace supply networks reliably across the multiple tiers of suppliers that are required to fully understand supply-side risk.

### **COVID-19 is Changing Global Supply Chain:**

**Protectionism will not create a recession, but it will deepen it:** This synchronized, global lockdown caused by Covid-19 has struck at the core of global value chains hub regions including

China, Europe and the U.S. Over the past four decades, the creation of global value chains has demonstrated how to produce and market products in a cost-efficient manner around the world. Trade barriers have gone up remarkably easily in the last few weeks. In fact, the WTO has reported that so far 80 countries have introduced export prohibitions or restrictions as a result of the Covid-19 pandemic.

- **Diversify or Re-shore?** More generally, there is a strong political will around the world to strengthen resilience in supply chains and to reduce trade dependencies that have been laid bare by this crisis. Policymakers differ on the correct approach to achieve such resilience and can be broadly divided into two camps: the free trade supporters call for a diversification of supplies, whereas the more interventionists believe the right remedy is to repatriate (parts of) the supply chains.
- **Choices of policymaker's matter:** International coordination will be key to prevent the global trade system from fraying. At the inaugural G20 summit in 2008, a strong, joint commitment helped to keep barriers to trade and investment largely at bay, speeding up global recovery from the financial crisis.

### **Top Three Reasons Why Supply chain is Rolling due to China:**

The COVID-19 pandemic underlines the importance of strong global cooperation to contain the deadly virus but also spotlights the dangers of over-reliance on international supply chains in manufacturing everything from cars to pharmaceuticals. The wide-scale supply chain disruption caused by corona virus doesn't have a simple fix.

- **Shutdowns cause work and supply bottlenecks in the factories:** Citywide closures and quarantines have led to work and supply shortages as Chinese authorities from different areas of responsibility try to contain the outbreak of corona virus (Covid-19). In more serious cases, some cities – most notably Wuhan in the center of the Corona virus (Covid-19) epidemic – have introduced “sealed management” initiatives that have led to residential areas being sealed off, limiting workers’ ability to return to work.
- **Floating quarantine:** The shutdowns mean that some ships can't get into Chinese ports, as the loading and discharging of goods slows, Others are stuck in dock, waiting for workers to return to ports so that construction and repairs can be completed. In Singapore, authorities are requiring all vessels that have called at ports in mainland China over the past 14 days to

submit a health declaration form. According to port authorities, some shipping companies have taken additional measures, including canceling shore leave for crew, but port operations have not been disrupted. Giant shipping companies such as Maersk, MSC, Mediterranean Shipping, Hyundai, COSCO, CSG, Hapag-Lloyd and CMA-CGM have said that they have reduced the number of vessels on routes connecting China and Hong Kong with India, Canada, the United States and West Africa.

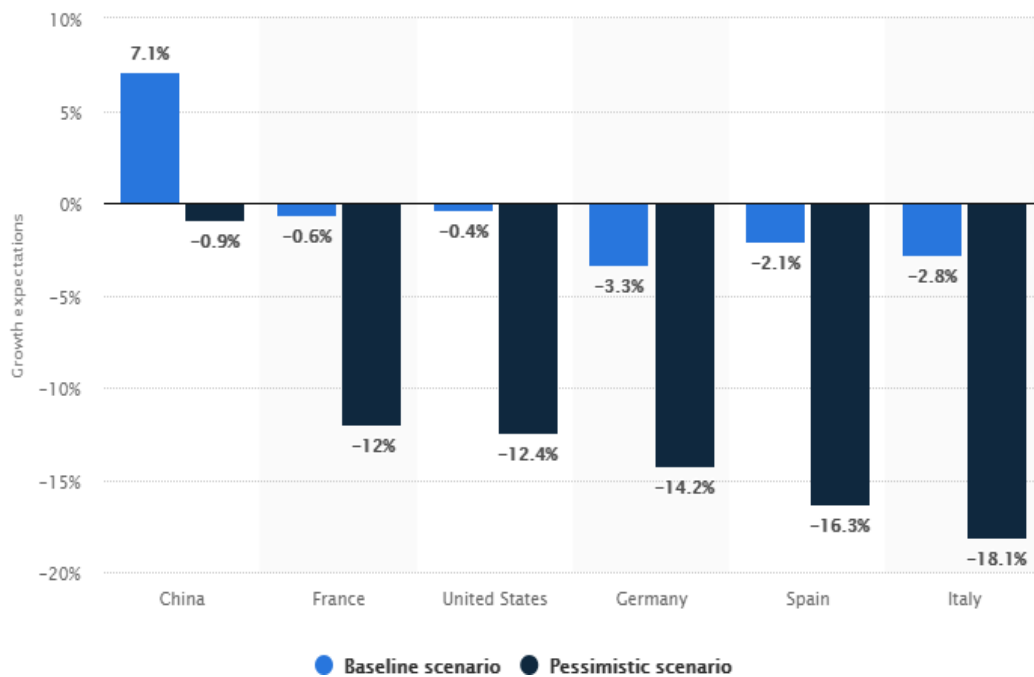
- **Logistics Shortage:** Most countries have restricted or stopped international flights and air travel, which has led to a deferred slowdown as far as the movement of goods are concerned. The shipping sector has also been hit as vessels are placed under quarantine for weeks before being allowed into the ports thereby slowing down processes. Shipping companies that carry goods from China to the rest of the world say they are reducing the number of seaborne vessels, as measures to stop the spread of the corona virus crimp demand for their services and threaten to disrupt global supply chains.

The corona virus outbreak puts a strain on every sector of the logistics industry. Italy's logistics market, one of the countries most affected by the pandemic, is expected to see 18.1 percent contraction in a pessimistic scenario. The corona virus outbreak has put every sector of the logistics industry under strain. In a scenario, the industry's economic activity in 2020 could be down by 10.2 percent worldwide. The global logistics industry is anticipated to be affected by the outbreak of COVID-19. In a worst-case scenario, the industry's gross value added could be down 6.1 percent in 2020

### **The impact of COVID-19 on the supply chains and economy:**

The global effects on supply chains have resulted mostly from the serious situation in China, and we can talk about those effects in two distinct ways. First, it's having an impact on the supply of inputs for many manufacturers and retailers all over the world, and that's important because China is a huge source of components and finished goods. The longer plants in China sit idle, the emptier the global pipeline of parts and components circling the globe, which is meant to feed manufacturers and retailers all over the world. If the disruption continues, we may see many manufacturers, and maybe even retailers, suspending their operations as they run out of the key inputs they need.





**Figure-4: Estimated impact of the corona virus (COVID-19) epidemic on selected logistics markets worldwide in 2020**

Second, China is also a major market for goods and services. Anywhere in the world, local economies that depend on China as a customer are feeling the effects, as consumers in China limit their travel and consumption, and as manufacturers in China slow down or suspend their production. For example, a recent article in *The New York Times* explained how truck drivers in Mongolia are losing their income because they can no longer deliver coal to China—the border is closed, and the demand for coal is way down anyway. The flow of tourists from China has come to a screeching halt, and that's affecting the tourism sector in many countries, from freelancing guides to major hotels, especially in Asia.

### **Conclusions:**

After every one of these disasters and resulting disruptions, there was a sort of taking stock of how we are managing risk in supply chains. Until the early 2000s, supply chains stretched across the globe as manufacturing shifted where labor was cheap, and they also became leaner, because stuff sitting in the pipeline can easily become obsolete when product lifetimes are short, for example, in fashion apparel and consumer electronics. But many global brands learned, from

disruptions like SARS or the Tohoku earthquake in Japan, that a disruption to production in one corner of the world could starve the entire chain from much-needed inputs.

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## The Employees Perception on Technology Adoption in Banks: An Empirical study on Two Major Private Banks

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\*\*Dr. Subrata Chattopadhyay

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### **ABSTRACT**

With the recent advancement and adoption of state of the art mobile and internet technologies in different banks, the financial sector specially banking industry has undergone massive changes all over the world. The technological waves are reshaping the total banking landscape and the environment of the banking sector has gradually become highly aggressive today in Indian context also. The present research paper mainly focuses on the employees' [of the banking industry] perception towards the adoption of new internet and mobile technologies in banks. The paper is mainly designed to evaluate the awareness level of the technologies offered by the banking sector and overall perception of employees on these technological offerings. The paper also try to exhibit the employees' perception on technological adoption in the banking sector. A well-structured questionnaire has designed and an extensive survey was undertaken among 100 employees of ICICI Bank & Axis Bank of North 24 Parganas District of West Bengal. Some useful, relevant descriptive statistics is used in this study. On the basis of this study, it is found that, almost all the employees, of these two Private Banks, found the overall performance of tech-banking as satisfactory.

**Keywords** : Tech-banking, ICICI Bank and Axis Bank, Internet & Mobile Banking Technology, Employee Perception.

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## **INTRODUCTION**

Internet and Mobile Technology has been in a decisive moment in the Indian Banking Industry. It is a wild perception among the general mass that the technological advancement in the banking sector has reduced the work load of the employees of Banking Sector. However, there is different opinion of the bank employees. The increasing dependency on internet and mobile technology has brought additional challenges in managing and optimizing performance level in retail banking scenario. The growth and globalization of Indian economy has exerted tremendous pressure on customer-oriented business development in Indian banks. With the spontaneous and continuous emergence of newly invented technologies, the pressure for individuals to accomplish work task or to timely-response to work inquiries is constantly increasing. It is faster to generate reports due to technological advancement and hence the managements' expectations increase with shorter deadlines.

This Paper is mainly envisaging on two major private Banks ICICI Bank Ltd and Axis Bank Ltd. who are forerunner of adopting various consumer driven technologies. They are known as trend setters in introducing various tech-products in the banking industry, such as Mobile app oriented electronic passbook, bank account opening, unified payment interface app etc. in Indian banking history. Therefore it is essential to evaluate the perception of employees of such a banks – their responsibilities, their trouble shooting experiences, their customer orientation.

## **REVIEW OF LITERATURE**

Review of previous studies of different researchers validates the present study by indicating the gaps in those studies and gaining an insight for conducting this study.

Kaur, Rimpi (2010), enumerate the perception of different bank employees regarding the use of various retail products or services, their delivery channels and their acceptability in the area of urban Punjab. Results reveals that the employees are more or less satisfied with working through e-channels. The results also reveals that employees face some problems regarding lack of knowledge, fear of insecurity while dealing with customers.

Arasada Prameela (2013), try to trace the deployment of technology in different banking sector and try to evaluate the perception of employees in banks. The findings of the research study revealed that the banking employees try to accept the challenges of e banking procedure in a very sincere and dedicated manner with an expectation of extra incentives.

Sathyanarayana (2013), conducted an analytical study to evaluate the level of growth of e-

banking operations and tries to identify the key challenges faced by the customers and employees in respect of technology adoption in banking. It was found that the major problem faced in e-banking operation is security problem. It was also inferred that private sector bank employees are more satisfied in the implementation of e Banking procedures.

Jameela, Salma (2016), conducted a study to determine the employees' perception of technology adoption of SBT in Palakkad district. The study indicated that electronic banking has greater advantage to attract young customers than the age-old.

Diksha Gupta (2017), evaluate the attitude of bank employees towards internet banking and concluded that the employees of banks have taken a internet banking as a competitive edge and it has resulted in increased employee morale and productivity, branch productivity vis- a-vis bank's productivity.

Shiva Prasad, Umesh (2018), jointly studied the relation between technological awareness, job stress and satisfaction level after implementation of internet banking in co-operative banks. The study reveals that technological awareness has a direct relationship with job satisfaction but inversely related with job stress. The research study thus inferred that, when an employee is technologically aware, the internet banking implementation increases his job satisfaction but reduces his job stress.

### **SIGNIFICANCE OF THE STUDY**

Innovation has been assuming a significant job in the financial division. Ensuing to the appropriation of innovation in banks, numerous examinations have been directed from the view purpose of clients. In any case, the quantity of studies focusing on the bank employees are moderately little because of the discernment among the overall population that mechanical progression is especially positive for bank employees. Anyway the bank employees all in all opine in an unexpected way. It is in this manner essential to learn about the selection of banking innovation from the employees' point of view.

### **PROCLAMATION OF THE PROBLEM**

Innovation is currently a main thrust in the financial business. It makes an unpredictable and serious work environment in banks prompting insuperable work pressure among the representatives. Technological innovation has changed the workplace of bank representatives or employees. In light of various segment and business factors, the probability of the workforce to get changed in accordance with innovation may shift. This Paper is an endeavor to comprehend the discernment level of a cross area of two major private Banks ICICI Bank Ltd and Axis Bank Ltd. employees in assigned area out of sight

of innovative technological progression in the bank.

## **OBJECTIVES OF THE STUDY**

To examine bank employees' perceptions in accordance with job satisfaction, job stress and Technological awareness or computer and internet literacy after implementation of e- banking i.e. internet and mobile banking technology.

To explore whether bank employees' perceptions are linked with their demographic profile.

## **METHODOLOGY**

This study is restricted to two major private banks i.e . ICICI Bank LTD. and Axis Bank Ltd. employees in 24 Parganas [North] district of West Bengal which may be perceived as a semi- urban area and adjacent to the metropolitan city Kolkata.

### Data Collection

In this study, data was collected from primary sources and secondary sources. A well structured questionnaire has been designed to collect the primary data. To collect the secondary data, different related books, research papers, journals and online sources were referred.

### Sampling Design

Stratified Random Sampling is the sampling method of this study. ICICI and Axis Banks have been decided for this examination as they are the biggest technically & mechanically propelled banks in India. 24 Parganas [North] district of West Bengal was chosen for the investigation dependent on the biggest grouping of parts of these two private banks. The essential information was gathered from 100 representatives [or employees] of ICICI & Axis Bank in the assigned region.

### Tools of Analysis

The data was collected through proper questionnaire and the data was sorted out, ordered and analyzed deliberately utilizing some significant measurable statistical tools.

### Statistical Tools for Data Analysis:

The responses were validated and filtered, and then analysed using SPSS packages with Chi-Square with p-values with Measures of Central Tendency and Standard Deviation Methods.

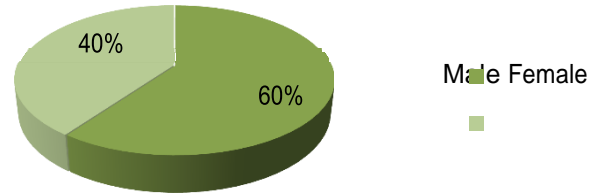
## DATA ANALYSIS

### A. Demographic Analysis

**Table 1: Gender wise Respondent summary**

Gender	Frequency	Percent
Male	60	60%
Female	40	40%
TOTAL	100	100%

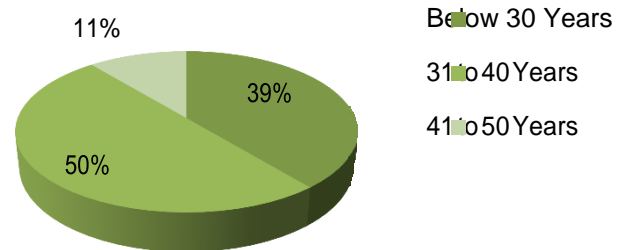
#Source : Primary Data



**Table 2: Age wise Respondent summary**

Age	Frequency	Percent
Below 30 Years	39	39%
31 to 40 Years	50	50%
41 to 50 Years	11	11%
TOTAL	100	100.0

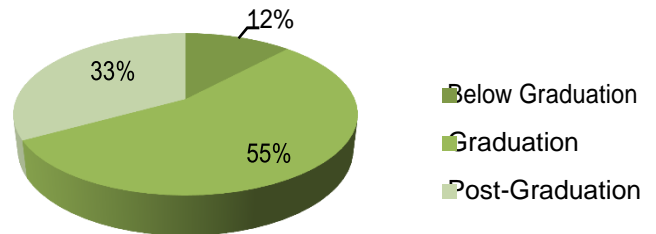
#Source : Primary Data



**Table 3: Education wise Respondent summary**

Education	Frequency	Percent
Below Graduation	12	12%
Graduation	55	55%
Post-Graduation	33	33%
TOTAL	100	100.0

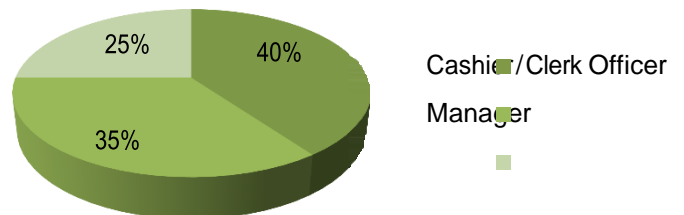
#Source : Primary Data



**Table 4: Designation wise Respondent summary**

Designation	Frequency	Percent
Cashier / Clerk	40	40%
Officer	35	35%
Manager	25	25%
TOTAL	100	100.0

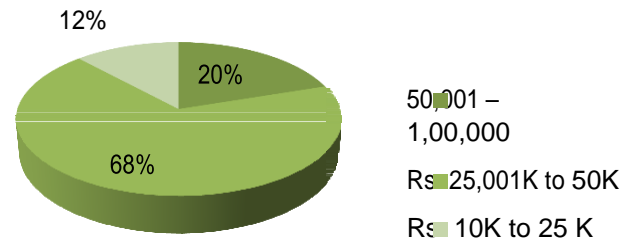
#Source : Primary Data



**Table 5: Monthly Income Wise Respondent summary**

Monthly Income	Frequency	Percent
50,001 – 1,00,000	20	20%
Rs. 25,001 to 50K	68	68%
Rs.10K to 25 K	12	12%
TOTAL	100	100.0

#Source : Primary Data



**B. TECHNOLOGICAL KNOWLEDGE OF EMPLOYEES**

**Table 6: Technological Knowledge level of Employees**

Description	Yes	No	Mean	Std.Dev	Variance	Skewness
Are you Computer Literate: [Formal Education]?	73	27	1.27	0.446	0.199	(1.052)
Do you think computer literacy increase the proficiency of working in the banking scenario	94	6	1.06	0.239	0.057	(3.762)

**Hypothesis A:**

**H<sub>0</sub>: There is no difference between formal Computer Literacy and the proficiency of working in the recent technology oriented banking scenario**  
**H<sub>A</sub>: There is a real significant difference.**

**Results:**

**Statistical Inference: A) Difference: -0.210; B) Standard Error: 0.052; C) 95% CI: -0.3098 to -0.1102; D) t-Statistic : -4.150; E) DF: 198; F) p<0.05**

*Inference* : Here p- Value is the less than 0.05 [p<0.05] so we reject the null hypothesis and could infer that there is a significant difference between formal computer literacy and the proficiency[efficiency] of working in the banking scenario.



**FACTORS AFFECTING JOB STRESS AND JOB SATISFACTION & INFLUENCE OF TECHNOLOGICAL ADOPTION ON JOB STRESS & JOB SATISFACTION SCENARIO**

**Table 7: Factors affecting Job Stress and Job Satisfaction**

Factors increasing Job Satisfaction										
Factors	Strongly Dis Agree	Dis Agree	Neut r al	Agree	Strongl y agree	Mean	Std. Deviation	Variance	Media n	
<b>U1</b>	Reduced workload after implementation of Mobile and Internet Banking System	05	03	69	20	03	3.14	0.725	0.520	3
<b>U2</b>	Increases the speed of the work	03	04	18	70	05	3.81	0.544	0.294	4
<b>U3</b>	Minimization of Error	09	19	23	46	03	3.14	1.044	1.080	3
<b>U4</b>	Reduced complaints	20	40	20	11	09	2.49	1.193	1.4099	2
<b>U5</b>	Reduced stress	25	25	30	17	3	2.47	1.114	1.2291	2.5
<b>00</b>	<b>Your bank has adopted state of the art technologies</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>20</b>	<b>80</b>	<b>4.8</b>	<b>0.402</b>	<b>0.16</b>	<b>5</b>

**Hypothesis 1:**

**H<sub>0</sub>:** There is no relation between reduction of workload and adoption of technologies in the recent technology driven banking scenario

**H<sub>1</sub>:** There is a real significant relation.

**Statistical Inference:** A) Difference: 1.660; B) Standard Error: 0.083; C) 95% CI: 1.4965 to 1.8235; D) t-Statistic : 20.024; E) DF: 198; F) p<0.05

*Inference :* Thus Null Hypothesis is rejected and it has been established that by adopting technologies the workload of the employees has been reduced in present technology driven banking Scenario.

**Hypothesis 2:**

**H<sub>0</sub>:** There is no relation between Speed of the Work and adoption of technologies in the recent technology driven banking scenario

**H<sub>2</sub>:** There is a real significant relation.

**Statistical Inference:** A) Difference: 0.990; B) Standard Error: 0.068; C) 95% CI: 0.8566 to 1.1234; D) t-Statistic: 20.024; E) DF: 198; F) p<0.05

*Inference :* Here p- Value is the less than 0.05 [p<0.05]. Thus Null Hypothesis is rejected and it has been established that by adopting technologies the speed of the work of the bank employees has been increased in present technology driven banking Scenario.

### Hypothesis 3:

**H<sub>0</sub>:** There is no relation between minimization of error and adoption of technologies in the recent technology driven banking scenario

**H<sub>3</sub>:** There is a real significant relation.

**Statistical Inference:** A) Difference: 1.660; B) Standard Error: 0.112; C) 95% CI: 1.4394 to 1.8806; D) t-Statistic: 14.838; E) DF: 198; F)  $p < 0.05$

*Inference :* Here  $p$ - Value is the less than 0.05 [ $p < 0.05$ ]. Thus Null Hypothesis is rejected and it has been established that by adopting technologies the working error has been minimized of the bank employees has been increased in present technology driven banking Scenario.

### Hypothesis 4:

**H<sub>0</sub>:** There is no relation between reduction of complain of the customers and adoption of technologies in the recent technology driven banking scenario **H<sub>4</sub>:** There is a real significant relation.

**Statistical Inference:** A) Difference: 2.310; B) Standard Error: 0.126; C) 95% CI: 2.0617 to 2.5583; D) t-Statistic : 18.349; E) DF: 198; F)  $p < 0.05$

*Inference :* Here  $p$ - Value is the less than 0.05 [ $p < 0.05$ ]. Thus Null Hypothesis is rejected and it has been established that by adopting technologies the complain of the customer has been minimized in present technology driven banking Scenario.

### Hypothesis 5:

**H<sub>0</sub>:** There is no relation between reduction of stress in the workplace and adoption of technologies in the recent technology driven banking scenario.

**H<sub>5</sub>:** There is a real significant relation.

**Statistical Inference:** A) Difference: 2.330; B) Standard Error: 0.118; C) 95% CI: 2.0965 to 2.5635; D) t-Statistic : 19.674; E) DF: 198; F)  $p < 0.05$

*Inference :* Here  $p$ - Value is the less than 0.05 [ $p < 0.05$ ]. Thus Null Hypothesis is rejected and it has been established that by adopting state of the art technologies in the banking sector [Pvt.] the work stress of the employees has been reasonably reduced in present technology driven banking Scenario.

**Table 8: EMPLOYEES’ DEMOGRAPHIC ANALYSIS**  
**[Considering Gender, Age, Education, Monthly Income and Designation]**

Demo-graphy	Options	Freq.	U1		U2		U3		U4		U5	
			$\chi^2$	p-value	$\chi^2$	p-value	$\chi^2$	p-value	$\chi^2$	p-value	$\chi^2$	p-value
Gender	Male	60	10.431	0.0337 [S]	1.210	0.8764 [NS]	1.9218	0.7501 [NS]	9.6138	0.0474 [S]	15.4837	0.00379 [S]
	Female	40										
Age	Below 30 Years	39	26.548	0.0008 [S]	16.988	0.0302 [S]	7.1001	0.5287 [NS]	15.6251	0.0480 [S]	7.0048	0.5361 [NS]
	31 to 40 years	50										
	41 to 50 years	11										
Education	Below Graduation	12	6.320	0.6114 [NS]	6.804	0.5579 [NS]	6.1462	0.6308 [NS]	8.175	0.4165 [NS]	3.8487	0.8705 [NS]
	Graduation	55										
	Post-Graduation	33										
Monthly Income	Rs. 50,001 TO 1Lakh	20	9.628	0.2920 [NS]	8.296	0.4050 [NS]	42.0107	<0.00001 [S]	9.932	0.2698 [NS]	5.07	0.7500 [NS]
	Rs.25,001 to 50K	68										
	Rs. 10K to 25 K	12										
Designation	Cashier / Clerk	40	10.725	0.2117 [NS]	16.476	0.0360 [S]	5.9351	0.6545 [NS]	5.6747	0.68362 [NS]	5.5932	0.69268 [NS]
	Officer	35										
	Manager	25										

**INTERPRETATION**

□ At 5% significance level, The Gender difference is very significant in case of the employees [assigned private banks employees] reduction of workload, reduction of stress and consistency of work which reduces the number of complains.

□ At 5% significance level, the Age difference is very significant in case of the employees [assigned private banks employees] reduction of workload, consistency of work which

reduces the number of complains and increasing the speedy work by induction of latest technologies in the banking sector specially assigned two private bank i.e. ICICI Bank Ltd and Axis Bank Ltd.

- At 5% significance level, the difference of educational level is not atall significant in the resultant effect of the Bank employees' different satisfaction criteria.
- At 5% significance level, the difference of monthly income is very significant in case minimization of error after implementation of technologies in the Banking Sector specially the two assigned private banks.
- At 5% significance level, the difference of Designations are significantly attributable in case of Speed of the work and resolving the problems in the Banking Sector specially the two assigned private banks.

### **OBSERVATIONAL AND STATISITICAL FINDINGS**

The use of mobile and internet technology in private sector bank specially ICICI and Axis Bank Ltd. in the assigned region is commensurate with the new technological adoption of these banks. The employees are aware about the benefits of these services try to convince the consumers to avail the benefits of the technology.

- Employees should be properly trained & educated about the mechanism of using these services otherwise some sort of irregularities of services arises due to technical incompetencies.
- For adoption of banking innovation, it is important that the banks offering this administration make the employees mindful about the accessibility of such a help and clarify how it increases the value of their satisfaction and reduce the stress.
- There is immediate need to use e-banking to be employee friendly and to focus only on building the brands on the basis of competitive edge of consumer inclination and trust.
- ICICI, and Axis Bank employees are dynamic and sincere in dealing with the mind bogging issues identified with protection, security, respectability of information and speculation related angles. Employees are proactive and receptive in security related parts of client and this assistance in expanding fulfillment and trust among clients. The client trust bank as they keep up security of information and data.

### **CONCLUSIONS**

This paper observes to evaluate the perception of banking employees concerning the effect of technological adoption and improvements on banking services. The dependency on facts

generation and technology adoption has elevated steadily for banking sectors specially in private banking sector as a strategically important competitive advantage. With extended level of globalization, privatization and new reforms of the Indian banking sector, competition in the marketplace is increasing in a day-to-day extent. If the banks apprehend the marketplace dynamics & threats it could increase their dynamism and consumer drivenness of their functioning and responses to the marketplace needs. In the near future, technology in banking sector can have a rich time in advance and can reach to first-rate heights. The Bank employees are happy with innovation as they are eager to become familiar with the new innovations with a great sincerity. This will build their exhibition level. They tend to keep refreshed with innovations as it causes them to turn into an expert in their own field. They show an inspirational disposition towards innovation as it obliged their work and made it easy and encourages them to complete their work in time. On the off chance that association isn't compelling his workers in refreshing his aptitudes and gives enough timeframes in receiving new innovation, workers will feel calm and advantageous in receiving it which will cause them to contribute more towards association development. Innovation doesn't influence the representative relational relationship, it encourages them to have a superior correspondence with their associates and like to work in groups than as individual however it has diminished their own co-operations.

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## Flourishing Financial Operations Through Smarter Intelligence

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### **Abstract**

Artificial Intelligence (AI) has penetrated every aspect of our lives in this era of Big Data. Nowadays application of AI has become very common. It is also playing a vital role in the field of finance. AI has been helping in every aspect of finance, from banking to investment. AI has given the world of banking and the financial industry as a whole a way to meet the demands of customers who want smarter, more convenient, safer ways to access, spend, save and invest their money. Especially during pandemic situations, AI is playing the most important role in the field of finance by helping society to do financial activities digitally more securely, accurately but in a very handy way using data mining operations. This paper will attempt to focus on the emerging applications of AI to optimize different financial services.

**Keywords** : Artificial Intelligence, Big Data, Financial Industry, Data mining

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## **Introduction**

Artificial intelligence has been developed for more than 70 years and it has also earned some outstanding achievements. The application of AI in the field of finance has given a way for people to interact with money <sup>[1]</sup>. AI has helped people to become smarter by doing financial activities digitally. Mostly nowadays every people have access to a smartphone. With the help of the smartphone, AI has made financial activities easier, faster, accurate, and secure. Now anyone can do banking, trading, payments, etc. very easily, with the help of few touches within a few seconds. Especially during this pandemic situation, people have become more friendly with digital payments.

In recent years many applications (apps) have been developed for doing financial activities digitally. There are many apps for doing monetary transactions to any shop, E-commerce website, or any person. There many apps for those who want to do trading or want to invest in mutual funds virtually. There is also a facility for doing internet banking. In every field of finance, the application of AI has shown remarkable performance. Initially, some people were scared of doing digital payments whereas some have shown their enthusiasm. Not only like AI has also helped in the field of corporate finance in various ways. AI helps the financial sector in optimizing and streamlining processes that vary from credit-related decisions to quantitative trading and financial risk management.

## **Background Study**

The term "Artificial Intelligence" was coined in the year 1956 at a conference at Dartmouth College, in Hanover, New Hampshire <sup>[2]</sup>. According to McCarthy, "Artificial Intelligence is the science and engineering of making intelligent machines." It is an inseparable part of computer science. It tries to make activities easier for humans. The term 'artificial' itself describes that this intelligence is different from natural intelligence which is seen in humans or animals. AI technology is created to function intelligently and independently as humans do. It is used to analyze a large complex dataset, which is a bit difficult for humans to do manually. It takes less time than humans to perform any task as per given information. So, it can be said that AI technology has made activities easier for humans and provides accurate results.

Though in today's world, AI is used vastly, but still, we are in the era of Narrow AI, where AI is not that much intelligent as a human, but it can perform tasks faster than human. It will take some more time to reach the era of General AI and then Strong AI when machines will become more intelligent than human beings.



## 1. Emerging AI Across Different Avenues of Finance

AI has been developed for more than 70 years but its applications were limited to some fields only. But now the application of AI has accelerated <sup>[3]</sup>. People now have become so comfortable using AI in financing activities that they sometimes prefer to do financial activities digitally rather than doing that physically. For example, nowadays GPay or Paytm or any other payment app has become a much more convenient way of making payments rather than giving cash hand to hand, especially in this pandemic situation, where everyone is doing ordering online to avoid going outside from home and get in touch with other people. Financial activities with the help of AI has become so safe and secure that people can rely on them without any hesitation. Earlier, those who were not so convinced to do financial activities digitally, nowadays, they are also doing financial activities digitally. Even our phones have become more secure with the help of AI. We can use the fingerprint sensor to secure our phones and others can't access our phones until and unless we unlock it.

### • 1.1 AI Assistance in Credit Decisions

Nowadays credit is something with which everyone is very much accustomed, whether it is a credit card or a credit score. A recent study has found that 77% of people prefer paying with a debit or credit card compared to only 12% who favor cash payments <sup>[4]</sup>.

People now prefer paying not only with cards but they are preferring different payment apps for making payments now and then. They are finding it a more convenient, safe, and secure way for making payments. Earlier many people were not interested to use such apps as they find it easier to pay with cash and they were also scared to share any sort of bank details on a virtual platform. But it is quite obvious that in this situation the percentage of people who are doing financial activities with the help of AI has increased remarkably.

The credit score is an important factor for loan procedure. With the help of AI, it has become easy for any individual to check his/her credit score. There are some apps which help people to get loan virtually based on their credit score.

AI solutions are helping banks and credit lenders to make smart decisions by utilizing a variety of factors that can be assessed more accurately rather than assessing those traditionally. Thus, AI is playing a vital role in the credit decision-making process. Zest Automated Machine Learning (ZAML), DataRobot, Scienaptic Systems, Underwrite.ai, etc. are some example of AI which helps in credit decisions.

- **1.2 Risk Management Through AI**

Time is money. People take the risk by investing money, but the risk can be deadly if proper attention is not given. For this reason, accurate predictions are crucial for both the protection of money and the speed of the growth of money. Financial markets are becoming more and more AI-based to create more exact nimble models<sup>[4]</sup>. These predictions help financial experts to utilize existing data. It helps to understand pinpoint trends, identify risks, conserve manpower, and ensure better information for future planning. Kensho, Ayasdi, etc. are examples of the application of AI for risk management.

- **1.3 AI and Fraud Prevention**

People of modern society are very fond of making transactions digitally. They always try to go cashless. So, huge quantities of digital transactions take place every day. They make payments, pay bills, deposit checks, trade stocks, and more via online accounts and apps. So, there is always some risk of fraud in transactions. AI has come up with a solution to this problem. Nowadays it is indispensable for banks and other financial institutions to ramp up their fraud detection efforts and cybersecurity facilities. With the help of AI, every financial institution and app, which helps in monetary transactions, are trying to make their transactions safe and secure. Shape Security, Darktrace, Cognito, etc. are some examples of the application of AI used for fraud prevention through data mining.

- **1.4 AI and Trading**

In this era of inflation, everyone wants to grow their money rather than keeping it idly. Nowadays almost everyone is interested in trading. AI has helped all those trade lovers by making trade easier. For trading, it is required to analyze large data sets and find out the patterns that can be used to make trading strategies.

AI-powered computers can easily analyze large, complex data sets faster and more efficiently than humans. The results generated by it are quite accurate. AI has helped people to understand and analyze the market trend and whether it is good for them or not. Many apps have been launched with the help of AI to make trading easier. People find it secured also. They can trade as per convenience. Earlier, the person with no idea of trading used to go to an agent, who helps them to do trading. But now AI has made this process very easy. Some apps can help him by analyzing the financial markets on behalf of him and show the best results which will be appropriate for him. With the help of chatbots, people can also ask their questions and clear their doubts. AlphaSense, Kavout, Alpaca are some examples of the application of AI in trading.

- **1.5 AI and Personalized Banking**

Time is a very important thing for everyone. People are getting so busy nowadays that they are getting time to go to the banks. Traditional banking is not that convenient for people, it was earlier. Especially during this situation where people were restricted to go outside. So, they became fond of net banking which uses AI technology to provide customers better results securely and simply.

According to a study conducted by Accenture based on 33000 banking customers, 54% of the customers wanted tools to aid them in adjusting real-time spending and monitoring their budgets. Moreover, 41% were "very willing" in using computer-generated banking advice. This study was done on some 33,000 banking customers.

AI assistants, such as chatbots, are used to generate personalized financial advice. NLP (Natural Language Processing) also helps to provide instant, self-help customer service. Now people find it convenient for their use and they can get every bank-related detail without going to a bank. KAI, Abe AI, Trim, etc. are some examples of AI applications in personalized banking.

- **1.6 AI and Process Automation**

From the very beginning, AI has tried to automate the manual processes. It has always tried to make the work of humans easier and easier. In the field of finance, AI has also helped a lot. Many apps have made financial activities so easy with the help of AI. Let us discuss this with an example, suppose there is a huge dataset which is collected from a survey and now it has to be sorted. AI can help to sort that huge data. Just we need to feed the dataset or we can scan the data and upload it to any applications and it will give the result as per our requirement. So, there is no need to go through manually to find out any particular information. There are also many other examples of the application of AI in process automation. Like system-generated emails, texts, calls, chatbots, etc.



### Impacts of AI on Finance Services

AI has a recognizable impact on finance. It has made many financial activities easy, and it also helped them to save time. According to analysts and experts, AI will save the banking industry roughly \$1 trillion by 2030. Many banks and financial institutes have already incorporated AI technologies in their system. The applications of AI in finance can provide fast, reliable, and accurate results. The new wave of innovation done by AI mainly focuses on customer experience. With the help of AI, financial services have become more easy, secure, and customer friendly. Like, chatbots have become a more friendly option for customers, rather than going to the bank and stand in a queue and then clear their doubts.

- 2.1 The Future of Finance Using AI

The finance sector is facing a radical transformation with the application of AI. Deloitte reports that "the economic fundamentals are strong, the regulatory climate is favorable, and transformation technologies are more readily accessible, powerful... than ever before <sup>[5]</sup>." Everyone has high expectations regarding the future. With the rapid development of AI, people think that there will be more security for financial services. Digital assistants and apps will become more safe and secure day by day. It will provide more accurate results in the field of risk management and trading.

As we all know the process of financial services is changing day by day. It is coming up with new ideas through which the process can be made more secure and efficient. The transaction has become more transparent than before. Instant notifications are sent. So, people always stay notified about their financial

activities. AI is penetrating every aspect of financial services to make it more and more secure, customer-friendly.

Finance is a sensitive domain and everyone wants to make their safe and secure from any sort of fraudulent activities. So, AI is coming up with new technologies, like Retina Pattern, Iris Scan, Fingerprint, Handprint, Voice Pattern, Keystroke Biometric Authentication <sup>[6]</sup>, to make this field more secure. Though these technologies aren't used widely, till now, many financial institutions are adopting this technology to make their financial services more secure and reduce the risk of fraud.

## **Conclusion**

AI has become an inseparable part of our daily life. Especially during the time when there is the scope of doing most activities from home. All are using different kinds of financial apps for doing financial activities easily, securely, and quickly on digital platforms. People are finding these convenient and more secure through bio-informatics collaborations. Though there is some risk, AI has tried to make the activities as much secure as possible using cryptography. The smarter and accurate predictive Financial strategies are expanding many promising avenues and sub-avenues of Financial services to be benefited from human society.

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*Demonetization and Poor Economics: Warning signs that the government overlooked*

\* Shouvik Chattopadhyay

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**Abstract**

Demonetization as a tool to curb black money in the Indian economy and promote a cashless society miserably measurable failed in the aspect of social welfare and poor economics or how the economics of being poor worked. This research paper shows that the government overlooked warning signs in the form of existing available data that with fair consideration would make demonetization infeasible because of the impact on poor people particularly in rural areas.

**Keywords** : Poor Economics, Social Welfare, Demonetization

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## **Introduction**

Rich people including economists find it difficult to understand the preferences and constraints of poor people while classical economics evolved studying poor people (Theodore 1980). In democratic societies the State's purpose is to improve people's lives (Wilensky, H. 1975; Sen A. 1997). However through arbitrary and unplanned demonetization the State failed to follow the theories of social welfare.

## **Impact of Demonetization on Rural India**

On November 8, 2016 the Government of India demonetized all 500 rupees and 1000 rupees at 8:00 PM through a live address to the nation. These two banknotes constituted 86% of the total notes in circulation. It was expected by the government that people will deposit their cash holdings into existing bank accounts or create new accounts for depositing cash. A time period of 50 days was provided for the same. However the government failed to account for the economic conditions and access to financial facilities such as banks in rural areas, the literacy rate of rural people and digital literacy and understanding of the online banking facilities of these rural people. Borpujari. P (2013) notes that there is a conspicuous apathy of the privileged towards the less privileged. This indifference, to an extent, is driven by market logic to an outcome of selective class-centered coverage of news and debates by Indian media (Kumar, 2017). Economic growth after liberalisation has been exclusionary (Chandra, 2010; Suryanarayana & Das, 2014). Poverty is not a natural phenomenon but a direct result of the structural features of the prevailing political economy as the under-privileged are left out of the economic growth and wealth is transferred from the poor to the rich (Shrivastava & Kothari, 2012).

The following available data for India with particular reference to rural India were overlooked by the government which forcefully implemented demonetization on the Indian economy:

1. Cash and ornaments (considered as cash for assessment purpose) comprised only 5% to 6% of the black money while the rest is stashed in other forms of assets (Suresh, A. E., 2016).
2. A study of online data available on Statista shows that smartphone as a percentage of total phones in circulation in India at the end of year 2015 was 26.3% and in 2016 were 29.8%. Smartphone is essential for smooth mobile banking or doing digital transactions.

3. Subscriber base of GSM phones at the end of 2016 was 562 million (Rajkumar. D, Sharmila K, and Rebello. S, 2016)
4. While rural banks greatly increase economic growth ( Burgess and Pande, 2003), a cashless rural banking economy depends a lot on knowledge about m-banking as well as digital literacy.
5. Inappropriate internet connectivity in rural India, complexity of mobile banking, lack of knowledge about mobile banking and digital literacy (Sihare, 2017), led to an ill-prepared rural India.
6. Literacy rate is less than 80% for working people and less than 60% for older people (Tanushree Chanda, 2019) with higher illiteracy rate in villages. and will be a big impediment to usage of mobile banking service or banking.
7. The lack of cash would directly impact farmer's ability to get good prices for the crops harvested at the time of demonetization, with a ripple effect into purchases of seeds and fertilizers for the next cultivation season (Gurav, 2020).
8. While microfinance has helped the poor a lot, a large of poor people in rural areas don't have access to this as non-availability of formal employment makes them non-bankable (Chavan, V., Khanna, K., & Shinde, G., 2016). This also ensured lack of exchange facilities for the poor who had to travel a lot without guarantee of same day exchange of banned currency with new ones.

## **Conclusion**

The study of poor economics means the study of the economics of being poor and with rural agricultural areas comprising the maximum of any country's population, it is essential that we understand that common economic theories also applies to them as given proper access to facilities like healthcare and education they will also exhibit similar behavior which the middle class population show (Theodore 1980). Dreze and Sen (2013) had stated that in the last two and half decades, growth had excluded the poor. Even with demonetization it was obvious that the concerns and problems of the poor didn't figure in the decision making of the government. So we can state that Demonetization had overlooked the warning signs available to the government in the form of reports as well as research papers and data. This is also against the Theory of Social Welfare as the state acted to the detriment of the interests of the common man and poor people.



## **Further Research Potential**

An in-depth study of the impact of this demonetization exercise can be made by various social scientists and economists post COVID that would be an eye-opener to how the social welfare of people of India was undermined through this decision.

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## GOOD TO GREAT

### How companies successfully transition from being good companies to great

\*Kaushik Kumar Ganguly

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#### **ABSTRACT**

How do great companies become so successful? How do market leaders stay ahead despite never-ending changes and new competitors in their industries? How do businesses survive and even thrive in times of uncertainty? Why are great companies and big brands not able to adapt to changing environment?

These are all complex questions that are hard to answer, given the sheer number of variables in business strategy. Jim Collins, former professor at Stanford Business School, took up this challenge to identify and evaluate the factors and variables that allow a small fraction of companies to make the transition from merely good to truly great. Over 1,400 Fortune 500 companies were examined in a five-year project and eleven great companies were identified from this research. Then, the defining characteristics that differentiated these 'great' firms from their competitors were quantified and analysed.

The resulting data are presented in his 2001 book, 'Good to Great - Why Some Companies Make the Leap...and Others Don't'. The overarching theme of Collins' arguments is the need to define a narrowly focused objective and field of competency and then focus all of the company's resources toward that area of strength.

**Keywords** : management theory, competition, strategy, leadership,

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## **Introduction**

The global pandemic of 2020 has affected every aspect of the global economy and almost every industry across the globe has been thrown into disarray. The onset of the pandemic caused an abrupt halt to traditional ways of working and this trend is set to continue well into the new year. Lockdowns and social distancing measures are likely to continue. We have seen traditional companies struggle to meet the demands of constantly changing lockdowns and we have found more and more untried entrepreneurs turning their own interests and passions into alternative revenue streams. Next year will pose many challenges for businesses as the pandemic continues to have global impact.

As 2020 draws to a close, it is clear that global companies will not be able to go back to the same ways of working as before. However, uncertainty has always been part of the markets, and while that uncertainty might be deeper at the moment, it's incumbent to adjust and move forward. It is moments of uncertainty that hold the greatest entrepreneurial potential. At a time when businesses are facing increased uncertainty, forward-looking organizations will take this opportunity to reshape the way we work. It is precisely in these contexts — not in stable times — that the real opportunities lie to gain competitive advantage through strategy.

There is a surge in international businesses looking to change their management strategies, so that they can continue to improve their efficiencies and profitability. This search for new insights is set to reach even higher levels in 2021. Hence the need to revisit the strategies that have worked in the past for great companies that transformed themselves for the changing times.

## **Literature review**

Management consultant James Collins described how companies transition from being good companies to great companies, and how most companies fail to make the transition in his 2001 book – ‘Good To Great: Why Some Companies Make the Leap and Others Don't’.

'Great,' is a subjective term, operationally defined by Collins according to a number of metrics, including financial performance that exceeded the market average by several orders of magnitude over a sustained period of time. Using these criteria, Collins and his research team identified a set of elite companies that had made the transition from good to great - and sustained that performance for at least fifteen years.

James Collins identified the factors common to those few companies to sustain remarkable success for a substantial period of time.

We may think of the transformation of good to great as a process of buildup followed by breakthrough.

Within buildup and breakthrough, Collins found that success in three broad stages was likely to determine a company's ability to achieve greatness:

Disciplined people: means getting the right people and keeping them focused on excellence.

Disciplined thought: means being honest about the facts and avoid getting sidetracked

Disciplined action: means understanding what is important to achieve and what isn't.

Within each of those three broad stages Collins describes specific characteristics of companies that went from good to great

## **1. Level 5 Leadership**

One of the most significant factors that differentiate good and great companies. is the quality and nature of leadership in the firm. Collins identifies "Level 5 leadership" as a common characteristic of the great companies assessed in the study. This type of leadership forms the top level of a 5-level hierarchy that ranges from merely competent supervision to strategic executive decision-making.

Collins found that many of those classified in this group displayed an unusual mix of intense determination and profound humility. These leaders often have a long-term personal sense of investment in the company and its success, often cultivated through a career-spanning climb up the

company's ranks. The personal ego and individual financial gain are not as important as the long-term benefit of the team and the company to true Level 5 leaders. As such, the much-touted trend of bringing in a celebrity CEO to turn around a flailing firm is usually not conducive to fostering the transition from Good to Great.

A Level 5 leader is an individual who blends extreme personal humility with intense professional will. He is a self-effacing individual who displayed the fierce resolve to do whatever needed to be done to make the company great. Level 5 leaders channel their ego needs away from themselves and into the larger goal of building a great company. They are ambitious, but their ambition is first and foremost for the institution, not themselves

Level 5 Leaders are a study in duality: modest and wilful, humble and fearless. They are comfortable with the idea that most people won't even know the roots of the success trace back to their efforts. One of the most damaging trends in recent history is the tendency to select dazzling, celebrity leaders and de-select potential Level 5 ones.



.Source : Jim Collins, *Good to Great* (2001)

## 2. First Who, Then What

Collins uses a bus as a metaphor – where the business is the bus and the leadership team is the bus driver. The bus driver needs to first assess who should get on the bus and who needs to get off it – before figuring out where to drive it.

**'the right people on the bus...**  
**...the wrong people off the bus,**  
**... and the right people in the right seats'**



Source : Jim Collins, *Good to Great*

(2001)

This same principle holds true for companies that made the transition from good to great. Finding the right people to drive your business takes precedence over all else – even before setting new direction, formulating new strategies or organizational structure. The process of securing high-quality, high-talent individuals must be undertaken before an overarching strategy can be developed. With the right people in the right positions, many of the management problems that plague companies and sap valuable resources will automatically dissipate. As such, companies seeking to make the transition from good to great must expend extra energy and time on personnel searches and decision-making.

According to Collins, ‘people are not your most important asset; the right people are’ – and who is right should be judged based on their character traits and innate capabilities, rather than specific skillsets or knowledge. Further, the research found no evidence linking executive compensation to

the shift from good to great, as compensation should not be used to ‘motivate’ right behaviours from the wrong people, but ensure that the right people continue to stay.

### **Importance of maintaining rigorousness in all personnel decisions**

Collins recommends moving potentially failing employees and managers to new positions, but not hesitating to remove personnel who are not actively contributing. He also recommends that hiring should be delayed until an absolutely suitable candidate has been identified. Both of these guidelines will save time, effort, and resources in the long-term.

### **How to be rigorous in recruitment and selection of employees?**

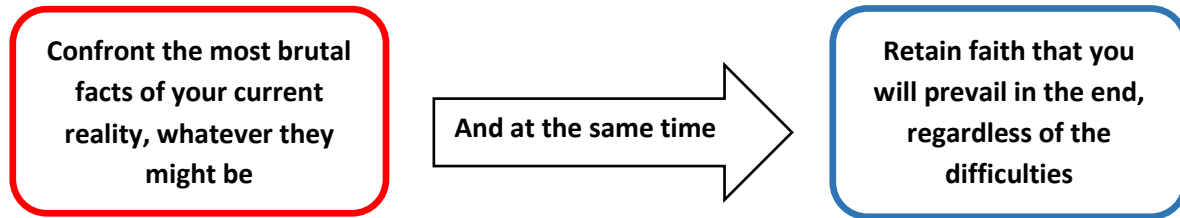
- (a) When in doubt, don’t hire — keep looking for better candidates.
- (b) You must let go of the wrong person right away. But don’t overlook the possibility that the person might just be in the wrong seat.
- (c) Put your best people on your biggest opportunities, not your biggest problems.

The right people don’t need to be tightly managed or motivated; they will be self-motivated by the inner drive to produce the best results and to be part of creating something great. If you have the wrong people, it doesn’t matter whether you discover the right direction; you still won’t have a great company. Great vision without great people is irrelevant.

The right people will do the right things and deliver the best results they’re capable of, regardless of the incentive system. The purpose of a compensation system should not be to get the right behaviours from the wrong people, but to get the right people on the bus in the first place, and to keep them there.

### **3. Confront the Brutal Facts (But Never Lose Faith)**





Source : Jim Collins, *Good to Great* (2001)

Great results can only be achieved when you making lots of good decisions and then execute well. To make good decisions you need to confront the facts, even if those facts are brutal and uncomfortable. To avoid distorting the facts you need an atmosphere where the truth is welcomed.

A primary task in taking a company from good to great is to create a culture wherein people have a tremendous opportunity to be heard and, ultimately, for the truth to be heard. Collins outlines a four-step process to promote awareness of emerging trends and potential problems:

(a) Lead with questions, not answers.

The leaders of great companies start by assuming they don't know what is required. They ask questions until a picture of reality and its implications emerges. The continued use of probing questions slowly brings the reality to the surface. This is the opposite of 'superstar' leaders who assume they have all the answers and just need to make their team execute. These leaders are likely to make bad decisions because they don't have a true understanding of the facts.

(b) Engage in dialogue and debate, not coercion.

Use questions not as a form of manipulation, but as a way to gain understanding.

(c) Conduct autopsies, without blame.

Things can and will go wrong. Even great companies make mistakes. Great companies don't try to hide these mistakes. Rather, they try to learn from them. Trying to blame someone for the mistake doesn't even enter into the conscious thoughts of Good to Great leaders.

(d) Build "red flag" mechanisms.

Great companies pay attention to what's really important and ignore everything else. They build red flag mechanisms. These turn raw data into information that cannot be ignored.

#### **4. The Hedgehog Concept**

The Hedgehog Concept is an understanding of what you can be the best at. To explain this concept let's look at the difference between a fox and a hedgehog.

A fox is a very clever creature. It sees the world in all its complexity and can pursue many goals at once.

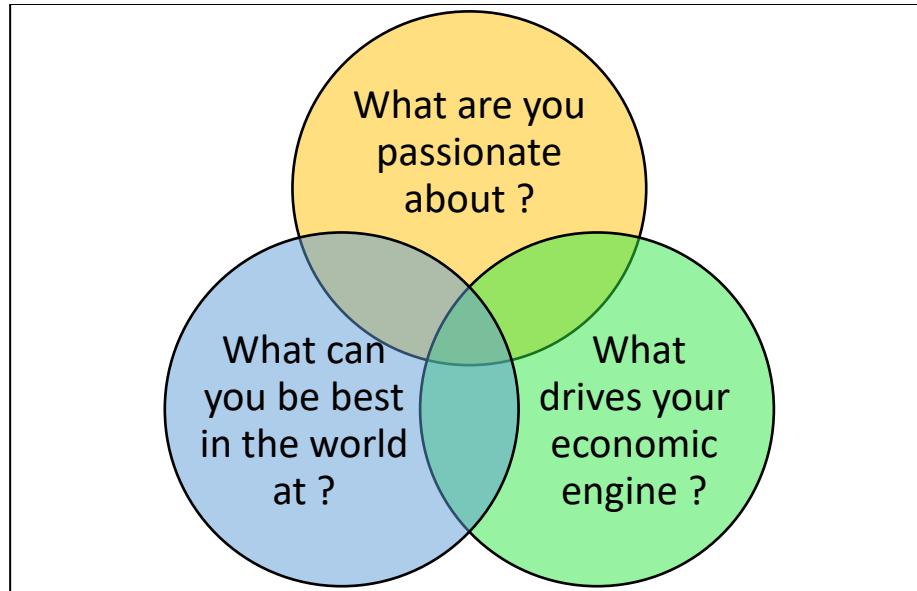
A hedgehog is a much simpler creature. It doesn't get bogged down by all the complexity. It's really only able to do one thing well – curl up into a ball to protect itself. This single response is simple and works as a response to any attack. All they see is a single goal and they execute to achieve that goal.

Good to Great companies behave in a similar way to a hedgehog. They stick to doing what they are best at and avoid getting distracted. They focus on doing one thing better than anyone else in the world. It's incredibly easy to get distracted, with even great companies having to fight to stop this from happening.

So, how does an organisation become more like a hedgehog and less like a fox? You can find your inner hedgehog at the intersection of these three questions:

(a) What do you feel most passionate about?

- (b) What can you be best in the world at?
- (c) What drives your economic engine?



.Source : Jim Collins, *Good to Great* (2001)

## **5. A Culture of Discipline**

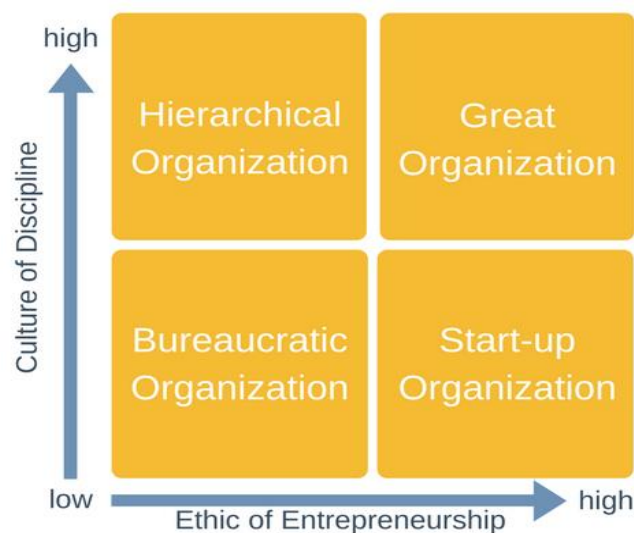
Sustained great results depend upon an organizational culture of discipline. In this type of organization, each individual functions as an entrepreneur, with a deeply rooted personal investment in both their own work and the company's success. The single most important discipline is obsessive adherence to the Hedgehog Concept by shunning opportunities that do not meet the singular 'better than anyone else' criteria.

As the companies grew, they instilled a culture of discipline through disciplined people, thought and action. This culture of discipline, when combined with the spirit of entrepreneurship, jointly delivered superior results.

it is important that within this culture of discipline, every team member is afforded the degree of personal empowerment and latitude that is necessary to ensure that they will be able to go to unheard-of extremes to bring the firm's envisioned objectives into existence.

Collins outlines a five-step process to support a culture of discipline –

- (a) Build a culture of freedom and responsibility but within a defined framework.
- (b) Get the right people on board that have the will to achieve their responsibilities.
- (c) Build a strong culture, not a dictatorship.
- (d) Exercise extreme focus in adhering to your Hedgehog Concept
- (e) Create a list of things you will stop doing so you can focus better.

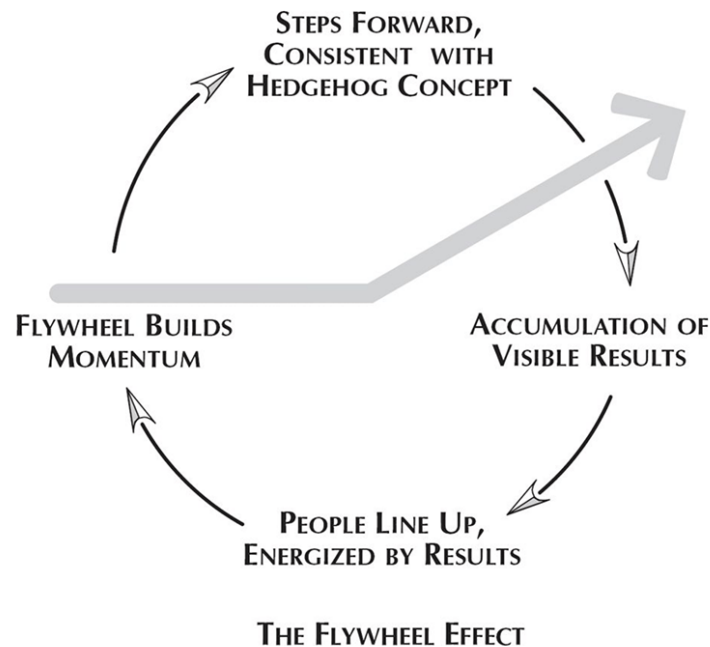


Source : Jim Collins, *Good to Great* (2001)

## **6. Technology Accelerators**

Good to Great companies use technology is used to accelerate rather than create success. They do not jump onto new technology trends haphazardly; and invest in new technology only if it serves their Hedgehog Concept. They view how technology is used as being far more important than adopting the latest technology

## **7. The Flywheel Effect**



Source : Jim Collins, *Good to Great* (2001)

Collins describes the advantageous business cycle that can foster the transition from Good to Great as The Flywheel effect.

- (a) Executives initiate positive momentum by making decisions and taking actions that reinforce and affirm the company's "hedgehog" competencies.
- (b) This, in turn, results in the accumulation of tangible positive outcomes, which serve to energize and earn the investment and loyalty of the staff.
- (c) This revitalization of the team serves to further build momentum.
- (d) If the cycle continues to repeat in this manner, the transition from *Good to Great* is likely to transpire.

Good-to-Great companies applied the above six strategies consistently over a long period of time, until the combined steps and activities accumulate to create a point of breakthrough. It's like how a flywheel picks up momentum turn by turn, until it's almost unstoppable.

The Doom Loop is the opposite and it is how bad companies do things. The Doom Loop is characterized by reactive decision-making, an overextension into too many diverse areas of concentration, following short-lived trends, frequent changes in leadership and personnel, loss of

morale, and disappointing results. Companies that fall into the Doom Loop genuinely want to effect change—but they lack the discipline that produces the Flywheel Effect.



Source : Jim Collins, *Good to Great* (2001)

### **The Doom Loop**

### **Conclusion**

Companies that enjoy enduring success have core values and a core purpose that remain fixed, while their business strategies and practices endlessly adapt to a changing world.

The transformation of a company from merely good to great is not the result of a miraculous, overnight success. Instead, a down-to-earth, pragmatic, committed-to-excellence process—a framework—kept each company, its leaders, and its people on track for the long haul. In each case, it was the triumph of the Flywheel Effect over the Doom Loop, the victory of steadfast discipline over the quick fix.

The Good to Great management framework provides an insight into the dimensions of leading an organization that consistently delivers, demonstrates excellence and can one day be considered great. The key takeaway from Good to Great is discipline. To go from a good organization to a great one you need disciplined people, disciplined thought, and disciplined action.

## **Limitations**

“Good to Great” has generally used financial success as a proxy for greatness. The author wanted to find out how good companies suddenly surged, with their stock value beating the market over the course of at least 15 years while their competitors remained where they were. So even though he brings up other factors, success ends up coming back to the bottom line. Other aspects of greatness — working conditions, employee welfare, societal impact, corporate culture – were not considered.

The author uses the “hedgehog and fox” explanatory model, but offers no proof that in fact this is a good model to understand business behavior.

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## **Introspecting innovative online teaching-learning pedagogy and its adaptation in Covid times**

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\*\*Arunava Dalal

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### **Abstract**

Advancement in technology has been a boon for mankind. It has helped in all segments and industries and the educational sector is no different. There have been new modes of delivering education, engaging with the learners, and enriching the learners' knowledge through the use of technology. The Covid-19 pandemic and the subsequent lockdowns that were implemented across many countries only helped in accelerating the adaption of these new technologies bringing in an innovative online teaching-learning pedagogy. The necessity of continuing with the education process, enhancing knowledge during a lockdown situation, collaborating with people having similar needs and urges, have led to a spectacular awareness of online education.

This paper looks into the impact of online education from the students' perspective, they being the main recipients of this process, and the views of the faculties who are the enablers. It also tried to understand the effects that the external ecosystem consisting of technology partners, content developers, and the organizations in the online education sector have in developing the online teaching-learning process.

The paper through primary research has looked into the benefits and drawbacks of this education model, the learnings which can be used in the future to make this an innovative teaching-learning methodology even post the Covid-19 era.

**Keywords** : E-learning, WFH teaching, Pedagogy, Digital classroom, Webinar

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## **Introduction**

Technology has enabled connectivity and globalised all. There has been extensive use of “Artificial Intelligence” to enhance outcomes superiorly. The services Industry especially the IT-enabled services (ITES) has long practiced Work From Home (WFH). Medical services have also adopted remote medication and surgery to a varied degree of success. Online educational services, webinars, e-conferences had limited acceptability due to its apprehended limitations and availability of alternative face to face physical deliberations. However, the speediness, reach and cost-effectiveness are features that online educational services were failing to adapt to. The Covid outbreak put forth an exploratory voyage to online education especially. Suddenly all activities started happening from home seamlessly with the teachers conducting classes, labs, and even exams online. Corporate lectures, e-seminars, e-workshops all started happening at a rapid pace. The entire pedagogy of teaching-learning changed and the education industry adapted to the same very fast. The Industry academia Interface truly shaped up online with constant corporate interactions and mentoring which was applauded by the student fraternity especially in higher education. Even schools adjusted to the virtual teaching-learning process with the children using a plethora of online medium tools at their disposal to great effectiveness. Designing learning environments for these needs is attracting attention from the education providers. Course developers and designers need support and training for developing resources including text, audio, and video. The present paper studies the innovative online teaching-learning processes and the pedagogical innovations and its adaptation by the stakeholders.

## **Review of literature regards online teaching-learning pedagogy**

Docebo (2016) in its 'Elearning market trends and forecast 2017-2021' report observes a shift, growth, and evolution in the e-learning sector. The e-learning market was worth USD 165 Billion in 2015 and all set to grow by 5% between 2016 and 2023 surpassing USD 240 Billion. Technavio's market research (2016) also reports an increasing need for training programs for enhanced employee productivity and adoption of advanced technologies for this purpose, this would result in a growth in corporate e-learning market at a CAGR (compound annual growth rate) of around 11% by 2020. Globalization, internationalization and the need for ubiquitous learning has given rise to a different set of expectations from educational systems, demanding more flexibility in teaching and learning process and use of technology (Lai, 2011). Bates (2015) also suggested certain skills that are required for the knowledge world: communication skills, teamwork and flexibility, ethics and responsibility, independent learning, thinking, and Digital skills are included in the teaching-learning process (p.16). The developments in the field of technology have helped come up with new modes of education like flipped classrooms, MOOCs, etc keeping the needs of students in mind. There is a strong demand to integrate ICT into formal or face-to-face teaching and going blended or online on the part of teachers (O'Neill et al., 2004; du Boulay et al., 2008). Compounded by the developments like gamification, mobile learning, flipped classroom, learning using augmented and virtual reality technology, MOOCs, and next-generation LMS, teachers need to have certain skills and orientation to successfully design for these learning environments. This calls for certain pedagogical approaches guiding the teachers, instructors, and tutors to have relevant technical skills to handle LMS or various technology tools and applications, effectively design, develop, facilitate, deliver and assess a course which will also have the capability to sustain the social and affective well-being of students (Redmond, 2011). Some of the popular pedagogical designs for e-learning environments are "learning by doing" (Schank, 1997), "problem-based learning" (Barrows, 1994), "case-based learning" (Chen, Rong-An, & Harris, 2006; Lynn, 1996), "learning by designing" (Naidu, Anderson, & Riddle, 2001), and "role-play-based learning" (Ip&Linser, 1999). Dabbagh (2005) suggested a Theory-

Based design framework for e-learning where he suggested three elements to be presented as an integrated environment:

- Pedagogical models, for example, flexible & distributed learning, knowledge-building communities.
- Learning strategies through role-playing, collaboration, exploration, articulation, problem-solving.
- Pedagogical tools using online learning technologies, for example, multimedia tools, course management tools, web authoring tools,

Sharma and Mishra (2007, p. 7) suggested another pedagogical framework of e-learning: Experience-Reflect-Interact-Construct (ERIC). The ERIC framework recommends flexible delivery and provision of anywhere, anytime learning experiences for the learners. Then the learner attempts reflective activities followed by interactions with peers or tutors both synchronously or asynchronously. In the final phase, the learner is involved in the construction of knowledge through group activity, presentations, project works, or any other creative activities. Ferguson et al. (2017) identified ten innovative pedagogies which either have impacted educational practices or might transform them in near future: “Spaced learning” (Building long-term memories in short duration of time); “Learners making science” (students making science and acting like scientists); “Open textbooks” (Taking to open licensed textbooks); “Navigating post-truth societies”; “Intergroup empathy” (Considerate of others’ viewpoints); “Immersive learning” (Learning through experiences); “Student-led analytics” (Data-driven learning where learners target their own goals and set to achieve them through the use of data); “ Thinking with data” (Working with big datasets to decipher the world); “Learning with internal values” (Students’ interests are channelized and inspired to learn) and “Humanistic knowledge-building communities” (Encouraging learners to build up knowledge). As educational institutions are going digital and learners have increased access to the Internet and technology devices, the learning spaces are being redesigned and redefined (Adams Becker et al., 2017). The learners demand greater flexibility, mobility, and access when needed.

## **Research objectives**

The present research strives to explore the following:

- The adaptability of online teaching-learning among the stakeholders
- Metrics for measuring the teaching outcomes
- Innovative processes and types of online teaching experimentation
- Sustainability of online sessions post-Covid

## **Research methodology**

To understand the views of students regarding online education during the lockdown period, a longitudinal study was carried out with a sample size of 500 students. The sample consisted of undergraduate and postgraduate students especially from the private colleges and Universities in Kolkata as the sample area. The questionnaire was administered through Google form and the responses thus collected were analyzed.

A focus group discussion (FGD) of faculties was also conducted to understand their views regarding this change of mode of education and what changes they have observed among the students and their own teaching methodology.

Secondary research was conducted to understand the different online education service providers' contents and features.

## **Research findings and its discussions**

In a Covid environment, the educational services sector was left with no other alternatives than to adopt and embrace virtual classes both theory and practical. In addition, due to critical times, the e-learning platforms too allowed the students to learn new courses and enhance their skills. Knowledge is power and the more the number of online courses and online exposure by virtual competitions and internships, higher will be the credibility. Herein there is a caution that the

studies need to be streamlined in a focused approach related to the stream that the candidate is pursuing so that there is more of a depth in the knowledge which would enable the learner to be at a competitive advantage over peers in his or her preferred specialization/stream.

A longitudinal study was carried out with the different takers of higher education to investigate the acceptance of online education in a locked-down environment. The objective was to find out the perception of the takers of education as to whether they feel that these tried and tested times is a holidaying opportunity for them.

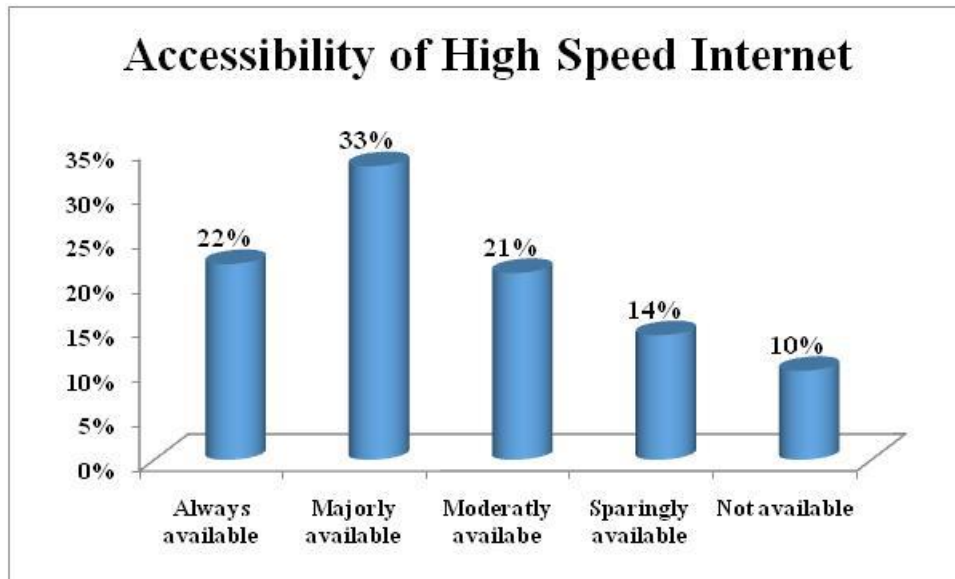
The different aspects that were captured in the questionnaire that was administered on the sample were the following;

- a. Accessibility of high-speed internet service – this being one of the important requirements of online education
- b. The adaptability of the students towards technologies being used for delivering online education.
- c. Convenience – how convenient it is for the students to study and attend classes in online mode
- d. Duration the students are spending in attending classes, studying, and attending to related academic matters like webinars, distinguished guest lectures, etc through online mode.
- e. Interaction ability between the students and the faculty or the person delivering the lecture. The authors felt that this being an important parameter for the smooth and effective running of the teaching-learning process; it needs to be captured separately.
- f. Understanding the top benefits as per the students, regarding the online mode of education.
- g. Understanding the top drawbacks as per the students, regarding the online mode of education.
- h. The overall experience of the students regarding the online teaching-learning process.

Since the sample consisted of students from Kolkata colleges and Universities it was hypothesized that the students would have uninterrupted internet access and they would be able to attend sessions by faculty and corporate as well as enrich their knowledge taking these turbulent times as an opportunity. However, it was found that out of the basket around 10% of

the students did not have online access with high internet speeds and around 14% faced disruptions in accessing their classes/ sessions. (Table 1)

**Table 1**



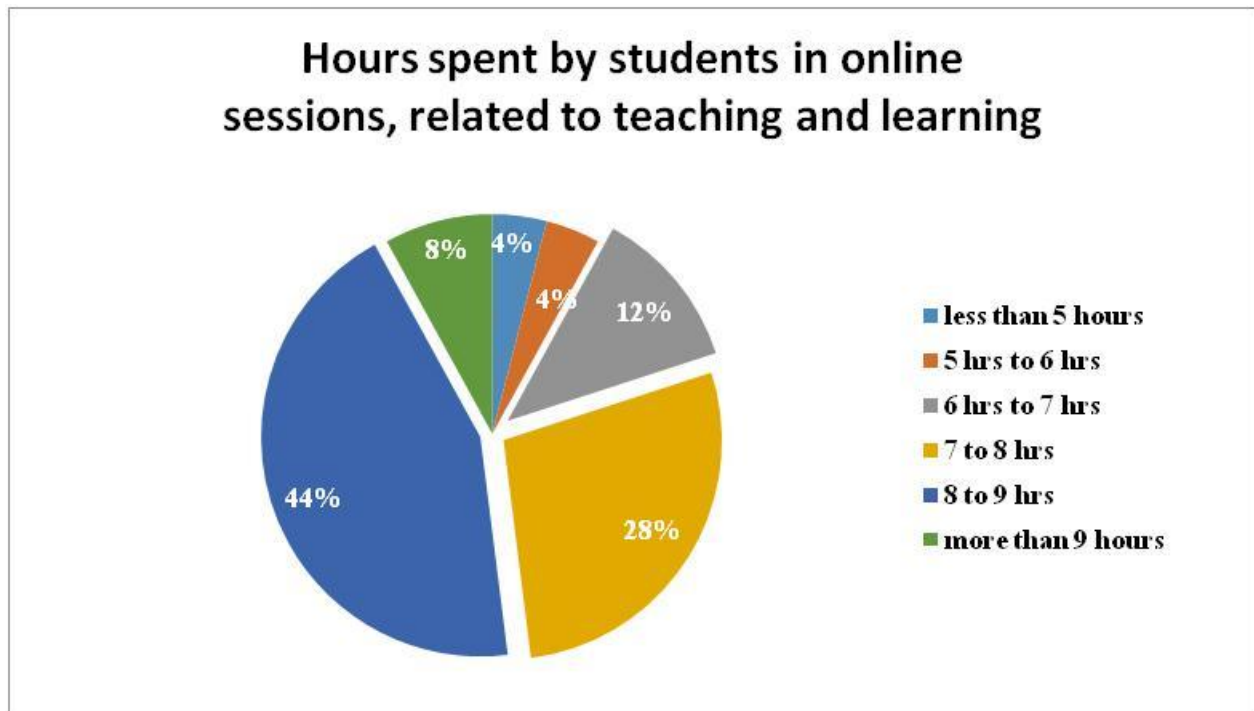
The students being of younger generation and has abreast technology as a part of their life, most of the students (>95%) indicated their adaptability towards the new mode of education through different apps and video conferencing tools.

Convenience factor was unanimously accepted by all the students. The advantage of attending lectures and classes from the comfort of one's home without worrying about travelling and traffic played an important role for getting positive feedback on this parameter.

The next point on duration of time spent by the students for online studying or being engaged in online activities related to study was used as a surrogate to understand the propensity of likeability and adaptation to online teaching-learning pedagogy. The results show that there was lot of enthusiasm which spiked due to online sessions and the students remained online. This was also corroborated by the faculties who attended the FGD who estimated that the attendance of the students using various online platforms to attend sessions from their home increased appreciably by as high as 31% (comparison between pre lockdown period and during lockdown period), due to the ease of attending sessions from their home and at their convenience.

The average time spent by the students attending online sessions in the sample taken was a whopping 8 to 9 hours which was quite appreciable. (Table 2)

**Table 2**



The interaction ability in online education was a concern as greater than 65% of the students felt the need for interactivity during the classes. The faculties in the FCD also shared a similar viewpoint stating that the students despite being online were not responding in time. This indicated either lack of attention and engagement virtually or partial/complete abstinence despite showing online. It looks like the students were missing the physical ambiance as online could not provide holistic development of the mind and the body. Technical advancements after a certain level of adoption become mechanical and lack the flesh and blood of a physical environment which can't be simulated into the system effectively.

The students were asked to mark the benefits and the drawbacks that they felt they experienced through the online teaching-learning process. The top benefits and drawbacks are given in Table 3 and Table 4. The percentage is an indication of the number of students out of the sample who chose the specific options.



Table 3

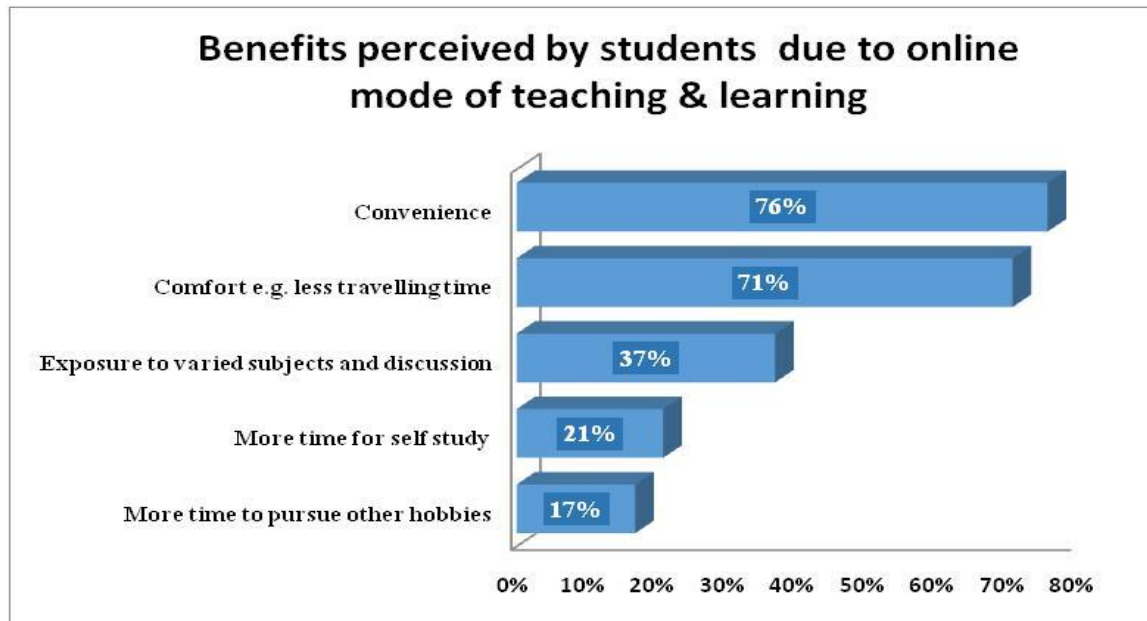
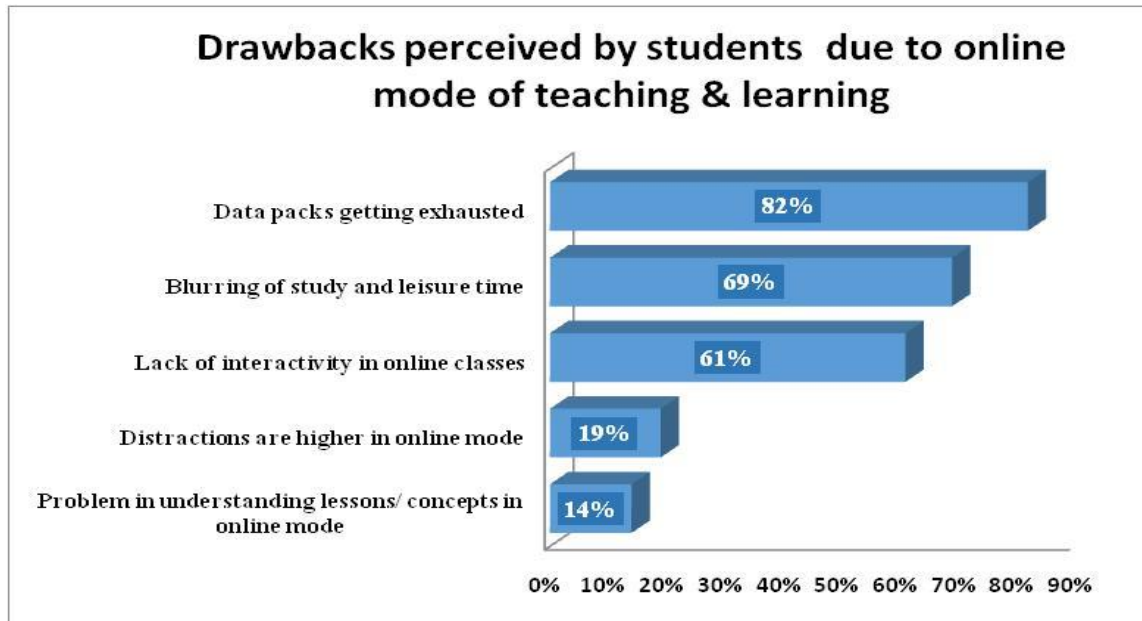


Table 4



76% of students thought convenience as a major benefit followed by comfort which can be reasoned as that the online sessions from their home provided them with a plethora of time to undergo more studies and take up courses and get more exposure exploiting different virtual modes.

Among the drawbacks, the top two reasons came out as frequent exhaustion of data packs (82%) followed by the blurring of study and leisure time.

Overall 91% of the students have rated this mode of education during the lockdown period as  $\geq 8$  on a scale of 1 to 10.

It was thus a win-win situation for all the stakeholders. However, there was divergence on the medium preferred and security concerns too. There were platforms like “Zoom”, “Google Meet”, “Cisco Webex”, “Microsoft Teams”, “GoToMeeting”, and many others. There was a varied level of comfort and compatibility in the usage of the platforms and each has its own advantages and limitations which is outside the scope of this paper. The online platforms too seeing an unprecedented high demand witnessed a sharp rise in business for their paid and professional versions which had exhaustive features and were much user friendly and convenient.

The best part of this online teaching-learning process was that even the faculty who were not very tech-savvy were compelled to use and embrace these technologies. They were delighted

after connecting with their students online and getting the responses they desired through detailed interactive sessions. These thoughts came out from the FGD with the faculties.

Besides because the entire learning process was online, the industry and academia from different parts of the world too got actively engaged in conducting online sessions either with their peers and subordinates and also having time to educate the students with cutting edge technologies and the latest and best practices in the Industry. This was a boon in disguise for the students' as they could be more connected real-time with the experts who mattered and got the opportunity to be mentored by them on a routine basis thus improving their standards for those who are keen to learn and change for the better.

The question now thus lies that what is the sustainability perspective of this online teaching pedagogy and processes post Covid when normalcy returns. Will online education get back to its old level of lesser engagement and adoption, is this a mere stopgap arising out of necessity? Looking into the opinions expressed by academia and industry practitioners in media, through online lectures, webinars, and other online modes available during the lockdown period, suggest that even post Covid there would be the usage of online tools for tutorials, corporate sessions, and virtual conferences. Since the people got accustomed to the various online platforms this would enhance the usage higher than pre-Covid times but they cautioned that they did not see the usage to peak to the levels as witnessed during lockdown. The online workshops too were not that lively and enjoyable as those with technology-based usage, the users complained. The online mentoring was difficult to be audited too at actuals. The reason was remoteness posed as a challenge for surveillance as to the authenticity of the deliverables and thus resulted in lesser credibility.

Further many times the medium and the receiver environment too posed a challenge for seamless delivery of the sessions. Since the speaker and the receiver were both in isolation it was difficult to assess the attention level and the understanding of the attendees. Teaching requires an in-depth explanation and many a time there is the usage of quantitative techniques that may not be possible over online delivery modes despite the best efforts of the teacher. Besides, the concepts explained may not be understood fully and a limited understanding might cripple the students from going deep into the subject with limited learning of the fundamentals and basics.

A survey of the online courses too proved the same. Though many of the online courses are quite popular the substitution of the same from the conventional brick and mortar is not possible as the detailed orientation is lacking. The question of measurement of the effectiveness of teaching is very cumbersome in the case of online teaching. For example, the teacher may not be able to assess fully whether the concepts were understood by the students. As a result, what happens is in the absence of a monitoring system in the physical presence of the teacher there is shallowness in the concept grasp by the student.

Online teaching-learning processes, however, should continue for education beyond classrooms as students have a lot of tools at their hands for their development. Learning should not be restricted to classroom teaching but the same topic should be learned exhaustively from the faculty across different institutions. Besides, the students should take advantage of virtual corporate sessions which zero down travel, save valuable time of the corporates and at the same time provide the necessary learning for the students.

## **Conclusion**

Successful implementation of online learning depends upon several factors, like effective course planning, designing, production, delivery, assessment, support, and credentials or accreditation. Resource planning is crucial (material and human) to all dimensions of online course development. It should not be a simple repository of online materials to be accessed by an individual with no guidance on how to make the best learning. Affective domains of learning are quite important and thus need to be paid serious attention. An effective online course should promote active learning, a suitable pedagogy will build a strong scaffold where learning becomes meaningful. Appropriate and timely feedback increases motivation to keep going among the students and thus reduces dropout rates. Use that technology which is simple, reliable, and easy

to use by the students and which assists in enhancing learning. The studies presented in this research offer innovative applications of online pedagogy that engage learners, reduces technical problems, and offer human support for the effective realization of course outcomes.

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## HR Analytics: Is It A Myth Or Reality In An Organization?

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### Abstract

Today's globalized world is making the organizations to face the huge problem of SUSS (Susceptibility, uncertainty, sophistication and sustainability) in the business environment. This proactive business environment is stimulating the business leaders to design certain levers and models to cope with the uncertainty in business. To enhance business performance and to gain competitive advantage designing an effective Talent Pool is of utmost important. Thus HR Analytics is the only tool which can help companies to recruit the right talent, organize them correctly and retaining the high performers. Masese Omete Fred, Dr. Uttam. M.Kinange (2015) defined HR Analytics as a data-driven framework for solving workforce problems using existing information to drive new insights. It helps in decision making process with a combination of software and methodology that uses statistical models to employee related data, allowing enterprise leaders to optimize human resource management .The basic purpose of this paper is to study whether HR Analytics is a myth or reality in an organization. To support the purpose a model "BLEND" has been designed to evaluate five perspectives of HR Analytics i.e. Business objectives, Leadership initiatives, Establishment technically upgrading , Negotiating with HR metrics, Data Analysis and Integration. The Model is validated by a survey of a sample of 22 respondents consisting of 5 HR executives and HR managers of logistic companies and 17 HR executives and HR managers of manufacturing companies in West Bengal. A Questionnaire based on Renesis Likert 5-point Scale is designed on the basis of five perspectives of Model "BLEND" of HR Analytics in Sales and Marketing Division in the above companies. The value of Cronbach's alpha of the questionnaire is 0.9501 and validity of the questionnaire is tested through content validity. The data is analysed by Kruskal – Wallis (or H test) a non-parametric test which is analogous to the one-way analysis of variance which revealed that there exists a significant difference of HR analytics perspectives between manufacturing and logistics companies. The percentage analysis of data revealed that HR analytics of manufacturing companies is ahead of Logistic companies as per the model "BLEND".

**Keywords:** *HR Analytics, Susceptibility, Sustainability, HR metrics, Kruskal – Wallis, BLEND*

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## Introduction

**“ Ksheeyante Sarvadaanaani Yagya homabali Kriyaah  
Na Ksheeyate Paatradaanambhayam Sarva dehinaam”**

(AS PER CHANAKYA NITIS)

The above line speaks that the effect of gifting, rewarding donations disappear over time but when given to the right person survive forever. When taken to management concept that an organisations should rejuvenate an organisation’s reward policies by utilizing them for productive and deserving employees on the basis of their performance. Thus how to identify the potential employee in the organisation .What is the parameter to benchmark their efficiency and effectiveness? The need of the hour has given birth to the concept of Human Resource Analytics. Human Resource Analytics basically integrate the business data with the people data strategically focusing that what human resource department in the organization does and what is the business return the organization is getting . Human resource analytics (HR analytics) is an area in the field of analytics that defines the application of analytic processes to the human resource department of an organization in order to improve the employee performance level and therefore enhance the organization’s productivity and getting a better return on investment. HR analytics not only gathering data on employee but also it seek to provide insights into each business process by using data to make relevant decisions, improve the processes and operational performance (Soumyasanto Sen,2015). ABN Amro has been practicing since 2013 with an HR analytics team (Bekkering, 2014). Cascio and Boudreau (2010) explained four levels of sophistication used by Google’s People Analytics Group. The four levels are counting, clever counting, insight and influence. Each particular level requires mastery of the lower levels. The level Counting consists of all relevant data about the workforce which are tracked, organized and accessible. Clever counting using the basic data from counting to extrapolate new insights. Insight tries to find the drivers from the trends, which has been extrapolate by clever counting. The highest level, influence, apart from measuring the outcomes also giving a shape to the outcomes .Thus the focus objective is to ensure that managers should have a shared understanding of the goals and the levers or the drivers they can pull to achieve those goals. To quote Mark Berry,VP of HR,CGB Enterprise Inc.(2016) that “In today’s workplace ,analytics can play a critical role in both identification of transformational opportunities and evaluation of transformational opportunities and evaluation of transformational impact .When you consider the factors affecting a global workforce...workforce analytics provide the means for organizations to be able to identify areas of opportunity, prioritize the opportunities and evaluate the impact of human resource transformational”. HR analytics can establish a tangible link between the people strategy and the organization’s performance.

## Literature Review

Today when the whole world is facing the problem of high attrition the only solution is to design an effective HR analytics which can not only satisfy the employees but also increase the return on

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investment of the company. To gain competitive advantage, companies should nurture and align Human capital management with core business objectives. HR analytics encompasses different perspective of Human Resource along with Business objectives.

### **Evolution of HR Analytics**

Dr. Jac Fitz-enz (2010) mentioned in his work “ The HR Analytics – Predicting the Economic value of your Company’s Human Capital Investment “ that in 1970s, they have initiated their study in HR to experiment with simple cost, time, and quantity metrics in order to evaluate that HR was at least manage the expense and create some value. Cindy Waxer (2013) outlined in his study that the exercise of human resources analytics dated as far back as 1984 with respect to Jac Fitzend, author and president of HR services organization Saratoga Institute, published How to Measure Human Resources Management, a influential work outlining the HR metrics for effective measurement of employee performance. Thus from an experimental approach for managing the workforce, HR analytics has taken birth by focussing on strategic tools for improving various HR aspects i.e. employee satisfaction, boosting retention rates, calculating compensation, forecasting workforce deficiencies and flagging star performers for special attention. In August 2012, IBM bought talent management software provider Kenexa for a massive move of \$1.3 billion. SAP (with SuccessFactors) and Oracle (with Taleo) also made acquisitions to enter into this field while smaller players like Visier and Evolv gain ground with highly scalable, cloudbased tools. Thus HR analytics is an expanding field. Researchers from Bersin & Associates projected that the global market for integrated talent management technologies will grow 22 percent to nearly \$4 billion this year—almost double the growth rate of 12 percent in 2011-2012.

Masese Omete Fred , Dr. Uttam. M.Kinange (2015) emphasized that from Harvard Business Review Analytic Services interviews and from other researches found five stages of HR Analytics evolution : Overreliance on Managerial Judgment Such As Intuition and Instincts, Use of Analytics in a Few Departments, Expanding Use Of Analytics In Several Departments, Noted By An Increasing Amount Of Collaboration, Scaling Decision Making Throughout All Ranks Of The Organization In An Integrated, Holistic Approach, Continuous Improvement built on an evolving technology,

A 2015 Economist Intelligence Unit survey found that 82% of organizations plan to either begin or increase their use of “big data” in HR over the next three years. CEOs are recognizing the importance of talent-related data in managing recruitment, retention, turnover and more.

Rutger Johannink (2015) highlighted in his study that the significance of HR analytics in 2025 will be very high. Organizations will consider HR Analytics as an essential part of Human Resources and a central linkage in the decision making process. It is predicted in 2025 that HR analytics will not only influence the decision making process of the organizations by providing appropriate facts and figures but also provide predictive capabilities and also ensure that HR analytics would be induced with every aspect that is people-centric.

## Models of HR Analytics

To streamline the HR process and Business Process, researchers and consultants have projected various factors, steps and maturity models that could be used by HR Department for analytical purpose for smoothing various HR practices and processes.

HR analytics is based on statistics from within and outside the HR function (Boudreau & Ramstad, 2006). Jac Fitz-enz (2010) emphasized in his paper ““ The HR Analytics – Predicting the Economic value of your Company’s Human Capital Investment” that Predictive management, or HCM:21, is the outcome of our eighteen month study called the Predictive Initiative. This model is the first holistic , predictive management model came into existence in the last quarter of 2008 which is a operating system for the human resources function.HCM:21 is a four-phased model which starts with scanning the marketplace and ends with an integrated measurement system.In the middle, it deals with workforce and succession planning in a new way and focussing on optimization and synchronization of the delivery of HR services. He has outlined the process by explaining the market or external and internal forces that affect human, structural and relational capital. He has considered risk assessment as a fundamental part of modern human capital management and framed a model for workforce planning that replaces the industrial-era, gap-analysis, structure-focused practice of filling, positions as needed with the concept of generating human capability.

Lawler et al. (2004) indentified three different kinds of metrics applied for HR analytics: efficiency metrics which focuses on the performance of the HR function with respect to the efficiency in fulfilling its basic administrative functions, effectiveness metrics which deals with the evaluation of the HR programs and practices how far they are affecting the people towards which they are directed, in a way they are expected and impact metrics tried to establish a link between what HR does and what are the tangible effects on the organization’s potentiality ,sustainability and in gaining competitive advantage. Davenport, Shapiro and Harris ( 2010) framed a ladder of talent analytical applications and the DELTA model - which stands for data, enterprise, leadership, target and analysts - for successful implementation of analytics.

Inostix (2011) explained about the HR value chain, as implemented by made by Brian Welle, people Analytics manager, Google. The first step is opinion, the second step is data which is about structured, but raw information. Metrics, the third step in the HR value chain, showing the trends based on ratio and counts .The fourth step deal with analysis which is meant to draw correlations and show relationships which is followed by the step called insight. The step insight leads to action and influence the decision making process and the process is terminated by the final step called action which is meant to change the process or policy. Thus the step insight is very important for HR analysts to work towards the insight, and even action step, in order to have influence on the decision making process.

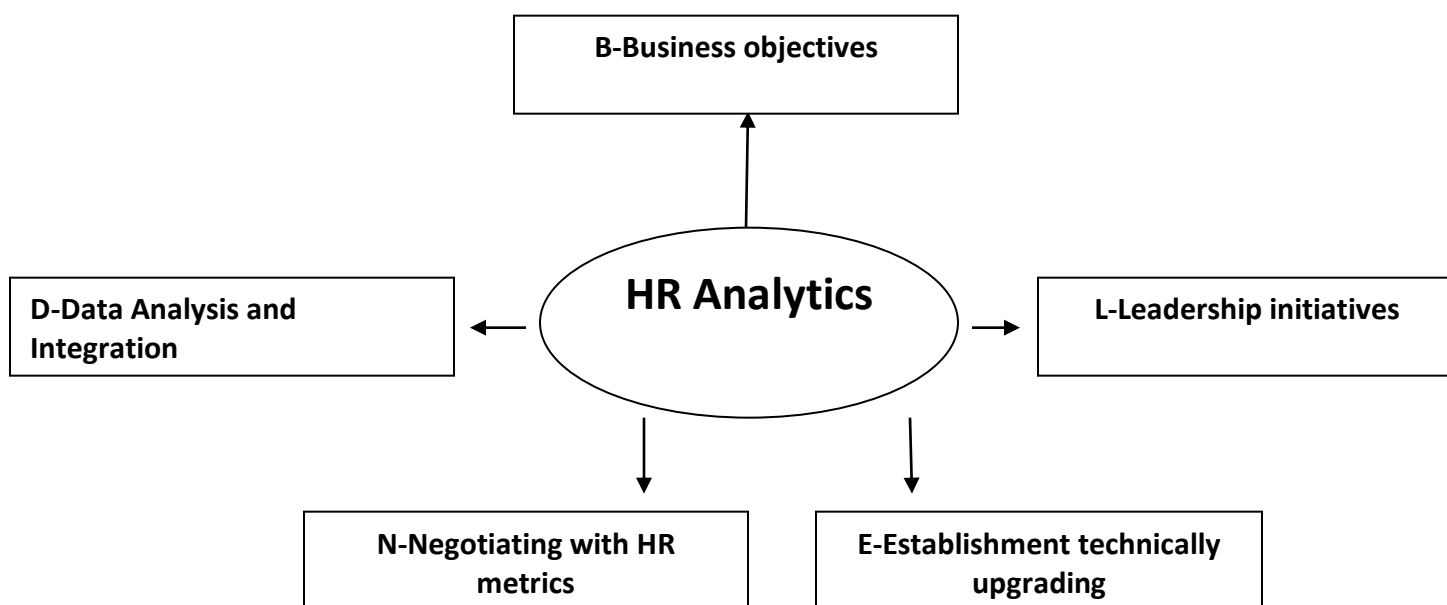
Mayo (2006) identified that HR analytics can be collected from seven types of data i.e. workforce statistics, financial ratios relating to people and productivity, measures of people’s values, measures

of people’s engagement, measures of efficiency of the HR function, measures of effectiveness of people processes and measures of investment in one-off initiatives and programs. Levenson (2011) emphasized that an organisation should have a strong analytic culture which is to be based on decisions at every level to be based on data.

Lije George and T. J. Kamalanabhan (2016) identified the factors that can influence acceptance of analytics in the human resources (HR) function. The factors are categorised into individual factors (Analytical skills, Performance expectancy, Readiness to change, Understand Importance ,Voluntary use ,Opportunities to use), organisational factors (Training, Top management support, Analytical Culture, Organisational size, Vision for using analytics, Data sharing and access, Visionary, Top management influence, Resources ,Availability of data, Business type) and technological factors.

**Model “BLEND”**

Based on the above literature reviews regarding different models and factors designed for HR Analytics , the author has made an attempt to design a model named “BLEND” to support HR analytics . The model “BLEND” evaluate HR analytics in an organisation on five perspectives given as follows:



**Business Objectives-** The Business objectives perspective focuses on whether -1. Business Objectives are considered while framing HR analytics programme. 2. Employees are aware of the business objectives .3. The annual turnover and annual report are transparent to employees.4. Employees views are encouraged while designing Business objectives.5.Business impact of HR programs and process are measured .

**Leadership initiatives-**This perspective determine- 1. leadership development program are considered to drive better business results.2. Managerial span of control affect sales results.3. Analyze the gap by identifying workers with strong leadership qualities and flagging those that

are unlikely to mesh with a company's corporate culture. 4. Analyze the customer satisfaction with leadership styles of employees statistically.

**Establishment technically upgrading** -This perspective deals with whether-1. Technology is highly upgraded to implement HR Analytics.2. Systems and tools are technically developed to manage data from multiple sources.3. HR is ensured to access all required data.4. HRIS is developed with understanding of all business requirements.5. Operating any specific software for HR analytics.

**Negotiating with HR metrics**- This perspective focuses on HR metrics adapted from Dulebohn & Johnson, 2013: (73---74) that is whether organisation is incorporating the different HR metrics in their HR Analytics i.e. Cost per hire , HR expense per employee, Yield ratios, Time to fill the open positions, Absent rate , Expense factor, Profit per employee, Labour cost factor, Human capital value added revenue, Involuntary and voluntary separation, Firm salary/competitor salary ratio, Number and quality of cross-functional teams, Progression of employees through development plans, Percentage of total salary at risk and Demonstrating a relationship between a particular HR metric and other metrics in the organisation.

**Data Analysis and Integration**-This perspective emphasized on whether 1. Data is relevant to Business Objective.2. Using Data on internal employee characteristics and external labour market to run statistical models on drivers of employee turnover.3. Establishing a correlation between data on employees' productivity and organization's productivity.4. Pursuing statistical analysis of data on Return on investment and HR expense.5. Designing a model showing interrelationship of HR data with other data in the organisation.

### **Objectives of the study**

1. To explore the extent to which HR Analytics followed by manufacturing and logistic companies in Sales and Marketing Division in West Bengal based on the model "BLEND".
2. To study whether there exists any difference of HR Analytics in manufacturing and logistics companies in Sales and Marketing Division in West Bengal based on the model "BLEND".

### **Research Methodology**

To test the Model "BLEND" a sample of 22 respondents have been selected comprising of 5 HR executives and HR managers of logistic companies and 17 of manufacturing companies in West Bengal. The five perspectives of "BLEND" has been selected i.e. **Business Objectives, Leadership initiatives, Establishment technically upgrading, Negotiating with HR metrics,**

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**Data Analysis and Integration.** A Questionnaire based on Renesis Likert 5-point Scale is designed on the basis of five perspectives of Model “BLEND” of HR Analytics in Sales and Marketing Division in the above companies. The value of Cronbach’s alpha of the questionnaire is 0.9501 and validity of the questionnaire is tested through content validity. The responses to the questionnaire were collected either at a face-to-face meeting, over email or over the telephone.

**Hypothesis**

H0-There exists no significant difference of HR Analytics perspectives between logistic and manufacturing companies.

HA- There exists significant difference of HR Analytics perspectives between logistic and manufacturing companies.

**Analysis of the data**

The data is analysed by Kruskal – Wallis (or H test) a non-parametric test which is analogous to the one-way analysis of variance. The Test Statics

$$H = \left[ \frac{12}{n(n+1)} \sum_{j=1}^c \frac{T_j^2}{n_j} \right] - 3(n+1)$$

Where n is the total number of participants (all groups combined). Tj is the rank total for each group. nj is the number of participants in each group. The sampling distribution of H can be approximated with a chi-square distribution with (k-1) degrees of freedom.

<i>The Kruskal-Wallis test or H test</i>			
<i>Logistic companies</i>		<i>Manufacturing companies</i>	
<i>Sum of all the ranks</i>	<i>No of respondents</i>	<i>Sum of all the ranks</i>	<i>No of respondents</i>
<i>15</i>	<i>5</i>	<i>238</i>	<i>17</i>
<i>Calculated Value of H=11.087</i>			
<i>Degrees of Freedom=2-1=1</i>			
<i>Tabulated value of H or Chi square at 5% level of significance=3.841</i>			

Since the calculated value of H is greater than Tabulated value of H i.e.  $11.087 > 3.841$ .

So, the null hypothesis is rejected and alternative hypothesis is accepted i.e. There exist significant difference of HR Analytics perspectives between logistic and manufacturing companies based on model “BLEND”

### Percentage Analysis of Data

	Logistic	Manufacturing
<i>Business Objectives</i>	49%	79.53%
<i>Leadership initiatives</i>	57.00%	83.82%
<i>Establishment technically upgrading</i>	60%	80.24%
<i>Negotiating with HR metrics</i>	58.40%	79.61%
<i>Data Analysis and Integration</i>	57.6%	79.29%

The percentage analysis of data revealed that HR analytics of manufacturing companies is ahead of Logistic companies in every aspect.

### Findings

It is summarised from the data that HR Analytics is not a myth in an organisation. It may be at a nascent stage in some of the organisations whereas it is in full-grown stage in other organisations. As per the Model “BLEND” the data analysis revealed that there exists a significant difference of HR analytics perspectives between manufacturing and logistics companies. According to the views of the respondents, 79.53% , 83.82%, 80.24%, 79.61% and 79.29%, in manufacturing companies believe that Business objectives, Leadership initiatives, Establishment Technically upgrading, Negotiating with HR metrics, Data Analysis and Integration is incorporated in their HR Analytics respectively whereas it is of 49% ,57% ,60% ,58.40%, 57.6% in Logistic companies.

### Recommendations.

To quote Rober Bolton ,a KPMG Advisory partner and HR Transformation expert in the UK, “I believe that well thought out predictive HR analytics could become as important to the CEO as the balance sheet and P&L statement.” These lines signifies that to handle the competitiveness in the market every company irrespective of the type of business they handle and type of customer they deal ,HR Analytics is very much important to handle the talent pool. As per my survey it is suggested for the logistic companies that –

1. Number of recruitment of HR executives should be increased so that HR analytics could be done in more systematic and convenient manner.
2. There should be decentralization of power for handing the HR analytics as most of the HR

executives in the Regional office are not aware of all the perspectives of HR analytics followed in their company .

3. Employees should be aware and their views should be encouraged while designing the business objectives.
4. Proper system is to be developed to measure the business impact of HR programs and process.
5. HR metrics should be properly followed while evaluating an employee.

For the manufacturing companies it is suggested that-

1. Induce new HR analytics into the profession of HR experts to enhance their analytical understanding.
2. Top management should thrive more investment on HR Analytics through more evidence –based HR research projects.

### Conclusion

There is a momentum gain in accelerating the HR analytics as most of the CEO's are realizing that human capital considered to be the main source of sustainable economic value (IBM's Fifth Biennial Global CEO Study from 2012). HR analytics should be evolved and go beyond of basic HR functions where it will take an "outside-in" approach so that HR could be part of value chain analysis . HR analytics are a key responsibility for HR Team in an organization for a proactive role in driving business strategy. It not only enhances business performance but also increase employee engagement and satisfaction. It has been rightly said that "No one can predict the future course of the HR profession. No one can predict how HR practices will change in the future. Thinking about the future, however, helps us to prepare for it. Thinking about the future may lead to innovative insights. Thinking about the future may help to change today's HR practices in positive ways." (Ulrich, 1997: 231).

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## Investigating The Social Aging Process Through Data Mining

Raul De\*, Udit Roy\*\*, Prasenjit Kundu \*\*\*, Saptaparna Ghosh \*\*\*\*

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### Abstract

Social aging is the phenomena that today's society faces. We all know that aging is natural and can't be stopped or prevented. But a variety of different factors like economic and cultural problems, Loneliness, low living standards along with social isolation can pose a threat to individual along with the society they live in.

Thus government, the society along with the individual must join hands in order to prevent such issue and also find appropriate solutions to avoid or prevent it from happening. This paper deals with various factors like stress, anxiety, financial condition, education level, how to deal with children of different age group. Clementine software along with Chaid model is used in this paper with data mining approaches.

**Keywords:** Social aging, Clementine Software Data mining

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## Introduction

Due to the drastic technological leap, we are living witness to the drastic ongoing change. Human life patterns are changing due to complex concepts and phenomena. Humans are always thinking about financial growth, physical skill sets, the gap between young and adult, people viewpoint, and expectations from life has been completely changed. This paper focuses on the psychological and personal requirements of individuals to find a link in behavioral patterns.

This paper plays a crucial role in improving life satisfaction, living standards along behavioral patterns thus generally reducing the aging process

## Literature review

The roots of social aging theory can be traced back to the post-war era. Social aging emerged as an interdisciplinary discipline during that period (Phillipson, 1998). The need for this social aging theory was born because of the government interference to achieve specific outcomes in health and social policies for the senior citizens and to achieve an equilibrium between the socio-politic and economic environment (Mirmozaffari, 2018). Using expert medical techniques in modern computers could help to determine and diagnose different disease and counter them effectively.

## Methodology

There are generally three unique criteria for measuring age.

1. Chronological age – Measures an individual's age from their birth to the present. Interviewees were met in a poll was first arranged, and in light of the inquiries gathered in this survey
2. Physiological age – Measures an individual's age based on the side effects due to the diseases they suffered over time and with physiology [Mirzapour,2020].
3. Mental age- Measures an individual's age based on the mental, emotional, and expressive state of mind. The World Health Organization categorizes life after adolescence according to chronological age.
  - a. Middle age: From age 35 to age 59.
  - b. The elderly: From age 06 to age 47.
  - c. Old: From age 75 to age 90.
  - d. Very Old: 90 or older.

Premature aging occurs when an individual exhibits the signs and symptoms of old age before

the age of 60 years. Various factors like stress, economic and financial problems, violence, etc. contribute significantly to the aging process. [Mirzapour,2020].

### **Problem definition**

The issue of social aging is the core problem in this paper which is being faced by the societies at large and various studies are centered around it.

### **Proposed Operational Model**

In this proposed model different information mining measure tasks including information assortment, information arrangement, preprocessing, and the use of different information mining calculations are performed. Then, the proposed model is the Chiad model. At the information assortment stage, the data expected to execute the undertaking is gathered through meetings with the objective of a network test. interviewees were met in four distinct sets and the results were introduced in an SPSS record.

At long last, the accompanying four sets are examined:

- a. Set 1: This part is the biggest number of interviewees which was around 1602, including youthful and moderately aged individuals, who were met by the arbitrary choice of family unit phone numbers.
- b. Set 2: It included 689 people 65 years and more established.
- c. Set 3: It included 552 from a progression of grown-ups.
- d. Set 4: It included 72 African Americans just as 54 older from Latin America and Spain.

In the information preprocessing step, information credits were characterized also, after information arrangement, different information mining models were used to look at the information by utilizing Clementine programming. One of the models utilized is the Chaid model, which is a model of choice

### **Results**

In this examination, the yield field analyses how individuals feel about their age. The anticipated qualities for responding to this inquiry incorporate three after alternatives:

- a. Choice 1: They feel more youthful.
- b. Choice 2: They feel more seasoned.
- c. Alternative 1: They feel to be a similar age.

In light of the previously mentioned choices, the accompanying outcomes have been acquired

from the assessment

**Table 1:** Results that obtained from evaluation

<b>Options</b>	<b>Percent</b>
They feel younger	<b>% 52/4</b>
They feel older	<b>%7</b>
They feel to be the same age	<b>% 35/7</b>
They did not respond or refused	<b>%4/7</b>

Source: (Mirzapour, 2020)

The principal layer of this tree, which is situated after the primary hub, depended on Field K10 and because of the topic of how old you feel. At this level, respondents were sorted by age bunches under 35 years, between 35 to 45 years, between 45 to 59 years, between 59 to 80 years, and more than 80 years. At last, in all age bunches over 75% of respondents felt more youthful than their genuine age.

The following degree of the tree was shaped dependent on field K8. This field asks the respondents their genuine age. At this level, a great many people between the ages of 26 and 45 announced themselves more youthful and those under 26 proclaimed themselves more seasoned than the real level. At this level, age bunches somewhere in the range of 45 and 59 years were approached to react to the accompanying Field 13 inquiry: Do you figure you shouldn't work when you get more established? Over 95% of the individuals who addressed yes and over 75% of the individuals who addressed no said they were more youthful than their real age. In the interim, the age gathering of over 59 years was asked to answer the accompanying inquiry: Do you figure you will have less pressure when you get more established? The majority of individuals didn't respond to this inquiry. Individuals more than 80 were additionally posed the accompanying inquiry: Do you feel more seasoned than you are? A great many people feel to be more youthful.

### **Conclusion**

At long last, about a portion of individuals felt more youthful and the other half felt a similar age. Sociological and mental considers permit governments and authorities to look at the network. In doing as such, they can anticipate the future by contemplating the current circumstance. Clearly, in a general public where individuals feel youthful and cheerful, profitability and proficiency, portability and elements can be a lot higher than in other social orders. Higher profitability can drastically build the advancement and greatness of social orders.

Governments ought to think about proper projects to improve expectations for everyday

comforts, increment future, and advance network work process by looking at the status of society.

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## **Data Mining: An Emerging Approach towards Business Decision Making**

\*Puja Dutta, \*\*Prasenjit Kundu

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### **Abstract**

Data mining is a field of computer science. The process of extracting information to identify patterns, trends, and useful data that would allow the business to take the data-driven decision from huge sets of data is called Data Mining. Data mining utilizes complex mathematical algorithms for data segments and evaluates the probability of future events. Data Mining is also called Knowledge Discovery of Data (KDD). It finds out specific data from a long data set. The paper discusses about is data mining, process, techniques, algorithms, applications which are adopting by business enterprises round the globe for better decision making.

**Keywords:** Data Mining, Data Driven Decision, KDD, Business Enterprise

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## **Introduction**

The process of digging through data to discover hidden connections and predict future trends has a long history (Agrawal, Imielinski & Swami, 1993). Sometimes referred to as "knowledge discovery in databases," the term "data mining" wasn't coined until the 1990s. Data Mining is carried using various techniques such as clustering, association, and sequential pattern analysis & decision tree. Data mining is a process of extraction of useful information and patterns from huge data. It is also called as knowledge discovery process, knowledge mining from data, knowledge extraction or data /pattern analysis.

**Data Mining** is a process of finding potentially useful patterns from huge data sets. It is a multi-disciplinary skill that uses machine learning, statistics, and AI to extract information to evaluate future events probability (Parker, 2004).

Three steps involved are

Exploration

Pattern identification

Deployment

### **1. Process:**

**Business understanding:** Understand the project objectives and requirements from a business perspective, and then convert this knowledge into a data mining problem definition and a preliminary plan designed to achieve the objectives.

**Data understanding:** Start by collecting data, then get familiar with the data, to identify data quality problems, to discover first insights into the data, or to detect interesting subsets to form hypotheses about hidden information.

**Data preparation:** Data preparation is the process of cleaning and transforming raw data prior to processing and analysis. It is an important step prior to processing and often involves reformatting data, making corrections to data and the combining of data sets to enrich data.

**Modelling:** various modelling techniques are applied, and usually more types of algorithms are used, with different setup parameters (often with some met approach for optimization of



parameters). Because methods have different formats of inputs and other needs, the previous step of data preparation could be repeated in a small feedback loop.

**Evaluation:** Evaluating the performance of a data mining technique is a fundamental aspect of machine learning. Evaluation measures can differ from model to model, but the most widely used data mining techniques are classification, clustering, and regression.

**Deployment:** The last step in the data mining process is to deploy the models to a production environment. Deployment is important because it makes the models available to users so that you can perform any of the following tasks: Use the models to create predictions and make business decisions.

## 2. Algorithms and Techniques

Various algorithms and techniques like Classification, Clustering, Regression, Artificial Intelligence, Neural Networks, Association Rules, Decision Trees, Genetic Algorithm, Nearest Neighbor method etc., are used for knowledge discovery from databases (Berry & Linoff, 1997).

### *Data cleaning and preparation:*

Data cleaning and preparation is a vital part of the data mining process.

### *Tracking patterns:*

Tracking patterns is a fundamental data mining technique.

### *Classification:*

Classification data mining techniques involve analyzing the various attributes associated with different types of data.

### *Association:*

Association is a data mining technique related to statistics. It indicates that certain data (or events found in data) are linked to other data or data-driven events.

***Outlier detection:***

Outlier detection determines any anomalies in datasets.

***Clustering:***

Clustering is an analytics technique that relies on visual approaches to understanding data.

***Regression:***

Regression techniques are useful for identifying the nature of the relationship between variables in a dataset.

***Prediction:***

Prediction is a very powerful aspect of data mining that represents one of four branches of analytics.

***Sequential patterns:***

This data mining technique focuses on uncovering a series of events that takes place in sequence.

***Decision trees:***

Decision trees are a specific type of predictive model that lets organizations effectively mine data.

***Statistical techniques:***

Statistical techniques are at the core of most analytics involved in the data mining process.

***Visualization:***

Data visualizations are another important element of data mining. They grant users insight into data based on sensory perceptions that people can see.

***Neural networks:***

A neural network is a specific type of machine learning model that is often used with AI and deep learning.

***Data warehousing:***

Data warehousing is an important part of the data mining process. Traditionally, data warehousing involved storing structured data in relational database management systems.

***Long-term memory processing:***

Long term memory processing refers to the ability to analyze data over extended periods of time.

***Machine learning and artificial intelligence:***

Machine learning and artificial intelligence (AI) represent some of the most advanced developments in data mining.

### **3. Applications**

Data mining being a promising emergent technology, already started adapting by multiple industries worldwide as a part of their marketing strategies formulation specially for statistics, pattern recognition, and other important analysis and insights finding. Data mining gaining popularity among many businesses because it provides identification of potential customers, their sentiments (Ghosh, Mukherjee & Kundu, 2021) and insisting for smart marketing decisions making (ORALHAN, Kumru & ORALHAN, 2016).

Financial Analysis. The banking and finance industry relies on high-quality, reliable data.

Telecommunication Industry. Expanding and growing at a fast pace, especially with the advent of the internet.

Intrusion Detection.

Retail Industry.

Higher Education.

Energy Industry.

Spatial Data Mining.

Biological Data Analysis.

The predictive capacity of data mining has changed the design of business strategies. Now, you can understand the present to anticipate the future. These are some examples of data mining in current industry.

**Marketing:** Data mining is used to explore increasingly large databases and to improve market segmentation. By analyzing the relationships between parameters such as customer age, gender, tastes, etc., it is possible to guess their behavior in order to direct personalized loyalty campaigns. Data mining in marketing also predicts which users are likely to unsubscribe from a service, what interests them based on their searches, or what a mailing list should include to achieve a higher response rate.

**Retail:** Supermarkets, for example, use joint purchasing patterns to identify product associations and decide how to place them in the aisles and on the shelves. Data mining also detects which offers are most valued by customers or increase sales at the checkout queue.

**Banking:** Banks use data mining to better understand market risks. It is commonly applied to credit ratings and to intelligent anti-fraud systems to analyze transactions, card transactions, purchasing patterns and customer financial data. Data mining also allows banks to learn more about our online preferences or habits to optimize the return on their marketing campaigns, study the performance of sales channels or manage regulatory compliance obligations.

**Medicine:** Data mining enables more accurate diagnostics. Having all of the patient's information, such as medical records, physical examinations, and treatment patterns, allows more effective treatments to be prescribed. It also enables more effective, efficient and cost-effective management of health resources by identifying risks, predicting illnesses in certain segments of the population or forecasting the length of hospital admission. Detecting fraud and irregularities, and strengthening ties with patients with an enhanced knowledge of their needs are also advantages of using data mining in medicine.

**Television and radio:** There are networks that apply real time data mining to measure their online television (IPTV) and radio audiences. These systems collect and analyses, on the fly, anonymous information from channel views, broadcasts and programming. Data mining allows networks to make personalized recommendations to radio listeners and TV viewers, as well as get to know their interests and activities in real time and better understand their behavior (Pawar & Naranje, 2016). Networks also gain valuable knowledge for their advertisers, who use this data to target their potential customers more accurately.

**CRM:** Customer Relationship Management is all about acquiring and retaining customers, also improving customers' loyalty and implementing customer focused strategies. To maintain a proper relationship with a customer a business need to collect data and analyze the information. This is where data mining plays its part. With data mining technologies the collected data can be used for analysis. Instead of being confused where to focus to retain customer, the seekers for the solution get filtered results.

**Fraud Detection:** Billions of dollars have been lost to the action of frauds. Traditional methods of fraud detection are time consuming and complex. Data mining aids in providing meaningful patterns and turning data into information. Any information that is valid and useful is knowledge. A perfect fraud detection system should protect information of all the users. A supervised method includes collection of sample records. These records are classified fraudulent or non-fraudulent. A model is built using this data and the algorithm is made to identify whether the record is fraudulent or not.

**Intrusion Detection:** Any action that will compromise the integrity and confidentiality of a resource is an intrusion. The defensive measures to avoid an intrusion includes user authentication, avoid programming errors, and information protection. Data mining can help improve intrusion detection by adding a level of focus to anomaly detection. It helps an analyst to distinguish an activity from common everyday network activity. Data mining also helps extract data which is more relevant to the problem.

**Lie Detection:** Apprehending a criminal is easy whereas bringing out the truth from him is difficult. Law enforcement can use mining techniques to investigate crimes, monitor communication of suspected terrorists. This field includes text mining also. This process seeks to find meaningful patterns in data which is usually unstructured text. The data samples collected from previous investigations are compared and a model for lie detection is created. With this model processes can be created according to the necessity.

**Customer Segmentation:** Traditional market research may help us to segment customers but data mining goes in deep and increases market effectiveness. Data mining aids in aligning the customers into a distinct segment and can tailor the needs according to the customers. Market is always about retaining the customers. Data mining allows to find a segment of customers

based on vulnerability and the business could offer them with special offers and enhance satisfaction.

#### **4. Conclusion**

Data mining has wide application domain almost in every industry where the data is generated that's why data mining is considered one of the most important frontiers in database and information systems and one of the most promising interdisciplinary developments in Information Technology. Semantics to improve taxonomies and reasoning about data and text. The need to develop new tools to incorporate ad hoc data as seamlessly and effectively as possible.

Finally, it is noted that data can also go beyond numerical and text data. One important type of data is images. The mining of images is quite established in some fields such as medical science (e.g., in the detection and interpretation of patterns in MRI scans) and biometrics/security (e.g., in the identification of faces as well as objects posing threats). The power of data mining will be greatly enhanced if the mining of all types of data (numerical, text, web/internet and image) can be integrated.

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## A Roadmap Towards Predictive HR Analytics

\*Piya Majumder, \*\*Sayani Mukherjee, \*\*\*Prasenjit Kundu

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### Abstract

The incorporation of Human Resource (HR) analytics by modern day organizations is turning out to be a progressive manoeuvre for gathering, deciphering and estimating organizational data relating to HR. HR analytics takes a holistic approach which enables not only collection, interpretation and measurement of data by using various statistical methods but also involves data forecasting. HR analytics acts as a tool for edifying well approximated solutions to complex organizational problems. HR analytics helps a company to achieve its competitive edge by formulating a productive and dynamic HR strategy in perfect synchronization with the overall business strategy of the company thereby helping it to take explicit and meticulous decisions. HR analytics has through its Business Intelligence, set of theories, methodologies, architecture, transcription of raw data into meaningful data has ushered an evolution for HR Professionals across all levels and made analytical literacy the need of the hour for achieving the corporate goals of the organization as well as improve the overall organizational performance optimally. This paper aims to find out the benefits firms would experience as an outcome of implementing and using HR analytics in contrast to using traditional HRIS for maintaining transparency in workforce information, data driven decision making and empowering Learning and development within the organization

Keywords: Human Resource Analytics, Business Strategies, HRIS

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## **Introduction**

HR Analytics demonstrates or predicts the direct impact of people data on business outcomes (George & Kamalanabhan, 2016). Leading-edge companies are predominantly and progressively embracing sophisticated and futuristic approaches of scrutinizing and interpreting employee data to magnify their competitive advantage manifold. The corporate giants like Google and others need to ensure the highest productivity, engagement, and retention of top talent, and then replicating their successes. Hr Analytics is the only way by which we will be able to forecast how much better performance we expect from our top employees—who are perhaps our greatest asset and our largest expense—we'll do well to favouring analytics over our gut instincts.

## **Background**

Data are the new bacon of enterprise business. But as it was difficult in collecting and analyzing HR data and also the existing HRIS systems unable to satisfy the business need. The previous research also evidence to invest in human capital (Fred & Kinange, 2015) as the HRIS suggested. Also, in 2009 Google worked on finding out the best competent traits that are needed to be an effective manager and doing this Google developed “Project Oxygen” which caused a prodigious transition from traditional HR measurements to HR analytics. Google too pointed out the perks of using HR analytics in ameliorating organizational performances. Thou, HRIS has many great features but as HRIS workflow (Achary, 2018) is based on hard-coded business rules therefore industries are in favour of HR analytics which are based on statistical modelling and machine learning for better connect HR need.

## **Our Approach through Case study and Data analysis**

HR analytics has been presenting high quality predictive data for risk minimization and profit maximisation which even the best of traditional HRIS has failed to present. Since HR analytics is data driven approach therefore it is less judgemental and leans more towards decision making and gives insight for gamut of HR operations like Recruitment, sometimes regarding Retention and Attrition analysis, Performance Management, Training and Development, Compensation and the other Benefits Management and overall organizational effectiveness and its



deliverables. The crux of HR analytics is HR metrics which is a testimony that analytics is not just about numbers but it is more about astute logic and appropriate reasoning.

A quintessential HR Analytics System compiles employee data from HRIS, business performance records within a Data Warehouse, administers big data, statistical analysis and data mining techniques to analyse and interpret hidden data patterns, relations, probabilities and forecasting. A Data Warehousing System is concerned with the collection of data, analysis of the collected data, transformation and transposition and preserving data on numerous databases.

As per our studies and analysis (Pratik, 2020; Vulpen, 2019; Mohammed & Quddus, 2019) there are multiple number of cases where the aptly executed application of HR Analytics triggered the company's vision and mission forecasting much more accurate and reliable like the below mentioned cases.

- Cognizant's a U.S.-based professional services firm with many employees in India, analyzed social media contributions, particularly blogs. It found that bloggers were more engaged and satisfied than others and performed about 10% better, on average. Their analytics clearly revealed that employees who blogged were more engaged and satisfied.
- IBM, where turnover was high for certain business-critical roles. Using IBM's Watson machine learning capabilities, the workforce analytics team build an algorithm that included sources like recruitment data, tenure, promotion history, performance, role, salary, location, job role, and more. The company likewise incorporated employee sentiment too, estimated with the aid of their Social Pulse. The hypothesis here was that engagement with social media might fall when employees are thinking about leaving. The investment yielded \$ 300,000,000 over four years and turnover for critical roles has fallen by 25%. As far as the findings reveal, there was a boost in productivity observed while recruitment costs were reported to decline too.

### **Gap of the study**

The main limitations of the following research transcendently focus on the availability and accessibility of literature in the area. There are scopes for existing literature to be substantiated with more case studies of predictive analytics and in-depth organizational studies to ascertain the best roadmap is predicted.

### **Future Scope**

We are hopeful that future research in this direction will opens many avenues in the area of Human Resource Analytics and will address the aforesaid issues. We are waiting for the era where each of the basic or advanced HR operations including planning, staffing, performance analysis will fully automated and govern by HR analytics and traditional HRIS operations will reach to its extent heights.

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## Research Study on Talent Retention in Pharmaceutical Organisations of India

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### Abstract

Pharmaceutical industry, being highly organised and knowledge oriented, requires individuals who are highly skilled and talented. Loss of one employee may affect the organisation negatively. One of the major problems faced by pharmaceutical sector is that of increasing attrition rate. After Information Technology (IT), pharmaceutical sector is dealing with highest level of attrition. Attrition is understood as the function of demand and supply. There is a huge demand for qualified/skilled employees in the pharmaceutical sector and globalisation has made this demand even grimmer. To survive in this competitive market, organisations have to manage their talent, talent management is now on the horizon. Talent management ensures right person in right job at right time. It is important for organisations to understand that keeping employees happy and engaged leads to competitive advantage for the organisation in global arena.

In the present scenario this study has been undertaken to articulate factors related to employee retention in pharmaceutical industry, as this sector has not been studied in relation with talent retention in detail. This study investigates relationship between HR policies, compensation – benefits and work pressure with talent retention in pharmaceutical organisations. Pearsons Correlation is used to find out relationship between variables. The results show that fair compensation, policies which are employee supportive and encourages professional development plays important role in talent retention.

**Keywords:** Talent retention, Compensation & Benefits, Work pressure, HR policies, pharmaceutical industry.

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## **Introduction**

Retaining top talent is the primary concern for organisations in the era of globalisation. Latest trends direct towards an impending shortage of highly skilled employees who have requisite skills, knowledge and ability to perform with high standards. Retention is a crucial element of talent management strategy of the organisations who aim for high productivity by developing best practices of attracting, developing, retaining and utilising talent with requisite skill sets necessary to meet business objectives.

Effective employee retention is an organised effort of organisations to build and nurture an environment that is encouraging for employees to remain for a longer tenure with the organisation. This is possible when policies and practices are well in place that takes care of their diverse needs.

Another concern of employee turnover is the associated cost which includes hiring and training cost and loss in productivity. According to the Karen E. Timberlake (referred as Timberlake) in website of Workforce Planning for Wisconsin State Government, 2009, replacement costs usually are 2.5 times the salary of the individual. The cost linked with turnover may also include lost customers and business and damaged morale of the employees in the organisation. The hard costs of time spent in screening, verifying credentials, references, interviewing, hiring and training the new employees has to be borne by the organisation. (Timberlake, 2009)

The Indian pharmaceutical industry is the most respected amongst the emerging nations and currently it tops the chart amongst India's science – based industries with wide ranging capabilities in the complex field of drug manufacture and technology. It is a highly organised sector and is growing at an annual rate of 8 – 9 % and ranked very high in terms of technology, quality and the vast range of medicines that are manufactured ranging from simple headache pills, sophisticated antibiotics and complex cardiac compounds. (LLP & Associates, 2014)

Pharmaceutical sector in India comprises of more than 20,000 registered units that meets 70% of country's demands of bulk drugs, drug intermediates, pharmaceutical formulations, chemicals, tablets, capsules, orals and injectable. There are about 250 large units and around 8000 small scale units that forms the core in the sector. 45% of total units in India are located in Maharashtra and Gujarat region. (LLP & Associates, 2014)

The sector which was only \$ 6 billion in 2005 has shot up to \$18 billion in 2012, with a CAGR of 17%. The sector is expected to grow upto \$ 45 billion by 2020, as per Kapil Bhatia (referred as Bhatia) in Pharmabiz(Bhatia, 2015). The Indian pharmaceutical sector is at the threshold of

exponential growth. It is believed that Indian pharmaceutical market will be amongst the top three global markets in terms of incremental growth by 2020. Pharmaceutical sector is expected to be top employment provider in India with not only hiring people from healthcare but also other sectors for diversified functions. (LLP & Associates, 2014)

In today's competitive market scenario of pharmaceutical industry talent management is at the highest priority. Talented human resource is required to tap and manage increasing demands of market and to hold the market position. Thus, need of the hour is to attract, retain and assist talented individuals to enrich their skills for the growth and success of the organisation.

Pharmaceutical industry, being highly organised and knowledge oriented, requires individuals who are highly skilled and talented. Loss of one employee may affect the organisation negatively. One of the major problems faced by pharmaceutical sector is that of increasing attrition rate. After Information Technology (IT), pharmaceutical sector is dealing with highest level of attrition. The fastest growing knowledge-based sector suffers an annual attrition rate of 30 – 35 %, according to a recent survey by Interlink Marketing Consultancy (Unnikrishnan, 2015).

Globally, the rate of attrition in pharmaceutical sector is found to be only 10 – 12%, the attrition rate at field level is around 30 – 40% and 8 – 10% at managerial level annually. It is important for organisations to understand that keeping employees happy and engaged leads to competitive advantage for the organisation in global arena. (Unnikrishnan, 2015)

Pharmaceutical industry is undergoing a turbulent phase where war for talent has begun. Because of globalisation, tremendous opportunities are available and due to lack of talented employees, organisations are facing never before attrition problem. This study is focused towards understanding the reasons of turnover in the industry and to understand relation between various retention factors that organisations can adopt to retain its valuable talent. Loss of a talented employee can cost an organisation huge amount which can be detrimental for its growth in domestic as well as global arena.

The research questions that researcher aimed to answer were:

- ▶ To explore factors that could be responsible for employee turnover
- ▶ To identify factors that lead to talent retention

The data was collected with the help of structured questionnaire where respondents had to give their opinion from strongly disagree to strongly agree. To analyse the results quantitative

technique of Correlation has been adopted to understand strength of linear relationship between variables.

The results of the study indicate that employee retention is reliant on factors such as fair compensation, work load, encouragement related to professional development and employee supportive policies that hold strong positive correlation. Interestingly, work load distribution and reasonable completion time are negatively correlated to intent of employee to seek job somewhere else.

### **Review of Literature**

Organisations are able to maintain a competitive advantage in domestic and global arena because of their employees. It is of utmost importance for organisations to be able to retain talented employee for a longer period of time. Talent retention is a critical component of talent management strategy of the organisation. Research has been carried out on this construct by various researchers and they have given their findings, suggesting relationships between variables that lead to employee retention.

One of the initial researches has been carried out by James March and Herbert Simon (1958), (referred as March & Simon) who has contributed Theory of Organisational Equilibrium where they have tried to understand reasons for employee movement and have proposed that desirability and ease of movement are the two factors of employee turnover. Desirability implies employee's satisfaction level in the organisation and ease of movement is the availability of alternative jobs in the market. From talent retention point of view employees will stay in the organisation when they are satisfied and less alternatives are available for them in the market (March & Simon, 1958).

After March and Simon, R.M. Porter and L.W. Steers (1973) (referred as Porter & Steers) introduced aspect of personal and professional reasons responsible for employees to stay in the organisation or to leave it. They have explained about several intentions of employees to stay, such as, extrinsic rewards which includes pay and other benefits, growth opportunity, non-work influences such as family responsibility, as motives to stay with the organisation and when they find these benefits outside the organisation they tend to leave the existing organisation. (Porter & Steers, 1973).

J.L. Price and C.W. Mueller (1981) (referred as Price & Mueller) came up with new model that included many factors from previous research but they introduced new elements as well. Elements of previous research which they included were job satisfaction and perceived alternatives and considered them as closely related to employee retention and considered pay, promotional opportunities and organisational commitment as distal reasons for employee retention. (Price & Mueller, 1981)

Fitz-enz (1990) also recognises that employee retention is not related to a single or any particular factor but it is a combination of various factors. Management must pay attention and take into consideration important elements such as compensation and rewards, job security, training and development, support of supervisors, work environment and organisational justice. These elements are considered as determinants of employee retention in an organisation. (Fitz-enz, 1990).

According to J.W. Walker (2001) (referred as Walker), who has contributed seven factors towards employee retention in an organisation, challenging work, compensation and performance benefits, opportunities to learn and grow, strong work relationships, recognition of efforts, performance and capabilities, balance in work and personal life, effective communication are the elements which enhance the possibilities of employee retention (Walker, 2001).

There has been research which included single elements of the above-mentioned retention drivers to understand its impact and importance for employee retention in the organisation. As per D.G. Gardner et al (2004) salary / pay acts as a motivator for employee performance and in return increases employee retention rate in the organisation. (Gardner, Dyne, & Pierce, 2004). George Milkovich and Jerry Newman (2004) (referred as Milkovich & Newman) stated, in their book titled 'Compensation' that out of all the rewards extended to employees monetary/financial reward is the most important and strongest retention driver in an organisation. (Milkovich & Newman, 2004).

Margaret Deery (2008) (referred as Deery) mentions that to increase employee retention it is important that organisations should provide flexible work hours, on the job training, health and

insurance benefits, other perks like gym, health centres, rewarding employees for task completion not only on time but also efficiently. (Deery, 2008)

Eva Kyndt, Filip Dochy et al (2009) has brought in a factor called work pressure which is related to talent retention inversely. If work pressure increases it is most likely that employee would leave. There are very less chances of employee retention in the organisation.(Kyndt, Dochy, Michielsen, & Moeyaert, 2009)

Research has been carried out on factors related to HR policies such as job security aspect, flexible working hours, grievance redressal etc. As per James Abegglen's (1958) (referred as Abegglen) research conducted on Japanese workers, regarding organisational policy of lifetime employment and seniority system in organisation. Job security leads to high commitment as well as retention of employees in the organisation. (Abegglen, 1958). Another study of Susan Ashford et al (1989) where they used a new theory-based model and that of Jaenette Davy et al (1991) on job security aspect found out that dissatisfaction in job arises mainly due to lack of job security.(Ashford, Lee, & Bobko, 1989), (Davy, Kinicki, & Scheck, 1991). Study of construct of flexitiming was done by B.B. Baltes et al, and D.R. Dalton and D.J. Mesch (referred as Dalton & Mesch) the study brings out the concept that organisations offer employees flexible work arrangements to accommodate their personal preferences to carry out their duties, flexitime and compressed workweek schedule helped organisations to reduce absenteeism also employee tussle between work schedule and personal engagements to be attended to, this resulted in better employee retention.(Baltes, Briggs, Huff, Wright, & Neuman, 1999)(Dalton & Mesch, 1990).

It is important for organisations to understand the benefits of talent retention for their future perspectives. Without the best talent, organisations would not be able to survive in this competitive world. Losing a talented employee would mean a severe cost that the organisation would have to bear. This not only includes advertisement, recruitment, selection, orientation and training costs but also decreased productivity till the time new employee gets the hands onto the job he has to perform. There are instances of losing an employee to a competitor and with that the risk of losing the important organisation information and strategies.



There are various benefits organisation can fetch by retaining the talent –

Source: Houston Chronicle (Sherrie Scott 2008) referred as (Scott 2008)

1. **Cost Effectiveness:** An organisation can certainly be benefitted by retaining the talent for a longer duration as it ensures a strong and safe bottom line of the organisation. Organisations geared towards retaining talent helps equipose employee replacement costs and reduce indirect costs such as decreased productivity.
2. **Maintain Performance and Productivity:** Employee retention helps to maintain organisation's productivity. Recruiting and training of employees takes time and a vacancy in the organisation indicates that the work is not being done. There is a learning curve for every new recruitment in the organisation before it becomes profitable for the organisation. Retaining the present talent will ensure productivity is not interrupted.
3. **Enhanced Recruitment:** Effectiveness of retention strategy starts from the process of recruitment. Employees are more likely to stay with the organisations who provide a clear picture of their corporate environment, advancement opportunities for employees and job expectations. Talent will certainly remain with the organisations who fulfil the promises made at the time of extending the job offer.
4. **Increased Morale:** Employees who enjoy what they do and the atmosphere in which they work are more likely to stay with the organisation. Retention strategies are important because they help build a positive environment at work place and strengthen employee commitment towards organisation. Organisations engaged in activities like team – building and community involvement, increases morale in the organisation and develops a sense of pride in the employees.(Scott, 2008)

Some more factors that could be beneficial for organisations include:

Source: Nobscot Corporation

1. **Be able to avoid loss of organisation knowledge:** When employee leaves an organisation there is a robust possibility that he carries with him valuable information about organisation's policy, future projects, customer data, may be to a competitor. Organisation has invested a lot in the employee in terms of money and time in order to get ROI in future but it cannot be realised when he leaves the organisation. Retaining an employee would ensure that these losses can be evaded.
2. **Uninterrupted customer service:** Customers and clients do business with any organisation partly because of its people. Customer relationships are developed to

ensure continued business with the clients and customers. Turnover of employee would mean loss in business and at times customer also as new employee takes time to establish the same relations. Retaining employees with the organisation would give assurance of continued business with the existing clients and customers and also increase in new customers.

3. Turnover leads to more turnover can be nullified: When an employee leaves an organisation, other employees have to pick up his work and this results in extra burden on employees. The unspoken negativity intensifies in remaining employees. This needs to be nullified and it is possible with retaining talent in the organisation and ensuring proper distribution of workload. (NobscotCorporation, 2013)

### **Contribution to the Academic Literature**

This present study certainly adds value to the academic literature as not much research has been conducted in pharmaceutical industry pertaining to talent retention. The hypotheses formulated help to establish relationship between factors that are important for talent retention for an organisation. This research highlights the prevailing issues and it is of importance to practitioners as they encounter these issues every day. This research will help organisations to understand relationships between aspects of talent retention like compensation and benefits, work pressure and human resource policies with their organisational policies. It will give them insight about the changes they can incorporate in their policies to increase retention. Talent retention is the key to increased productivity and continued growth. In today's era globalisation has opened doors for infinite opportunities, at the same time for survival organisations need talent and the malpractice of poaching is the biggest threat to them. Talent retention is the only way out of this situation. For talent retention understanding of relationships between retention drivers and organisation policies is important. This research contributes towards this aspect of talent retention.

### **Hypotheses Formulation**

The Hypotheses formed for the current study are derived with the help of literature review and it will bring-forth the current existing scenario in the pharmaceutical sector.

**H1:** There is a significant relationship between employee retention and compensation and benefits extended to employees by organisations in pharmaceutical industry of India.

**H2:** Employee turnover and work pressure are directly and positively related in pharmaceutical industry of India.

**H3:** HR policies of the organisation are also related to employee retention in the organisation, to name a few; job security, growth opportunity, working hours and grievance resolution in pharmaceutical industry of India.

### **Methodology**

This is an attempt to understand the talent retention concern of pharmaceutical industry in India. The methodology adopted for data collection includes primary as well as secondary sources. Primary data has been collected using a structured questionnaire which is shared online with employees in pharmaceutical organisations and they have been asked to mark their opinion/preferences for the questions asked. To collect secondary data print and electronic media has been employed that includes books, journals, reports, websites etc.

### **Sample Size and Sampling Method:**

The target respondents of the present study are employees working in pharmaceutical industry of India. The total sample size taken for this study is 60 and the sampling method used is random sampling technique as the questionnaire was administered using online survey method.

### **Data Analysis Technique:**

To test the hypotheses Correlation is used to describe the linear relationship between two variables. It measures the strength and direction of the linear relationship between two or more variables. The Pearson correlation coefficient measures the strength of the linear association between two or more variables.

A correlation can range in value between -1 to 1. When correlation is greater than 0 then as X (independent variable) increases, Y (dependent variable) also increases and two variables are said to be positively correlated.

If correlation is less than 0, then as X (independent variable) increases, Y (dependent variable) decreases and two variables are said to be negatively correlated.

If correlation is 0, then there is no linear relationship between X (independent variable) and Y (dependent variable). The two variables is said to be uncorrelated.

**Results and Discussion**

The results generated, using SPSS for correlation to understand the relationship between different variables, are discussed below.

Table no. 1 – Relation between Employee intent to stay with organisation and Compensation and Benefits

CORRELATION	FAIR COMPENSATION	RETIREMENT BENEFITS	HEALTH CARE BENEFITS	SALARY HIGHER THAN INDUSTRY AVERAGE
INTENT OF EMPLOYEE TO STAY IN THE ORGANISATION (Dependent Variables)	0.529	0.162	0.212	0.297

\*Correlation values significant at 0.01 level(2tailed)

To appreciate relationship between dependent variable (intent of employee to stay with organisation) and independent variables (fair compensation to all, understanding about retirement and health care benefits and organisation pays higher than industry average) the results of correlation in Table No. 1, suggest that there is a significant correlation (at  $p < 0.001$ ) between fair compensation and intent of employee to stay in the organisation. The Pearson correlation value is 0.529 whereas other correlation report suggests that intent of employee to stay in organisation is not strongly correlated to awareness regarding retirement benefits, healthcare benefits and whether organisation pays higher than the industry. The correlation values for above three variables is 0.162, 0.212 and 0.297 respectively which are not significant either at  $p < 0.001$  level nor  $p < 0.005$ .

Table no. 2

CORRELATION	TOO MANY TASK FOR MY POSITION	REASONABLE WORKLOAD AND COMPLETION TIME	EQUAL DISTRIBUTION OF WORK
THINKING OF SEEKING JOB SOMEWHERE ELSE (Dependent Variable)	0.701	-0.804	-0.598

\*Correlation values significant at 0.01 level (2tailed)

Further it is found in Table No.2, that employees think of seeking job elsewhere is a dependent variable and is strongly correlated to work load (too many tasks for a position) with correlation value of 0.710 (at  $p < 0.001$ ) whereas reasonable workload and completion time along with equal distribution of work are negatively correlated with employees' intent to seek job somewhere else. The correlation values are -0.804 and -0.598 respectively. It implies that employees think of seeking job somewhere else when reasonable workload and completion time and equal distribution of work is not provided.

Table no.3

CORRELATION	ENCOURAGEMENT FOR PROFESSIONAL DEVELOPMENT	POLICIES ARE EMPLOYEE SUPPORTIVE	FLEXIBILITY TOWARDS FAMILY MATTERS	POLICIES ARE CLEARLY ARTICULATED TO EMPLOYEES	EFFECTIVE CONFLICT MANAGEMENT	FINANCIAL SUPPORT FOR PROFESSIONAL DEVELOPMENT	CLEAR PATH FOR CAREER DEVELOPMENT	FLEXITIMINGS TO MANAGE OTHER RESPONSIBILITIES
INTENT OF EMPLOYEE TO STAY WITH THE ORGANISATION	0.661	0.701	0.422	0.452	0.472	0.341	0.235	0.187

\*Correlation values significant at 0.01 level(2tailed)

To find out relationship of human resource policies with intent of employee to stay with organisation, correlation test was run with nine independent variables represented in Table No.3. It was found that policies related to encouragement of professional development and employee supportive policies are strongly correlated with 0.661 and 0.701 correlation values at  $p < 0.001$ . Two of the variables, flexibility towards family matters and policies are clearly articulated to employees, establish moderate relationship with employees' intent to stay with organisation at 0.422 and 0.452 correlation values, at  $p < 0.001$ . The rest of the variables such as effective conflict management, clear path for career development, financial support for professional development, flexi timings to manage other responsibilities are weakly correlated with employees' intent to stay with the organisation.

## **Discussion**

The correlation test was employed to understand the relationship between dependent and independent variables. The results of Table No.1 above show a strong positive relationship between Fair Compensation and intent of employee to stay in the organisation and weak relationship between other independent variables. This indicates that we are not in a position to fully accept H1.

Results of Table No.2 describes the relationship between dependent variable, thinking of seeking job somewhere else and independent variables of Too many tasks for my position, reasonable workload and completion time and Equal distribution of work. A positive correlation can be seen with too many tasks for my position and thinking of seeking job elsewhere. A negative correlation indicates inverse relationship between reasonable workload and completion time and equal distribution of work. When reasonable workload and completion time is given intent of seeking job elsewhere decreases. These results indicate that H2 is accepted.

Similarly, when we go over to Table No.3 it is interpreted that, policies supportive towards employee and encouragement for professional development leads to intent of employees to stay with the organisation and show strong correlation values. Thus, we can say that H3 is accepted. As HR policies lead to talent retention.

### **Scope of the Study**

The scope of the study is that it was conducted in and around city of Ahmedabad in the state of Gujarat only, since Gujarat is considered as hub of pharmaceutical industry and together with Maharashtra has 45% of total industries in the pharmaceutical sector. Turnover of Gujarat pharmaceutical industry was worth USD 7.8 billion in 2013-14. 5,585 manufacturing licenses in the state contributes to 40% of total pharmaceutical production in India. Pharmaceutical industries in the state provides employment to 75,000 people. (Global Pharmaceutical Hub, 2015)

Online questionnaires were circulated and since it was an online survey it was difficult to gauge the authenticity of responses filled in by the respondents.

### **Conclusion**

In today's competitive business environment, organisations who provide flexible and challenging work environment along with employee recognition and reward will be the long-term players and winners. Due to growing employee expectations at all levels, employees look for an improved quality of life and for this they expect better salaries from the organisations. As per the future growth projections, pharmaceutical industry needs to retain its talent in order to remain competitive in the market. Higher retention will ensure better operations and greater productivity, higher morale and lot of cost savings. Hence employee retention is the focus and necessity for the organisations to plan their strategy accordingly.

The analysis of the study helps us to conclude that employees will remain with the organisation when they are fairly compensated, also when organisations have employee supportive and encouraging policies. Work load also plays a critical role in employee retention. When employee is over loaded with work, he intends to seek job somewhere else. Interestingly reasonable workload and completion time along with equal distribution of work is negatively correlated or we can say it is inversely proportionate, with employees' intent to seek job somewhere else. If work load is not reasonable and its not equally distributed then employees' intent to seek job somewhere else increases.

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**Determining Status of Health Seeking Behaviour and Health Care Facilitation across  
Indian States: An Application of TOPSIS Algorithm Technique**

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**Abstract**

**Introduction:** Undoubtedly, the recent outbreak of pandemic has imparted a deeper impact globally as well as on Indian economy. During the COVID-19 pandemic, the necessity of ultimate health care facilitation has been realized. The undermined health facilitation causes serious consequences on the health status of the citizens. Hence at this juncture, there is a need to have a look at the health seeking behaviour and capture a detail insight regarding the health care facilitation provided by Government. The study intends to analyze the status of health seeking behavior among citizens and the related health care facilitation across the Indian States.

**Methodology:** To conduct the study, data has been extracted from National Sample Survey Office (NSSO), 71<sup>st</sup> round, Social Consumption: Health. Total 37,244 interviewed person have been considered for the study, those who are suffering from any illness in last 15 days. To assess the performance of the states in terms of both health seeking behaviour and health care facilitation, the TOPSIS algorithm technique has been used to rank the states in order.

**Result:** Post analyzing the data on various health indicators regarding health care facilitation the states has been ranked using the TOPSIS score. It has been observed that, the states from southern zone viz. Kerala and Tami Nadu are at the top of ranking, whereas States from Northern zone as well as eastern zone viz. Uttar Pradesh, Bihar and Jharkhand are found to be at the bottom of the list. On the other hand, while looking at the health seeking behavior pattern, the states those who are top in the ranking are Kerala, West Bengal and Uttar Pradesh and the states where the health seeking behavior among the people are considerably low are Telangana, Chhattisgarh and Bihar.

**Conclusion:** It has been observed that, although the health seeking behavior in few states are quite good but the health care facilitation seems to be drastically poor such as Uttar Pradesh, similarly in west Bengal the health seeking behaviour among the individual is at the top of the ranking but the health care facilitation seems to be lacking behind. But in Telangana where the state is good at health care facilitation, the health seeking behaviour among the individual seems to be poor in this state. Although Kerala and Tamil Nadu seems to be the exception, since the states are well performing in both the cases, but the situation is exactly opposite for Bihar and Jharkhand since it is performing drastically poor in both the cases. The major reason behind the interstate disparity is the lack of public health care service and poor public health infrastructure along with lack of awareness among the individual which imparted a serious consequence on the health seeking behaviour pattern. Poor public health infrastructure accompanied with shortage of doctors especially in rural India encompasses increased dependence on private health care system, which jeopardize the individual with poor socio-economic condition and ultimately end up with an uncanny health seeking behaviour pattern.

**Keywords: Heath Seeking Behavior, Health Care Facilitation, COVID-19 Pandemic, TOPSIS Algorithm Technique.**

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## **Introduction**

The outbreak of COVID-19 pandemic in the last year has showed the necessity of prioritizing the public goods such as health and education. The pandemic has made all the policy and planning undone addressed towards better health accessibilities in the past few years. The necessity of social distancing has made frontline health workers to set their step back to serve health care accessibility in rural areas. The massive spread of COVID-19 endangers the health care of individuals with several comorbidities. The sufferings of patients affected with corona virus received the priority although the sufferings of those with other illness remained unsettled. With the growing COVID-19 cases and its severity the focus of equal distribution of resources got distracted and the drastic failure of public health infrastructure has come in front with an overburdened diseased beyond its capacity. The unexpected disaster has opened the eye of many to resettle the health care facilitation with an advanced and new paradigm by introducing e-health facilitation, although it requires a monumental reshaping from both the provider and recipient side. At this juncture unprecedentedly health takes the center stage and health care facilitation remains the center of attraction. An ascertain initiative needs to be taken to evaluate the prevalent health care opportunities and the intrinsic behaviour of individual to seek the facility for the purpose of treatment. The study undertaken in this paper intends to determine the present scenario of health care facilitation as well as the intensity of health seeking behaviour among the individuals across the Indian States. The opportunity of this study would generally ascertain a clear picture to what the extent the reshaping is required although the vibrant need is unquestionably visible, but the distribution may not be equal across the states in India.

The National Rural Health Mission in this context was launched with an aim of ensuring equitable health care distribution to all and played a significant role for the betterment of health system. The National Health Mission was one of the greatest initiatives adopted by Government of India in April 2005, with a vision to facilitate a universal health system accommodating wide range of services to address the health needs of the vulnerable section of the society. The overarching National health Mission (NHM) encompasses two submissions namely National Rural Health Mission (NRHM) launched in April 12, 2005 and The National Urban Health Mission (NUHM) launched in May 2013 with the purpose of equitable health acceleration in both rural as well as urban areas. The mission aims at ascertaining candid, affordable and quality health care services at all levels by focusing on decentralized health planning and service delivery to ensure reduction in out-of-pocket expenditure prioritizing the weaker

section of the society. To strengthen the monitoring and evaluation process for the better health outcomes an innovative and advanced support system has been designed namely 'Health Management Information System' to undertake robust and effective tracking at local level.

Health Management Information System (HMIS) is basically a web-based portal launched in October 2008 by government of India to ensure the effective monitoring of the health programmes under National Health Mission and providing key inputs on current health status following the data centric evidence for future policy implication. The emphasis on "Facility based reporting" from April 2011 expanded the outreach of monitoring and warranted an extensive coverage of public health facilities. At present 672 districts are reporting facility wise data while few such as Brihan, Mumbai and Kolkata are uploading district consolidated figure on the HMIS web portal. The HMIS portal is envisaged as a "Singal Window" for the accessibility of all public health data and also liable to capture public health data from both public and private institutions in rural and urban areas across the country.

HMIS comprises various health indicators in broad group consisting of various sub-groups possessing number of indicators. The four broad indicators are namely; Family Health (21 indicators), Disease Prevention and Control (47 indicators), Resources (28 indicators), Health Systems (12 indicators). The broad group family health consists of three subgroups: Reproductive Health (12 indicators), Child Health (3 indicators), Expanded Programme on Immunization (EPI) (6 indicators). Likewise, the other three broad groups also consist of various subgroups. The subgroups further contains indicators such as Ante natal care, Maternal and child health, Family planning, population control, Immunization and others. With wide range of Indicators, HMIS contains both supply side and service delivery related information.

Health Management information System (HMIS) comes out as a unique feature of accessing real time data and easy accessibility of data with minimal data storage cost. It even reduces the manual intervention and the cost accordingly. The frequency of data accessibility in monthly or quarterly basis makes the portal lucrative enough to fulfil the aim of better health system in near future. It helps decision makers to detect and control the emerging and endemic health problems. Previously majority of the health sector data flows from the various health institutions in rural health infrastructure on paper form, but the introduction of HMIS can be proved as a revolutionary step to ensure the digitalized form of data flow for updated data accessibility. HMIS could eradicate the delay in reporting and sending timely feedback to the

data source. It will mostly facilitate the policy makers to get the real time data for the purpose of assessing and adopt a correct course of action. Although several concerns have been raised regarding the data quality and adequate integration of the HMIS, but a number of attempts such as training of the stakeholders have been undertaken to polish the web portal to bridge the gap of data convergence.

Considering all the given facts, it became inevitable at this juncture of time to have a relook on the aspect that, even after 15 years of introduction of National rural Health Mission, to what extend states are successful as a provider of health care facilitation. Along with that, the assessment of health seeking behaviour among the individual across the Indian States have also grabbed its own importance, since increase in awareness and improved tenacity of seeking treatment became a compulsion due to the emergence of pandemic. To successfully acclaim the assessment of the states the study has undertaken two objectives to fulfil.

### **Objective**

The objective of the study is mainly to help the policy makers to strengthen the policy initiates and practices for enhancing the health care facilitation among the rural masses. To fulfil the broader objective the underlying specific objective has been undertaken.

1. To highlight the status of health seeking behavior among citizens and the associated health care facilitation across Indian States.
2. To study the major challenges associated with health seeking behavior and health care facilitation across the states in India.

### **Data and Methodology**

While looking at the opportunities and challenges associated with health seeking behavior and health care facilitation, the first objective basically deals with the opportunity aspect, where it focuses on the present status of states across India on their health seeking behavior as well as health care facilitation. To proceed with the assessment of health seeking behavior among the individual, data has been extracted from National Sample Survey Office (NSSO), 71<sup>st</sup> round social consumption on health. The study has undertaken 37,244 sample of individual for the assessment of their health seeking behavior who has been self-reported their sufferings from any illness in last 15 days from the date of survey all over India. The variable defined for the assessment of health seeking behavior are a) Treatment taken for illness 2) Treatment taken on medical advice 3) Treatment taken on medical advice over public hospital 4) Treatment taken

on medical advice where the nature of treatment being allopathy 5) Treatment availed by opting health insurance. The defined variables have been depicted in details in Table 1 as given below.

**Table 1: Health seeking behaviour pattern of the respondents for spells of ailment in last 15 days**

Health seeking behaviour pattern	% of individual seeking treatment for spell of ailment	
	Frequency	Percentage
<b>Treatment taken for illness (n=37,244)</b>		
Yes	36,162	97.09
No	1,082	2.91
<b>Treatment taken on medical advice (n=36,162)</b>		
Yes	32,734	90.52
No	3,428	9.48
<b>Treatment taken on medical advice over level of care (n=32,734)</b>		
HSC/ANM/ASHA/AWW	646	1.97
PHC/dispensary/CHC/mobile medical unit	2,133	6.52
Public Hospital	6,328	19.33
Private Doctor/Clinic	14,068	42.98
Private Hospital	9,559	29.2
<b>Treatment taken on medical advice over nature of treatment (n=36,162)</b>		
Allopathy	34,098	94.29
Indian system of medicine (desi dawai: ayurveda, unani or siddha)	990	2.74
Homoeopathy	832	2.30
Yoga & Naturopathy	97	0.27
Other	145	0.40
<b>Availing health insurance for treatment (n=37,244)</b>		
Yes	4,746	12.74
No	32,498	87.26

*Source: National Sample Survey Office (NSSO), 71st round, Social consumption: Health*

The assessment of the performance of the states on the health seeking behaviour among their individual has been done using TOPSIS algorithm technique based on the defined variables. An application of TOPSIS algorithm technique assigns a certain score for each of the States based on its calculation and the ranking has been done based on the TOPSIS score. The beauty of TOPSIS technique is the best alternative should have the shortest distance i.e the Euclidean distance from the ideal solution. Now while dealing with the situation where the performance of the States would be ranked based on the five above mentioned criteria, the TOPSIS (The Technique for Order of Preference by Similarity to Ideal Solution) algorithm technique follows few steps to reach the solution.

**Topsis algorithm technique**

**Step 1: Vector Normalization: Formulation of Normalized decision matrix**

The normalized decision matrix is formulated by dividing the raw criteria value by the square root of the squared summation of raw criteria value of each criteria. The normalized decision matrix is denoted by  $(r_{ij})$  and the formula is as follows:

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{j=1}^n x_{ij}^2}} \text{ where, } i = 1, 2, \dots, m, \quad j = 1, 2, \dots, n$$

**Step 2: Formulation of Weighted Normalized decision matrix**

The formulation of weighted normalized matrix ( $t_{ij}$ ) encompasses the multiplication of assigned weights ( $w_j$ ) with normalized performance value ( $r_{ij}$ ) of each criteria. The weighted decision matrix is denoted by ( $t_{ij}$ ) and the formula is as follows:

$$t_{ij} = r_{ij} \times w_j \text{ where, } i = 1, 2, \dots, m, \quad j = 1, 2, \dots, n, \quad \sum_{j=1}^n w_j = 1$$

*Note: In this study equal weight has been assigned to each criteria determining health seeking behaviour.*

**Step 3: Determining ideal best and ideal worst solution**

The determination of ideal best and ideal worst solution entails the selection of maximum weighted normalized performance value of each criteria as an ideal best solution if the criteria is a beneficial criteria, if the criteria is a non-beneficial criteria then the minimum weighted normalized performance value of that criteria would be considered as an ideal best solution. Similarly in case of beneficial criteria the ideal worst solution would be the minimum value of weighted normalized performance value of that criteria, otherwise in case of non-beneficial criteria the maximum weighted normalized performance value would be ideal worst of that criteria.

$$V_j^- = \{(\max (t_{ij} | i = 1, 2, \dots, m) | j \in J_-), (\min (t_{ij} | i = 1, 2, \dots, m) | j \in J_+)\} \equiv \{t_{wj} | j = 1, 2, \dots, n\},$$

$$V_j^+ = \{(\min (t_{ij} | i = 1, 2, \dots, m) | j \in J_-), (\max (t_{ij} | i = 1, 2, \dots, m) | j \in J_+)\} \equiv \{t_{bj} | j = 1, 2, \dots, n\},$$

Where,

$$V_j^+ = \text{Ideal Best solution } (t_{bj})$$

$$V_j^- = \text{Ideal worst solution } (t_{wj})$$

$J_+$  = Beneficial criteria or criteria having positive impact

$J_-$  = Non beneficial criteria or criteria having negative impact

**Step 4: Calculation of Euclidean distance ( $L^2$ )**

This step includes the calculation of Euclidean distance from ideal best and ideal worst solution as well. The Euclidean distance from ideal best solution is calculated by taking the square root



of the summation of all the squared distances taken from each  $i^{th}$  weighted normalized performance value to the ideal best solution for each criteria. The Euclidean distance from ideal best and ideal worst solution is calculated likewise:

$$S_i^+ = \sqrt{\sum_{j=1}^n (t_{ij} - t_{bj})^2} \quad \text{where, } i = 1, 2, \dots, m, \quad j = 1, 2, \dots, n$$

$$S_i^- = \sqrt{\sum_{j=1}^n (t_{ij} - t_{wj})^2} \quad \text{where, } i = 1, 2, \dots, m, \quad j = 1, 2, \dots, n$$

Where,

$S_i^+$  = Euclidean distance from ideal best solution

$S_i^-$  = Euclidean distance from ideal worst solution

**Step 5: Calculation of performance score**

In the ultimate step of obtaining the final performance score of the states based on which ranking would be done is calculated using the Euclidean distances from the ideal best and ideal worst solution, taking the Euclidean distance from ideal worst solution in the numerator and taking the summation of the distances in the denominator. The ranking of the states will depend upon the final performance score ( $P_i$ ).

$$P_i = \frac{S_i^-}{(S_i^+ + S_i^-)}, \quad 0 \leq P_i \leq 1$$

Where,

$P_i$  = Performance score

$P_i = 1$  if and only if the  $i^{th}$  weighted normalized performance value is the ideal best solution for each criteria

$P_i = 0$  if and only if the  $i^{th}$  weighted normalized performance value is the ideal worst solution for each criteria

**Socio-Demographic profile of the respondents undertaken for the assessment of health seeking behaviour**

It is important to reflect the socio-demographic profile of the respondents those who have been undertaken for the study for the purpose of the assessment of their health seeking behaviour. In table 2, out of total 37,244 respondents, 53.96 percent respondents are female and 46.04 percent are male. Most of the respondents (30.92 percent) belong to the age group of 40-59 years, 27.49 percent of the respondents are 60 years and above and 22.16 percent of the

respondents belongs to the age group of 15-39 years. Most of the respondents (58.98 percent) are currently married, 26.65 percent of the respondents are not married, 13.82 percent of the respondents are widowed and merely 0.56 percent of the respondents are Divorced/ separated. Majority of the respondents (75.68 percent) are Hindu, 15.01 percent are Islam and others like Christian, Sikh and Jain seems to be minority. Majority of the respondents (42.04 percent) belongs to the Other Backward Classes and merely 16.47 percent and 7.42 percent of the respondents belongs to the scheduled caste and scheduled tribe category respectively. Notably majority of the respondents (37.99 percent) are illiterate whereas only 12.81 percent of the respondents have done primary and 12.58 percent of the respondents have completed their education up to upper primary.

**Table 2: Socio-demographic profile of the respondents**

<b>Interventions</b>	<b>Frequency (n=37244)</b>	<b>Percentage</b>	<b>Interventions</b>	<b>Frequency (n=37244)</b>	<b>Percentage</b>
<b>Sex</b>			<b>Social Group</b>		
Male	17,146	46.04	Scheduled Tribes	2,765	7.42
Female	20,098	53.96	Scheduled Castes	6,133	16.47
<b>Age in Group</b>			Other Backward Classes	15,657	42.04
Below 15 years	7,240	19.44	Others	12,689	34.07
15-39 years	8,252	22.16	<b>General Education</b>		
40-59 years	11,514	30.92	Not Literate	14,147	37.99
60 years and above	10,238	27.49	Literate Without Any Schooling	201	0.54
<b>Marital Status</b>			Literate Without Formal Schooling: Through NFEC	106	0.28
Never Married	9,924	26.65	Literate Through TLC/ AEC	33	0.09
Currently Married	21,965	58.98	Others	109	0.29
Widowed	5,147	13.82	Literate With Formal Schooling: Below Primary	4,668	12.53
Divorced/Separated	208	0.56	Primary	4,772	12.81
<b>Religion</b>			Upper Primary/Middle	4,685	12.58
Hinduism	28,187	75.68	Secondary	3,582	9.62
Islam	5,590	15.01	Higher Secondary	1,983	5.32
Christianity	1,996	5.36	Diploma/Certificate Course (Up to Secondary)	211	0.57
Sikhism	980	2.63	Diploma/Certificate Course (Higher Secondary)	212	0.57
Jainism	103	0.28	Diploma/Certificate Course (Graduation & Above)	104	0.28
Buddhism	237	0.64	Graduate	1,757	4.72
Zoroastrianism	5	0.01	Postgraduate and Above	673	1.81
Others	146	0.39			

Source: National Sample Survey Office (NSSO), 71st round, Social consumption: Health

Now while moving towards the health care facilitation, it is notable that, the assessment of the health care facilitation across the Indian states has also undertaken few criteria based on which the assessment of the states have been accomplished. The data has been extracted from National Family Health Survey (NFHS-4), 2015-16. In the similar way, TOPSIS algorithm technique

has been used to rank the states in order. The criteria undertaken for the assessment are as follows: a) Mother who have received full Antenatal care b) Mothers who have received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery c) Mothers who have consumed iron and folic acid for 100 days or more at the time of pregnancy d) Institutional births e) Births assisted by a doctor/nurse/LHV/ANM/Other health personnel. The defined variable have been depicted in Table 3 as given below.

**Table 3: Percentage of individual with access to health care facilitation by type of facilities**

Health Care Facilities	% of individual received health care facilities % (All India)
Mothers who have received full antenatal care	21.0
Mothers who have received post-natal care from a doctor/nurse/LHV/ ANM/midwife/ other health personnel within 2 days of delivery.	62.4
Mothers who have consumed iron and folic acid for 100 days or more at the time of pregnancy.	30.3
Institutional Births	78.9
Births assisted by a doctor/nurse/LHV/ ANM/Other health personnel	81.4

*Source: National Health Profile, 2017, Ministry of Health and Family Welfare (MoHFW), National Family Health Survey (NFHS-4), 2015-16*

Based on the above-mentioned criteria undertaken in Table 3, the assessment of Health care facilitation has been proceeded using TOPSIS algorithm which adhere certain steps to get into the assessment has been mentioned earlier. The assessment through TOPSIS algorithm technique delivers certain performance score based on which the ranking of the states has been done.

**Result and Discussion**

Post analyzing the data, while looking at the provision of health care facilitation in Table 4, most of the states pertains to southern region such Kerala, Tamil Nadu, Andhra Pradesh, Telangana seems to be at the top of the ranking when it comes to the health care facilitation. The state from western region such as Goa seems to be at the top of the ranking, other than that the states from north-eastern zone also seems to be performing quite well such as Sikkim and Mizoram in terms of health care facilitation. On the other hand, few states from north, east and north-eastern zone seems to be performing drastically poor in providing the health care facilitation in their states. From eastern zone, it is Jharkhand and Bihar, from northern zone it is Uttar Pradesh and from north-eastern zone it is Arunachal Pradesh and Nagaland are mostly the poor performing states in terms of health care facilitation and lies at the bottom of the ranking, whereas the states like Odisha, Haryana, Chattisgarh and West Bengal have been placed in the middle order of the ranking, seems their performance to be moderate in terms of providing health care facilitation in their states. Now while moving towards the state-wise

assessment of health seeking behaviour among the individuals of the states in table 5, it has been observed that, two state from southern zone i.e, Kerala and Tamil Nadu, West Bengal from eastern zone, Uttar-Pradesh from Northern zone and Maharashtra from western zone are at the top of ranking and has been identified as better performing states in terms the health seeking behaviour among the individual of these states. On the other hand, the states like Haryana, Assam, Uttarakhand and Goa seems to be in the middle order with a moderate performance related to the health seeking behaviour among the individual of these states, whereas the states from southern zone viz. Telangana, the states from eastern zone viz. Bihar and Jharkhand and Chattisgarh from central zone are the least performing states in terms of the individual's health seeking behaviour. More interestingly considering the performances and ranking of the states in terms of both the provision of health care facilitation and the health seeking behaviour among the individual, it has been observed that, in a state like Uttar Pradesh, the health seeking behaviour among the individual is quite good, but the heath care facilitation seems to be drastically poor. On the other hand, the state pertains to southern zone Telangana is performing well in terms of health care facilitation but the health seeking behaviour among the individual in that state seems to be very poor. In the state like West Bengal pertains to eastern region, the health seeking behaviour among the individual seems to be quite well, but the health care facilitation in the state is still lacking behind. Similarly in Maharashtra, the health seeking behavior among the individual also seems to be well, but the health care facilitation in the state is not up to the mark. On the other hand, the state like Goa which appears to be the best performing states in terms of health care facilitation, but the health seeking behaviour among the individual in this state appears to be poor enough. Although few exceptions have been observed in this regard, the states viz. Kerala and Tamil Nadu are exceptionally well performing in case of both health care facilitation as well as health seeking behaviour of their individuals. In contrast, few states from eastern zone such as Bihar, Jharkhand seems to be drastically poor performing in both the cases.

**Table 4: State wise ranking based on the provision of Health Care Facilitation**

Zone	State	Rank	TOPSIS score
West	Goa	1	0.8850
South	Kerala	2	0.8749
South	Tamil Nadu	3	0.7390
South	Andhra Pradesh	4	0.6972
South	Telangana	5	0.6721
North-East	Sikkim	6	0.6474
North-East	Mizoram	7	0.6124
North	Himachal Pradesh	8	0.5833
North	Punjab	9	0.5636
South	Karnataka	10	0.5615
West	Maharashtra	11	0.5512
North-East	Manipur	12	0.4994
West	Gujarat	13	0.4976
East	Odisha	14	0.4659
North	Haryana	15	0.4137
Central	Chhattisgarh	16	0.3899
East	West Bengal	17	0.3870
North-East	Assam	18	0.3570
North-East	Meghalaya	19	0.3534
North	Rajasthan	20	0.3215
Central	Madhya Pradesh	21	0.3149
North	Uttarakhand	22	0.2923
North-East	Tripura	23	0.2886
North	Uttar Pradesh	24	0.2304
East	Jharkhand	25	0.2096
East	Bihar	26	0.1837
North-East	Arunachal Pradesh	27	0.1001
North-East	Nagaland*	28	0.0000

Source: Own calculation using TOPSIS algorithm technique

\* The TOPSIS score for Nagaland is found to be nil since the ideal worst value for all the factors of the decision matrix pertains to Nagaland.

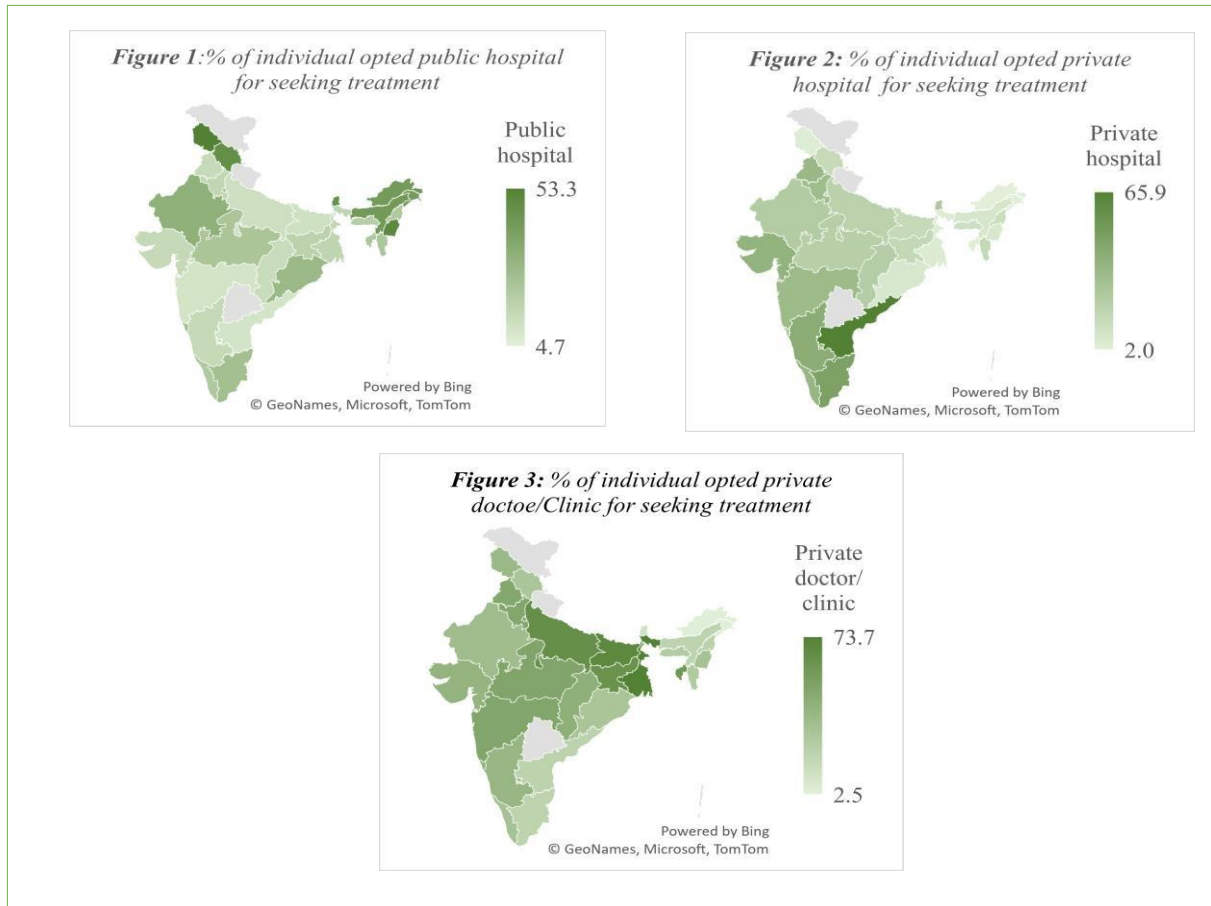
**Table 5: State wise ranking based on the Health Seeking Behavior pattern**

Zone	State	Rank	TOPSIS Score
South	Kerala	1	0.7558
South	Tamil Nadu	2	0.6503
East	West Bengal	3	0.6230
North	Uttar Pradesh	4	0.5660
West	Maharashtra	5	0.4564
South	Andhra Pradesh	6	0.4518
South	Karnataka	7	0.4250
North	Rajasthan	8	0.3924
West	Gujarat	9	0.3902
Central	Madhya Pradesh	10	0.3874
East	Odisha	11	0.3812
North	Punjab	12	0.3669
North	Himachal Pradesh	13	0.3362
North	Haryana	14	0.3271
North-East	Assam	15	0.3262
North	Uttarakhand	16	0.3257
West	Goa	17	0.3252
North-East	Sikkim	18	0.3245
North-East	Arunachal Pradesh	19	0.3243
North-East	Manipur	20	0.3240
North-East	Mizoram	21	0.3239
North-East	Meghalaya	22	0.3220
North-East	Nagaland	23	0.3219
North-East	Tripura	24	0.3218
South	Telangana	25	0.3215
East	Jharkhand	26	0.3192
Central	Chhattisgarh	27	0.3181
East	Bihar	28	0.3164

Source: Own calculation using TOPSIS algorithm technique

**Challenges associated with health seeking behaviour and health care facilitation**

The TOPSIS analysis has provided a detail insight on the present scenario of the health seeking behaviour and health care facilitation across the Indian states. Now after going through the opportunity aspect from the above analysis, we may seek to identify the major challenges associated with the health seeking behaviour and health care facilitation across the states. Table 8 provided in annexure depicted the state wise picture of treatment seeking on medical advice over level of care. It has been observed that, in the states like Kerala and Tamil Nadu which is in the top of ranking in terms of health seeking behaviour and also possess good health care



facilitation, 21.83 percent and 25.98 percent of individual opted treatment from public hospital respectively and 10.01 percent individual from Kerala, 5.37 percent individual from Tamil Nadu have opted treatment from PHC/CHC. It has also been observed that, the tendency of the individuals of these states of opting treatment from private doctor is quite less but the usage of private hospital seems to be persistent. In contrast, in the states like Uttar Pradesh, West Bengal and Maharashtra the extent of usage of public hospital for opting treatment is quite less and even very few percentages of individual are found to opt the private hospital but the tendency to go to private doctors for seeking treatment seems to be vibrant. In West Bengal it is only 4.78 percent of individual who opted treatment in private hospital, but 73.68 percent of individual went to private doctors for their treatment. The rather similar scenario could be observed for the states like Bihar and Jharkhand those who are very poor in health seeking behaviour and also possess drastically poor health care facilitation do not seek treatment much from public hospital as well as private hospital, most of them are found to opt private doctors for their treatment. This certainly indicates public health care facilitation is still lacking behind and poor enough to obtain the reliability of the individual to seek treatment from public institutions.

The state wise analysis has been done to identify the reasons behind not availing the government sources for seeking treatment in table 6. In the state like Kerala, 49.88 percent of the individual reported the quality of facilitation to be satisfactory, but it involves long waiting time, whereas merely 8 percent of individual has reported not availability of specific services. In Tamil Nadu, 35.26 percent of individual reported quality of public health service to be satisfactory but involved long waiting time, merely 4 percent of the individual reported non-availability of required services, but 48.47 percent of individual reported although service available but quality not satisfactory. It ascertains one thing that in the states like Kerala and Tamil Nadu the well circulated public health care facilitation is available, the only reason people may not opt it is the involvement of long waiting time and due to somewhat poor quality of service. But in the states like Uttar Pradesh and Maharashtra, 15.85 percent and 13.69 percent of the individual respectively reported non-availability of specific services, but it has also been observed that around 50 percent of the individual reported not satisfactory quality of the available services. In Uttar Pradesh around 11 percent of individual responded the available service to be too far. In West Bengal merely 6.82 percent of the individual reported the specific service to be not available, 33.98 percent responded the service to be available but quality not satisfactory, around 30 percent reported of long waiting time and 15.86 percent of individual responded the quality to be satisfactory but facility to be far. In the states like Bihar and Jharkhand 63.55 percent and 59.63 percent of individual responded the available service to be non-satisfactory respectively. In Bihar, 11.49 percent of individual responded non-availability of the specific services and in Jharkhand 20.19 percent of individual reported the same. The above analysis certainly indicates the state wise inequality in health care facilitation which emerged as one of major reasons behind unequal health seeking behaviour across Indian States.

**Table 6: Percentage of individuals by Reasons for not availing Government sources for seeking treatment for Spells of ailment in last 15 days**

State/UT	% of individual not availing government sources for seeking treatment						Total
	Required specific services not available	Available but quality not satisfactory	Quality satisfactory but facility too far	Quality satisfactory but involves long waiting	Financial constraint	Other	
Jammu & Kashmir	5.23	31.40	1.74	48.84	0.00	12.79	100
Himachal Pradesh	7.64	41.40	8.92	38.85	0.00	3.18	100
Punjab	13.45	37.55	12.09	30.64	0.36	5.91	100
Chandigarh	1.22	12.20	7.32	42.68	0.00	36.59	100
Uttaranchal	13.76	34.86	14.68	24.77	4.59	7.34	100
Haryana	8.49	46.58	14.08	27.74	1.45	1.66	100
Delhi	2.84	26.95	7.09	49.65	2.13	11.35	100
Rajasthan	9.87	53.03	8.12	20.06	0.32	8.60	100
Uttar Pradesh	15.85	50.12	11.23	18.07	0.45	4.28	100
Bihar	11.49	63.55	9.69	10.05	0.18	5.03	100
Sikkim	23.08	30.77	5.13	28.21	0.00	12.82	100

State/UT	% of individual not availing government sources for seeking treatment						Total
	Required specific services not available	Available but quality not satisfactory	Quality satisfactory but facility too far	Quality satisfactory but involves long waiting	Financial constraint	Other	
Arunachal Pradesh	37.50	0.00	0.00	12.50	12.50	37.50	100
Nagaland	18.18	18.18	9.09	27.27	0.00	27.27	100
Manipur	8.82	14.71	0.00	52.94	2.94	20.59	100
Mizoram	7.32	19.51	12.20	43.90	0.00	17.07	100
Tripura	11.36	24.24	9.85	29.55	5.30	19.70	100
Meghalaya	4.35	34.78	0.00	47.83	0.00	13.04	100
Assam	17.91	41.79	1.49	16.42	1.49	20.90	100
West Bengal	6.82	33.98	15.86	31.61	0.87	10.86	100
Jharkhand	20.19	59.63	8.70	6.52	0.62	4.35	100
Odisha	11.44	52.49	9.70	11.44	2.49	12.44	100
Chhattisgarh	15.28	37.04	10.19	22.69	0.00	14.81	100
Madhya Pradesh	12.36	57.88	8.21	14.22	0.11	7.22	100
Gujarat	11.02	45.05	12.15	23.73	0.56	7.48	100
Daman & Diu	11.54	26.92	25.00	32.69	0.00	3.85	100
D & N Haveli	15.38	38.46	0.00	34.62	0.00	11.54	100
Maharashtra	13.69	51.88	8.31	22.47	0.47	3.19	100
Andhra Pradesh	7.07	64.57	4.17	16.01	0.31	7.88	100
Karnataka	14.58	49.46	6.50	24.73	0.43	4.29	100
Goa	8.24	22.35	5.88	58.82	0.00	4.71	100
Lakshadweep	64.15	35.85	0.00	0.00	0.00	0.00	100
Kerala	8.00	21.53	8.71	49.88	0.36	11.53	100
Tamil Nadu	4.04	48.47	7.69	35.26	0.10	4.44	100
Puducherry	2.00	49.33	9.33	38.00	0.00	1.33	100
A & N Islands	6.67	53.33	0.00	33.33	0.00	6.67	100
Telangana	5.31	52.57	16.42	15.59	0.33	9.78	100
All India	10.34	44.82	9.80	27.14	0.52	7.37	100

Source: National Sample Survey Office (NSSO), 71st round, Social consumption: Health

Although poor public health facilitation is indeed a reason behind poor health seeking behaviour but the reason is not enough, there are many other factors which are responsible behind the poor health seeking behaviour among the individual. The variety of factors which could be responsible behind the poor health seeking behaviour may include poor socio-economic condition, Lack of feasibility or physical accessibility, geographical spread, cultural beliefs and prejudices, social awareness, literary level of the individual or the family. The state wise analysis has been done to figure out the reasons behind not seeking treatment on medical advice in table-7. It has been observed that, in Kerala and Tamil Nadu 57.73 percent of individual and 80.65 percent of individual reported the ailment not considered to be serious as a reason behind not seeking treatment on medical advice, but hardly few have reported non-availability of medical facility. In the state like Uttar Pradesh, West Bengal and Maharashtra it has been observed that, 14.29 percent, 16.19 percent and 16.91 percent of individual reported non-availability of medical facility in the neighbourhood respectively. In Uttar Pradesh 55.45 percent of individual responded the ailment not considered to be serious, similarly in West Bengal and Maharashtra 40.57 percent and 47.06 percent of individual reported ailment not considered to be serious. In Uttar Pradesh and West Bengal, around 10 percent of individual reported the facility of satisfactory quality to be too expensive. In Bihar and Jharkhand, 76.19



percent and 67.44 percent of individual reported the ailment not considered to be serious. In Jharkhand, 12.40 percent of individual reported non-availability of medical facility in the neighbourhood. The facts and figures certainly reveal that, there is still persistent lack of awareness among the individual regarding seeking treatment for their ailment, although non-availability of medical facility is also significant reason behind not seeking treatment.

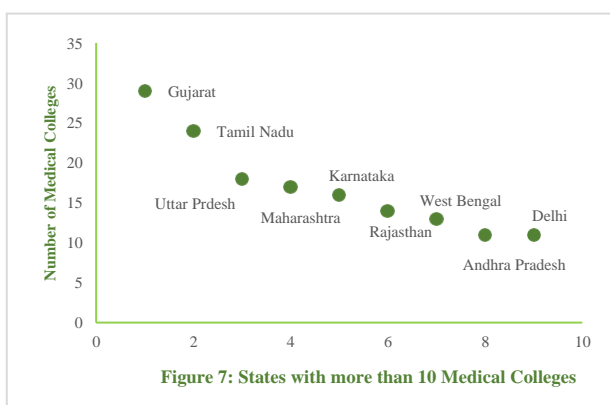
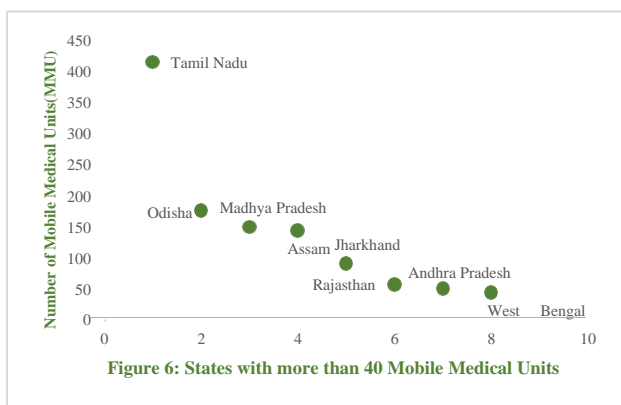
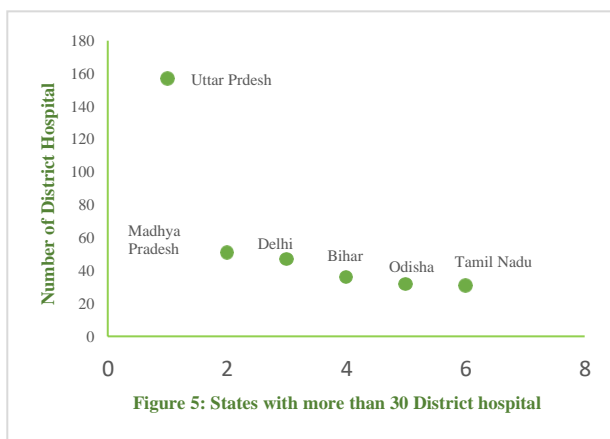
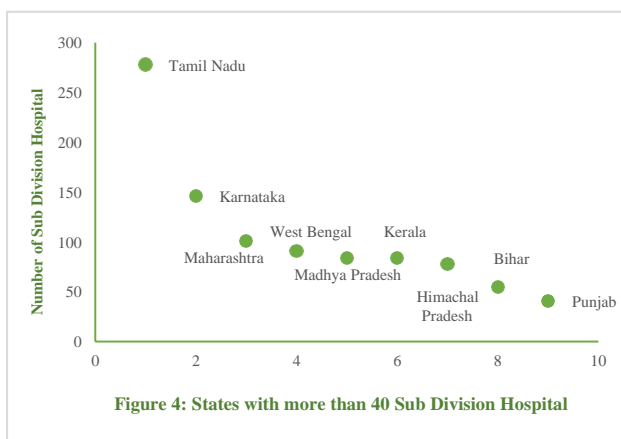
**Table 7: Percentage of individuals by Reasons for not seeking treatment on medical advice for Spells of ailment in last 15 days**

State/UT	% of individual not seeking treatment on medical advice						Total
	No medical facility available in the neighbourhood	Facility of satisfactory quality not available	Facility of satisfactory quality too expensive	Facility of satisfactory quality involves long waiting	Ailment not considered serious	Other	
Jammu & Kashmir	12.12	0.00	3.03	3.03	51.52	30.30	100
Himachal Pradesh	4.17	8.33	4.17	4.17	54.17	25.00	100
Punjab	1.18	4.71	20.00	7.06	38.82	28.24	100
Chandigarh	0.00	0.00	0.00	0.00	0.00	0.00	100
Uttaranchal	3.33	0.00	3.33	3.33	83.33	6.67	100
Haryana	0.00	0.00	8.33	0.00	75.00	16.67	100
Delhi	0.00	0.00	0.00	0.00	63.64	36.36	100
Rajasthan	2.99	1.49	14.93	5.97	55.22	19.40	100
Uttar Pradesh	14.29	2.91	10.17	0.24	55.45	16.95	100
Bihar	7.14	3.17	3.17	0.40	76.19	9.92	100
Sikkim	0.00	0.00	0.00	7.69	30.77	61.54	100
Arunachal Pradesh	17.24	0.00	6.90	0.00	34.48	41.38	100
Nagaland	0.00	0.00	2.78	0.00	83.33	13.89	100
Manipur	36.36	0.00	0.00	0.00	59.09	4.55	100
Mizoram	3.33	0.00	0.00	3.33	56.67	36.67	100
Tripura	5.13	2.56	10.26	2.56	71.79	7.69	100
Meghalaya	2.94	17.65	8.82	2.94	41.18	26.47	100
Assam	2.90	1.45	1.45	0.00	82.61	11.59	100
West Bengal	16.19	2.17	10.68	6.51	40.57	23.87	100
Jharkhand	12.40	3.10	6.98	1.55	67.44	8.53	100
Odisha	4.91	3.07	6.75	1.84	70.55	12.88	100
Chhattisgarh	3.17	1.59	4.76	1.59	66.67	22.22	100
Madhya Pradesh	8.42	1.05	4.21	10.53	53.68	22.11	100
Gujarat	2.22	4.44	5.56	3.33	63.33	21.11	100
Daman & Diu	66.67	0.00	0.00	0.00	0.00	33.33	100
D & N Haveli	0.00	5.88	0.00	0.00	58.82	35.29	100
Maharashtra	16.91	5.88	6.62	6.62	47.06	16.91	100
Andhra Pradesh	4.17	5.42	1.25	5.42	54.58	29.17	100
Karnataka	4.63	5.56	0.93	0.93	73.15	14.81	100
Goa	0.00	15.38	0.00	0.00	76.92	7.69	100
Lakshadweep	0.00	0.00	0.00	0.00	50.00	50.00	100
Kerala	1.03	1.55	1.03	1.55	57.73	37.11	100
Tamil Nadu	1.43	1.43	3.94	0.36	80.65	12.19	100
Puducherry	0.00	0.00	0.00	0.00	69.57	30.43	100
A & N Islands	0.00	4.76	0.00	4.76	57.14	33.33	100
Telangana	2.50	10.00	5.00	5.00	60.00	17.50	100
All India	8.31	3.06	6.33	3.12	59.04	20.13	100

Source: National Sample Survey Office (NSSO), 71st round, Social consumption: Health

This is all what we have observed in case of health seeking behaviour, let us have a look on the other side i.e, the challenges associated with health care facilitation. In this regard, the data on rural infrastructure (2018-19) has been taken under consideration. The table-9 provided in annexure has reflected state-wise availability of health care infrastructure. It has been observed

that, in Tamil Nadu the number of mobile medical unit is quite high and good number of sub divisional hospital exists in the state, although in Kerala the number sub divisional hospital and mobile medical units are quite less. In Maharashtra and West Bengal moderate number of sub divisional hospital and mobile medical units have been found. The observable fact is in Uttar Pradesh, although there are no sub divisional hospital and mobile medical unit, but the state has highest number of district hospital. After Tamil Nadu the highest number of mobile medical unit are there in Odisha and after that it is Madhya Pradesh which is in the third highest position and Assam stand in fourth position with 145 mobile medical Unit. Tamil Nadu has the highest number of sub division hospitals and after that Karnataka holds the second highest position in this regard. It is observable that, in Bihar there is no mobile medical unit, similar scenario has been observed for Chandigarh, Uttarakhand and Himachal Pradesh. There are number of states where there is no sub divisional hospital such as Jammu & Kashmir, Uttar Pradesh and many other north eastern states viz. Meghalaya, Sikkim, Arunachal Pradesh, Nagaland etc. The varied infrastructural facility in different states indeed imparts an impact on the health seeking behaviour as well as health care facilitation to the individuals of the states.



### **Conclusion**

Consolidating the major finding out of the study, it has been depicted that, although the health seeking behavior in few states are quite good but the health care facilitation seems to be drastically poor such as Uttar Pradesh and, in some states, it is vice-versa viz. Telengana, which indicates although with better provision of health care facilitation, the health seeking behaviour in this state is quite poor. In West Bengal the health seeking behavior among the individual is at the top of the ranking but the health care facilitation still seems to be lacking behind. Similar scenario could be observed in case of Maharashtra. On the other hand, in terms of health care facilitation Goa is in the top most of the ranking but health seeking behaviour among the individual of the state seems to be lacking behind. Although Kerala and Tamil Nadu seems to be the exception in this case, since the state is well performing in both health seeking behaviour and health care facilitation, but at the same time states like Bihar and Jharkhand seems to be drastically poor performing in both the cases. While analyzing the factors responsible for this disparity in health seeking behaviour across the states it has been observed that, poor quality of service in public health services held responsible for this. Along with that, one of the major reasons behind poor health seeking behaviour which has fetched our eye is lack of awareness as well as seriousness among the individual to seek treatment for their ailments. Now this seems to be one side of the coin, while talking about another side i.e, the health care facilitation, it is important to point out that poor health infrastructure seems to be responsible for the lagged health care facilitation. Although it is given fact that, health seeking behaviour does not only depend upon health care facilitation, there are many other factors which drive the intensity of seeking treatment, i.e, socio-economic condition, cultural beliefs and prejudices, social awareness, literary level etc. But improved public health care service may outweigh the other factors and instill a strong impact on individual to enhance their health seeking behaviour pattern. Although this improvement in public health care services have been planned since long back and the implementation has been imparted somewhere and somewhere it is still awaited. But at this junction of time where the second wave of nobel coronavirus is at our door, there is hardly any room for further delay but to take sufficient effort to improve the public health infrastructure to cope up with the situation. It is evident that, the public health infrastructure in rural areas is still in a very bad state of affairs accompanied with a shortage of doctors in rural India, which makes health care facilitation to be lagging behind with an increased dependence on private health care system, which jeopardize the individual with poor socio-economic condition and ultimately end up with an uncanny health seeking behaviour pattern.

### **Way forward**

Health care service is at stake due to lack of public sector infrastructure. The number of primary health care unit or community health centers are still at few in numbers in most of the states. The basis infrastructural facility which is mandatory for the well running community health center are missing in many of the states, such as one functional laboratory, Operation theatre, Labour room, newborn care concern with at least 30 beds etc. The facility of intensive care (ICU) unit are rarely available at rural public health care unit. The outcome of this shortage in public sector infrastructure created a menace when COVID-19 has arrived at our door and accounted a systematic breakdown within the institutional framework. The pitfalls have not only broken the health care supply chain but damaged the human relationship and accountability. Although the focus has been driven towards the infrastructural deficiency, but it is not only the physical infrastructure but also the shortage of skillful health care practitioner allocated for each primary and community health centers as per the minimal norms provided by the Government, leading to underutilization of existing facility. Unwillingness of eminent doctors to serve in rural areas due to infrastructural inadequacy and lack of incentive turn out to be the major issues of poor quality of service as well as lack of access. The lack of public sector facility inducing private practitioner to grow and outweighing the desire of seeking treatment in private sector over public sector among individuals. But this is certainly impeding for those with poor socio-economic condition due to high out of pocket expenditure and ultimately demotivating to seek treatment for their ailments. Prevalence of Quackery in this regard also impart major consequence on public health. Government has a major role to play at this juncture, since systematic problem could be solved with phase wise systematic solutions. Strategizing systematic and large vision reform in public health infrastructure guided by pilot studies would be the plausible approach towards reform. Mobile medical units equipped with basic medical facilities specially oxygen cylinder, saline etc., considering the present scenario would supplement the health care facilitation to combat with the pandemic. The enhanced practices would not only boost up the current services to win the battle against the pandemic but also implant a seed of reform in public health care system which would make the country ready to encounter any further calamities.

Annex Tables

Table 8: Percentage of individuals availed treatment on medical advice over level of care for Spells of ailment in last 15 days

State/UT	% of individual seek treatment on medical advice over level of care					Total
	HSC/ANM/A SHA/AWW	PHC/dispensary/ CHC/mobile medical unit	Public Hospital	Private Doctor/Clinic	Private Hospital	
Jammu & Kashmir	2.39	3.11	53.35	37.56	3.59	100
Himachal Pradesh	0.28	8.86	47.37	29.36	14.13	100
Punjab	1.43	1.88	13.86	48.95	33.89	100
Chandigarh	0.00	5.45	44.85	44.24	5.45	100
Uttaranchal	1.52	3.54	39.90	33.84	21.21	100
Haryana	1.18	1.69	15.68	49.58	31.87	100
Delhi	1.38	7.83	25.81	49.31	15.67	100
Rajasthan	2.41	6.77	32.56	35.16	23.10	100
Uttar Pradesh	2.00	2.57	11.69	64.59	19.15	100
Bihar	2.54	2.84	11.36	68.76	14.50	100
Sikkim	0.93	16.67	46.30	11.11	25.00	100
Arunachal Pradesh	8.72	43.62	42.28	3.36	2.01	100
Nagaland	3.13	40.63	21.88	21.88	12.50	100
Manipur	2.27	9.09	50.00	31.82	6.82	100
Mizoram	8.33	26.04	22.92	27.08	15.63	100
Tripura	0.94	14.55	22.54	59.62	2.35	100
Meghalaya	0.00	43.55	19.35	25.81	11.29	100
Assam	4.98	24.48	42.74	20.33	7.47	100
West Bengal	1.95	3.32	16.28	73.68	4.78	100
Jharkhand	2.18	1.94	17.72	62.62	15.53	100
Odisha	3.10	31.57	28.65	30.20	6.48	100
Chhattisgarh	10.64	10.33	13.37	44.07	21.58	100
Madhya Pradesh	0.94	3.93	23.27	50.86	20.99	100
Gujarat	1.83	5.55	14.25	41.30	37.07	100
Daman & Diu	0.00	14.06	4.69	31.25	50.00	100
D & N Haveli	2.04	14.29	30.61	16.33	36.73	100
Maharashtra	2.99	3.99	9.98	50.37	32.67	100
Andhra Pradesh	2.21	1.19	9.72	21.02	65.86	100
Karnataka	2.23	3.54	14.33	39.41	40.49	100
Goa	2.29	3.82	29.01	42.75	22.14	100
Lakshadweep	0.61	14.72	52.15	2.45	30.06	100
Kerala	0.89	10.01	21.83	31.99	35.28	100
Tamil Nadu	1.00	5.37	25.98	20.65	47.00	100
Puducherry	0.77	0.00	41.31	15.83	42.08	100
A & N Islands	7.95	56.07	23.43	7.53	5.02	100
Telangana	2.05	1.90	7.76	34.41	53.88	100
All India	1.97	6.52	19.33	42.98	29.20	100

Source: National Sample Survey Office (NSSO), 71st round, Social consumption: Health

**Table 9: Number of functioning Sub divisional hospital, District hospital, Mobile Medical Units and Medical colleges**

States/UT	As on 31 <sup>st</sup> March 2019			
	Sub divisional hospital	District hospital	Mobile medical units	Medical colleges
Jammu & Kashmir	0	23	11	3
Himachal Pradesh	78	12	0	6
Punjab	41	22	33	3
Chandigarh	1	1	0	1
Uttarakhand	18	18	0	3
Haryana	21	22	12	7
Delhi	9	47	1	11
Rajasthan	20	27	58	14
Uttar Pradesh	0	157	0	18
Bihar	55	36	0	9
Sikkim	0	4	4	0
Arunachal Pradesh	0	17	16	1
Nagaland	0	11	11	0
Manipur	1	8	9	2
Mizoram	2	9	9	1
Tripura	12	7	1	1
Meghalaya	0	11	4	1
Assam	14	25	145	6
West Bengal	101	24	45	13
Jharkhand	13	23	92	3
Odisha	33	32	177	5
Chhattisgarh	20	26	30	6
Madhya Pradesh	84	51	150	10
Gujarat	36	22	30	29
Daman & Diu	0	2	1	0
D & N Haveli	1	1	4	0
Maharashtra	91	23	40	17
Andhra Pradesh	28	14	52	11
Karnataka	146	15	22	16
Goa	2	2	0	1
Lakshadweep	2	1	0	0
Kerala	84	18	38	8
Tamil Nadu	278	31	416	24
Puducherry	6	5	4	2
A & N Islands	0	3	0	1
Telangana	37	6	0	7
All India	1234	756	1415	240

*Source: Rural Health Statistics, 2018-2019, Ministry of Health and Family Welfare, Statistics Division, Government of India.*

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**Decadal Performance of West Bengal and Maharashtra in Sarva Shiksha Abhiyan since 2000**

\*Dr. Lalima Mukherjee

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**Abstract**

The focus of this paper is to compare the two states, viz., Maharashtra and West Bengal in terms of their progress made in the Govt. of India launched Sarva Shikshya Abhiyan in the year 2000. These two states are among the four most highly populated states in India. This paper tries to understand the reasons behind the dismal performance of West Bengal in the SSA in spite of a remarkable improvement in the overall literacy in the current decade compared to Maharashtra. Some startling facts came up in this study such as an increasing enrolment ratio of the 6-11 years does not alone decide the future of education system of a state or an economy. Thus, in spite of a good progress in the literacy percentage in the 2011 census, West Bengal's poor performance in getting all school going children enrolled in school irrespective of gender and family income, is still a distant goal. The achievement of a satisfactory universal elementary education can probably be explained by the 'Inclusive Growth' theory which was taken up as a planning strategy for the first time in the 11<sup>th</sup> Five Year Plan. By Inclusive here it is meant - a concept that encompasses equity, equality of opportunity, and protection in primary education and Tier transitions – along with proper supervision which is an essential ingredient of any successful public expenditure strategy. Here it emphasizes the idea of equality of circumstances which is the only answer to the development of any area or economy be it a state or the country as a whole. Thus, the option of Inclusiveness seems to be the only way of achieving complete success specifically in achieving universal education.

**Keywords:** Enrolment, Grade completion, non-repetition, attendance, continuity, transition, inclusive growth, equality in education.

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## **Introduction**

Education is a critical input into the economic development process. Schooling is important for cognitive, creative and social development of children. Child schooling is universally acknowledged as one of the prerequisites of human development (Francavilla, Giannelli & Grilli,2008). The concept of compulsory education, where all school aged children are required to attend school, combats the force of poverty that pulls children out of school. Obtaining such education depends both on the availability of adequate educational facilities and on the will and financial ability of families to send their children to school. This latter issue is particularly important in less-developed countries where systems of universal, compulsory, and low-cost education do not exist or are limited only to a few grades. Poor families often find the costs of sending children to school prohibitive or at least unacceptably high relative to expected future benefits (Mason & Rozelle,1998).

However, in societies where school quality varies widely across regions and types of schools, as has been demonstrated for India (World Bank 1997; Probe Report 1999), years of schooling or grade completed do not provide good measures of education (Fuller and Heyneman 1989). Schools are often closed due to teacher absence, students may be absent due to labor force demands and many skills (particularly literacy) atrophy quickly when not used regularly (Vikram, Desai & Vanneman,2010). According to the National Family Health Survey (NFHS, 1998-99), the primary cause of a child having never been enrolled in a school in rural India is the cost of education. Nearly eight years after the Constitution was amended to make education a fundamental right, the government implemented a historic law to provide free and compulsory education to all children in age group of 6-14 years (PTI, Apr 1, 2010, TOI). While the gross enrolment ratio stands at 98 per cent, attendance in schools is only about 57 per cent. A lot needs to be done if children are to be actually enrolled in school.

In order to have a holistic solution to the problem of primary education and subsequently increase the Transition rate in the three Tier educational system (Primary, Secondary and Higher education), the Government of India launched a programme known as Sarva Shiksha Abhiyan

(MHRD, 2000) to achieve the goal of universal primary education by 2007 and that of universal elementary education by 2010. Currently the duration of the programme has been extended to 2012 in order to see concrete and better result.

The Comparison

Table 1 Overall analysis of Population in Maharashtra 2011 census

Source: Census 2011

<b>Maharashtra</b>	<b>2001</b>	<b>2011</b>	<b>Growth</b>
<b>Child Sex Ratio (Girls/1000 Boys)</b>	913	883	-8.76%
<b>Children between 0-6 years</b>	13671126	12848375	-6.02%
<b>Density</b>	315	365	15.87%
<b>Female</b>	46478031	54011575	16.21%
<b>Literacy Rate</b>	76.5	82.9	6.40%
<b>Male</b>	50400596	58361397	15.80%
<b>Population</b>	96878627	112372972	15.99%
<b>Sex Ratio (Female/1000 Male)</b>	922	925	0.33%

The following paper focuses on the performance of two very important states of our country in terms of population i.e., West Bengal and Maharashtra, in terms of the progress in achieving universal primary education and universal elementary education as a result of the Sarva Shiksha Abhiyan (SSA) since it was commenced in the year 2000. West Bengal, the fourth populated state which was once labelled as the intellectual capital of the country whose performance is perhaps not satisfactory as it has almost failed in implementing the SSA due to lack of proper supervision (TOI,2003). This paper will try to find answers for this with the help of some secondary data.

Maharashtra being the second largest populated state in the country has about 9.29 percent of total population of the country. West Bengal consists of 7.55% of country's population as per Census 2011. Thus, West Bengal has to manage lesser people than Maharashtra at any point of time. A glance at the tables given below will help us to know the exact demographic profiles of these two states compared on the basis of the data collected from Census 2001 and 2011 (provisional) report and also from ESAG (2018) which will guide us to the various reasons for the failure of this attempt to have universalisation of education through the Sarva Shiksha Abhiyan.

In Table 2 below, we find that the percentage increase in the overall literacy rate of West Bengal (8.44) has increased more than that of Maharashtra (6.40) in 2011 shown in Table 1. Thus, from this we can assume that the overall enrolment ratio of West Bengal should grow at a higher rate than that of Maharashtra. West Bengal did not follow a policy of no detention in primary classes. Nearly 6% of the rural children and 9% of urban children in Classes I & II were declared as "failed" and retained in the same grade. Further, 6% of the rural students did not appear for term end examinations indicating the incidence of seasonal migration (Para 3.24 &7.29, Evaluation Report 2010). The overall enrolment has declined in West Bengal along with few more states. The enrolment ratio of girls has remained almost equal in both the states and it has increased in West Bengal.

Table 2 Population in West Bengal 2011 census

West Bengal	2001	2011	Growth
<b>Child Sex</b>			
Ratio (Girls/1000 Boys)	960	949.5	-1.09%
<b>Children</b>			
between 0-6 years	1,14,14,222	1,01,12,599	-11.40%
Density	903	1029	13.95%
Female	38710212	4,44,20,347	14.75%
<b>Literacy Rate</b>	68.64	77.08	8.44%
<b>Male</b>	41465985	4,69,27,389	13.17%
<b>Population</b>	80176197	9,13,47,736	13.93%
<b>Sex Ratio</b>			
(Female/1000 Male)	934	947	1.39%

Source: Census 2011

Table 3 Gross Enrolment Ratio: Maharashtra & West Bengal

Maharashtra		
Primary (Classes I-IV)	Upper Primary	Secondary

STATES/ YEAR	(Classes V-VIII)						(Classes IX-X)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2013-14	99.93	99.68	99.81	96.04	105.88	100.67	87.50	83.39	85.58
2014-15	99.00	98.88	98.95	97.94	99.85	98.82	91.08	87.27	89.31
2015-16	97.86	97.60	97.74	97.44	101.38	99.24	91.97	87.62	89.95

West Bengal									
STATES/ YEAR	Primary(Classes I-IV)			Upper Primary (Classes V-VIII)			Secondary (Classes IX-X)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2013-14	103.16	104.88	104.00	92.84	106.87	99.64	68.62	81.34	74.82
2014-15	101.78	102.91	102.33	96.16	110.67	103.17	70.67	86.05	78.17
2015-16	103.13	104.26	103.68	97.90	112.64	105.00	74.92	92.65	83.56

Source: Data Source: National Institute of Educational Planning & Administration, New Delhi (ESAG)

One of the striking facts is that Maharashtra has less of Primary School teachers (157856 in nos.) than West Bengal (300391 in nos.). The scene is absolutely reverse for secondary level where West Bengal has no teacher and Maharashtra has 33678 number of teachers (U-DISE-2015-16 Prov.). The drop-out rate of Maharashtra for Primary schools was only 9.53% in 2011 within the age group of 6-14 years (Classes I-VIII) while it was 24.33 % in West Bengal (CEIC,2011).

Table 4 Student Responses on Teacher Attendance and Punishment

<b>Student Responses (%)</b>	<b>Andhra Pradesh</b>	<b>Assam</b>	<b>Maharashtra</b>	<b>Puducherry</b>	<b>Uttar Pradesh</b>	<b>West Bengal</b>	<b>All states\UT</b>
<b>Teachers Attend School Regularly</b>	98.90	100	100	100	93.70	80.60	96.40
<b>Physically Punished by Teachers Frequently</b>	0	0	0	100	18.70	3.23	15.35

Source: Planning commission, Evaluation report, 2009

Table -4 indicates that the regular presence of the teacher in the school building and the respective classes. The table also presents vital statistics regarding the teacher attendance which is in reality more important than student attendance. If a teacher remains absent from school and is irregular in the defined job then definitely a child will refrain from attending classes which disturbs his regularity and also fails to inculcate interest in continuity and attendance. Apart from this, harsh punishment rate is absolutely nil in Maharashtra which is again a positive sign while it is 3.23 percent in West Bengal. A striking fact is that the teacher attendance in West Bengal is far below the majority of the states and union territories taken together which needs to be addressed as early as possible.

### **Conclusion**

This paper tried to throw light on some of the important aspects as per the objectives of the Sarva Shiksha Abhiyan, 2000 with regard to the two most populated states in India. These two states were chosen only because of their population in order to keep parity in comparison. Some myths have been highlighted such that if the overall literacy rate percentage increases in a decade, does not have any relevance to the lower or primary, upper primary and secondary level education. Thus, the need for inclusive growth is established in universalisation of education along with strict supervision of public expenditure. It will be prudent to focus on the success of Sarva Shiksha Abhiyan because primary school children are the future torch bearers of higher education. The factors which came into limelight while writing this paper was the infrastructural standards of schools in terms of toilets, library, availability of required teachers, their willingness to teach based on their appointment like regular (permanent) or contractual(temporary), level of education of the teachers. In this context it would not be very wrong to say that financial remuneration to teachers may be one of the basic

requirements for improving the GER-NER and also control the drop-out or decrease the grade repetition at the primary level and increase the transition from middle to secondary level. Maharashtra needs to concentrate on primary education and West Bengal on Secondary education.

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**CSR AMENDMENT 2021- BOON OR BANE?**

\*Ujwal kakkad

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**Abstract**

CSR allocation has been declared mandatory from discretionary effective from accounting year 2020-21. These rules came into operation from 22nd January 2021. From 1st April 2021 organisations undertaking CSR endeavors are compelled to file with the Central government an electronic form namely CSR-1 to obtain Unique registration number.

From 1 April 2021 it is indispensable for all organisations to enlist itself with the ROC by inscribing the e form CSR-1 and in case anyone fails to do so shall not be entitled to continue as an implementing enterprise. The modifications are in assent with suggestions made by MCA. This paper attempts to deal with the new amendments introduced under The Companies Amendment Act of 2020 and how far it attempts to simplify the existing problem of CSR allocation.

Keywords: CSR, CSR amendment, companies, rules.

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## **Background**

CSR first came into existence as a peremptory enforcement for corporations under section 135 in Companies act 2013, subsequently rules were circulated that required all companies to follow specific procedure while performing CSR duties. The Companies Amendment act of 2019 and 2020 culminated in many modifications in the existing law under section 135. The Ministry of Corporate Affairs (MCA) has released a list of promulgated alterations in new rules as issued by Companies Amendment act of 2019 and 2020. It is helpful as it provides clarity and enlightenment to companies.

## **Research gap**

According to the researcher till now no research has been done on this topic. The researcher realizes that there is a dearth of study that has been carried out regarding CSR and the new amendments that has been introduced. Therefore, it is evident that there is research gap and choosing this area for doing research would surely help the corporate researchers, policy makers and the society as a whole.

## **Objectives of the Paper**

There is an urgent need to promote consciousness amongst the business and budding entrepreneurs regarding environmental impacts of adopting various green businesses practices. It is observed in various studies that there is a lack of awareness regarding environmental-friendly practices. This particular study can facilitate the Indian companies to be acquainted with the adoption of CSR practices realizing the benefits of using it to save our earth in this crucial time and how they can fulfill it by complying with newly implemented law.

The research study has the following objectives:

To understand new concepts introduced under amended CSR rules

To know the various opportunity that CSR creates in this time of pandemic.

To comprehend where to transfer unspent CSR amount.

### **Methodology**

With the above objectives in view, this study has been conducted on the basis of available conceptual and empirical studies on CSR and how companies are following it after new amendments. Regarding the source of data, the study has used secondary data, e.g literature survey as included in journals, magazines, books, newspapers and various websites.

### **Literature review**

CSR has been of striking prominence over last few years. CSR in India is of paramount importance more so due to its rich traditions. In its vintage time it was CSR encompassed corporate philanthropy and Gandhian Trusteeship model (Ghosh S, 1989). With the fast-paced liberalization of 1990's there was a deviation from philanthropy model to a multi based model through which companies are presumed accountable to the shareholders, workers and the public (Seema G Sharma, 2009)

Khandelwal and Mohendra (2010) postulated that CSR cannot be exterminated as assessable to everyone method, rather companies need to be unambivalent about specifically their CSR approach and why this approach is appropriate for them. Companies now a days should devote in CSR as part of their business strategy to become more competitive.

After the introduction of section 135 in Companies Act 2013 companies were required to mandatorily spend 2% of profits for CSR activities. Anupam Singh and Dr Priyanka Verma (2014) said that India is a country bustling with an immense population with a huge disparity between affluent and impoverished people and here corporates can help by donating 2% mandatory CSR for the advancement of the society.

### **Incorporation of latest definitions**

#### **Impact assessment**

It is Obligatory for all corporations fulfilling the 10-crore threshold to fulfill impact assessment whereby assessment will be done of CSR projects having outlay of one crore or more and which have been executed not less than one year prior to engaging in impact study. It is usually annexed to the annual report. Impact assessment should be undertaken for large projects which have huge capital outlay for the welfare of neglected communities.

### **Administrative overhead**

These are the expenses incurred by a company for maintaining the CSR duties in the organization but excludes the cost incurred for working out a CSR project.

### **Ongoing project**

It is that project that keeps going on for multiple years and it doesn't have a time limit of three years.

### **International organization**

It highlights the institution as defined under section 3 under U.N privileges and immunities act 1946 as notified by the central government.

### **Amendments in CSR rules**

- Enacting NGOs to enroll with the central government.
- Transferring the unspent CSR amount to the government fund.
- Redesigned reporting layout.
- Devising a time threshold of three years for a current CSR project.
- Obligatory impact assessment of massive CSR ventures.
- Transparency with respect to the functioning of CSR committees.

### **CSR a room to manoeuvre- Covid 19 challenges related to CSR**

CSR is a window of opportunity especially in the time of pandemic when all companies are required to expand their horizon beyond their limit to help the government in producing ventilators, PPE kits and

obtaining oxygen concentrators and other essential items. Companies must make advantage of this to expedite their social responsibility. The list of items qualifying as CSR includes:

- Any donation to PM cares fund shall be considered a part of CSR while any allowance

to CM relief fund or state relief fund for Covid 19 will not be considered as a part of CSR.

- Any aid towards State disaster management authority will be considered a part of CSR.
- Any adjustment of salary paid to workers will not be adjusted in CSR as it is imperative on the part of management to pat them as a part of ethical duty.
- Disbursement of ex gratia over and above the wages paid mainly with the intention to fight Covid 19. All these should be authenticated by a statutory auditor.

### **Treatment of excess CSR surplus**

The extra fund arising out of CSR activities shall not be a part of business funds but rather it should be deployed back in the same CSR project or it should be relocated to the unspent CSR Account or to any fund which is stipulated in schedule VII within a period of six months from the year ending.

Any balance of surplus may also be offset in exchange against future CSR projects within a span of three succeeding years subject to the stipulation that the board shall pass a resolution for this purpose and also the surplus money available for CSR should not include excess funds of CSR activities. It also requires that the administrative expenditure should not surpass 5 percent of the total funds of CSR disbursement.

### **Board of CSR committee- need and functions**

There should be a minimum of three directors out of which one director would be involved in CSR matters and should head the CSR committee. They should map out a blueprint for the CSR projects to be embarked upon, the budget of the proposed plan and also oversee the progress periodically. In any instance when the CSR amount is less than the defined limit of 50 lakhs then the advisory body of the company will release the operations of the CSR committee. In such case no separate CSR committee will be required.

### **Conclusion**

The CSR amendment rules require companies to create acrimonious jurisdictional plan to accomplish CSR undertakings in India as against the previous CSR law pertaining to section 135 which required companies to either abide by undertaking CSR activities or clarify the reasons for which they were unable to fulfill it. It

was discretionary and not obligatory.

The new rules and amendments introduced in the new policy clears all the ambiguities which was existing in the existing CSR laws and ensures uniformity in implementation of CSR activities by all companies. The new laws are more orderly and systematically structured. It also means the administrative work and procedures have increased as it requires more disclosure. There are still some concepts which are still vague with regards to setting up of a new fund and also regarding five per cent ceiling on administrative overhead. But the picture as a whole is promising for the India's CSR implementation.

### **Limitations**

This research has certain unavoidable limitations. The study is based on secondary data and therefore future research is suggested to focus on primary data collected from companies across all sectors to identify their inclination towards CSR practices.

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**A Study to Explore the Existence of Pink Tax across the World leading to Gender –  
Based Price Discrimination**

\*Suchandra Bose

\*\*Joysri Datta

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**Abstract**

A Pink Tax is an extra charge on products that are specifically marketed for women. It is not a “legal tax” but an “upcharge/ extra amount” that makes a commodity more expensive, when it is intended to be manufactured particularly for the fairer sex. Women across the globe have participated in different protests and campaigns against the practice of imposing Pink Tax. In this study, attempts have been made to understand what is Pink Tax, its relevance and disadvantages in the modern society and analyze the reasons as in why it is important to know/to be aware of about Pink Tax for people in general and, which is making the lives of the female counterparts difficult in many instances throughout the world. Efforts have been made to identify the reasons in regards to why Pink Tax is unethical, contributing to the gender biasness and thus, proved to be out of the logic, that should ultimately be abolished over time. Endeavors have been taken to understand the psychology in regard to why Pink Tax even exists in the first place. The scope of gender marketing has also been studied to find out how it is contributing towards price disparity amongst the gender, the roles a brand can play, ultimately venturing into the gender inequality. Price disparity can be of major concern when it comes to necessary products or even for commodities that are used daily. The entire research has been conducted with the help of studying the already existing literature in this field. The significance of our research is to explore the areas that shows pricing disparity when targets one particular gender. We have researched the spectrum of different products, against which, Pink Tax is imposed, and compared with the products that are marketed typically for the male counterparts, that helped establishing the fact the reality level of the Pink Tax is. It has been found out that Pink Tax is a “Real Thing” which many individuals disagree to believe. The user of this study can be varied, from educationists to



professionals, students to entrepreneurs, academicians to industrialists, as to whosoever wants to know about the market and product pricing. Our research wants to contribute towards the actions taken to make people aware of the Pink Tax. With the growing seriousness of the issue, it has been figured out that in order to stop something from happening, the first requirement is to address the “happening” of a particular event; and this study aims to address this issue through making people aware about it. Recommendations as to how to deal with Pink Tax have also been made based on the current situation and prevalence of Pink Tax in our country, India, and across the globe. If this research work can impart knowledge regarding pink tax even to a tiniest bit to our countrymen and can make people aware, we will consider our study as worthwhile and meaningful.

Keywords: Pink Tax, Hidden Tax, Gender Based Price Discrimination, Gender Price Disparity, Gender Bias, Economic Disparity, Selective Consumption Tax, Gender Socialization

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## **Introduction**

Pink Tax is an instance where women are more likely to be susceptible to higher pricing when it comes to different items, including the essential commodities. Whether or not the pink tax exists, it still a matter of controversy for many, in several parts of the society. It is to be noted that the “Luxury” tax cannot be directly linked to pink tax, but, can trigger pink tax indirectly. In case if such an extra charge really exists in the society, it is important for all to recognize it and thereby attempts should be made to abolish it as soon as practicable. It is said that the pink tax targets certain specific goods, specifically marketed for women belonging to different age groups, that also includes young aged women. The existence of pink tax is dependent on product discrimination. In other words, a similar product which is a requirement for both males and females are marketed differently for both the counterparts, even though the basic ingredients remain the same. A good example of this instance can be soaps. The purpose of soap is same for both the genders, but in a majority of cases, soaps that are marketed for women are expensive, like- Dove compared with wild stone ("Bathing Soaps In India: Buy Bath Soaps and Bathing Products Online. Bathing Bars at Best Prices", 2021). Pink Tax had been recognized in many of the countries throughout the world. In the study called “The Tampon Tax: Sales Tax, Menstrual Hygiene Products, and Necessity Exemptions” by Jennifer Bennet, the author has talked about the “Tampon Tax” which is so much prevalent in the different areas of the United States. Even though a handful of states like Maryland, Massachusetts, New Jersey etc. exempted the menstrual hygiene products from the Sales Tax, as of January 2016 update, and some handful of legislations like Illinois and New York passed their Anti Tampon Tax Bill, the majority of the country still imposes ‘legal tax’ on necessity items like menstrual hygiene products, that according to many, contributes towards pink tax, even though the primary reason for such extra amount is the Government itself (Bennett, 2017). Bennett argued such taxes are simply bringing out the gender inequality where a woman is required to pay extra charge simply because of her natural bodily functions. According to an article called “The Cost of Doing Femininity: Gendered Disparities in Pricing of Personal Care Products and Services” by Duesterhaus, Grauerholz, Weichsel and Guittar, the authors have argued that women pay more than men when it comes to certain items falling under personal care and services

category leading to a significant gender-based pricing disparity in the personal care industry (Duesterhaus et al., 2011).

### **Literature Review**

The personal care industry deals in products that ranges from beauty and grooming products, hygiene products, services like haircuts and spa, etc. These are considered as some of the most important products and acquire a great share of the market. Not only Jennifer Bennet argued against the Tampon Tax in the study “The Tampon Tax: Sales Tax, Menstrual Hygiene Products, and Necessity Exemptions” (Bennett, 2017) but an article in the New York Times, dated July 22, 2018 ‘Periods’ to be political pointing towards the Tampon Tax. The article also talks about menstrual equity and how the idea of menstruation is eventually being introduced even to the school level kids as a part of their education and as an initiative to spread awareness. However, even though attempts are being made to impart the necessary education to children regarding the way a woman’s body functions naturally, minimum to negligible actions are taken to educate the public in general about the pink tax that every lady needs to pay even to avail the very basic grooming services or to buy daily usable personal care items (Zraick, 2018). In the study called “THE COST OF DOING FEMININITY: GENDERED DISPARITIES IN PRICING OF PERSONAL CARE PRODUCTS AND SERVICES”, the price differences in three industries has been documented. They are hair salons, dry cleaners and the retail industry that sells personal care products. It has been suggested in the study that even though the price differences are not uniform but still women do tend to pay higher than men, especially for those services and products that provides evidences for gendering the body (Duesterhaus et al., 2011). However, most of the women end up paying so, without even knowing that they are paying the ‘pink tax’. In the study called “Rolling Back the “Pink Tax”: Dim Prospects for Eliminating Gender-Based Price Discrimination in the Sale of Consumer Goods and Services” by Jacobsen, the problems with existing consumer protection laws has been acknowledged. The existing laws lack any scope of curbing the pink tax, the existence of which has already been proved through surveys, spanning decades. However, opponents still argue that narrowly tailored legislation is not at all necessary as the space of adequate protection

in the existing laws is already there (Jacobsen, 2018). In the study “An Economic Analysis of the Pink Tax” by Habbal, the pink tax has been referred to as pricing strategies that is inclusive of the Government policies which raise transactional costs for women. The study very much confirms the existence of pink tax, and concludes that such price discriminatory practices must be abolished at any cost (Habbal, 2020). In the study “The Pink Tax: The Persistence of Gender Price Disparity” by Lafferty, it has been said that women’s products are likely to be priced as higher as two times than the men. It argued that the color ‘pink’ has been awkwardly used as a symbol for femininity to categorize a very simple yet daily needed product as “feminine” like razors. This study also beautifully describes the “Gender Marketing”, where, packaging has been identified as one of the main sources where product differentiation based on gender, originates. It also talks about the gendered tariff rates, where the clothing imports for women are explicitly taxed at a much higher rate, and this mark-up is impacting the fashion industry in a very negative way. This study also highlights that without the legislation coming into proper action, the price disparity will only increase over the time (Lafferty, 2019). In the research work called “BLEEDING WOMEN DRY: TAMPON TAXES AND MENSTRUAL INEQUITY” by Jorene Ooi, the problem of menstrual inequity had been highlighted, where the taxes on menstrual hygiene products had been termed as discriminatory. This study also proposed free tampon programs, expanding the welfare benefits (Ooi, 2018).

Objectives:

Attempts are being made to understand why the concept of pink tax is important and imperative to know for everyone. There have been studies regarding the existence of pink tax in the different parts of the world, as we have explored the same in the literature review, but still everyone does not even know about it and a lot of women are not even aware of the fact that they are paying pink tax. We intend to generate awareness amongst them through this study. We also aim to gain an understanding how the price disparity amongst the genders is triggered through pink tax. So we try to recognize how price discrimination is prevalent between the genders in relevance to the existence of pink tax.

### **Research Methodology**

This is an empirical study that had been carried out with the help of the already existing literature in

the field. Some of the already existing studies drew certain conclusions, that helped us to form our own conclusions. The data drawn from some of the earlier published research also helps us to know if the prevalence of the price discrimination instance is real or not.

**Research and Findings**

The price discrimination that is being talked about in here is the third-degree price. The third-degree price discrimination takes place when different price is being charged to different groups/ set of consumers. Other than what the previous studies have already talked about, we explored the Indian FMCG market and came out with some surprising results. A product that is serving the same purpose for both the men and women are priced very differently just because of the fact that the specific product is being marketed to a particular gender. And, this discrimination is very much prevalent in the other sectors as well. It can be safely said that many of the FMCG products that has come to our attention for carrying a probable pink tax are marketed feeding on women’s insecurities, examples, beauty creams, lip balms and perfumes.

Category (FMCG)	Item	Quantity	Male		Female	
			Product Description	Price	Product Description	Price
Cosmetics	Fairness Cream	25 Gram	Fair & Lovely Men's Instant Fairness Rapid Action Cream	Rs. 75	Fair & Lovely Advanced Multi vitamin fairness	Rs. 120
Self-Grooming/Cosmetics	Deodorant	150 ml	AXE Dark Temptation Deodorant Spray - For Men	Rs. 200	Dove Go Fresh Cucumber 150MI - DEODORANT - For WOMEN	Rs. 350
Self-Grooming/Cosmetics	Razor	1 piece	Gillette Vector Plus Manual Shaving Razor, 1 Pc	Rs. 65	Gillette Venus Breeze Hair Removal Razor for Women with Avocado Oils 1 Pc	Rs. 325

Self-Grooming/ Cosmetics	Hair Removal/ Shaving cream	100 grams	PARK AVENUE Classic Lather Shaving Cream	Rs. 82	Veet Hair Removal Cream - Sensitive Skin Cream	Rs. 220
Self-Grooming/ Cosmetics	Trimmer	1 unit	Philips BT3211/15 corded & cordless Beard Trimmer with Fast Charge	Rs. 1895	Philips BRE235/00 Corded Compact Epilator (White and Pink) for gentle hair removal at home	Rs. 2795
Self-Grooming/ Cosmetics	Lip Balm	4.8 grams	NIVEA Men Lip Balm, Active Care SPF for 24h Moisture	Rs. 140	NIVEA Lip Balm, Soft Rose	Rs. 185
Wellness	Contraceptive	1 pack of 3 for Durex; 1 Tab for I pill	Durex Wildberry Flavoured Condoms - 3 Condoms	Rs. 50	Levonorgestrel, I Pill Tablet	Rs. 120
Self-Grooming/ Cosmetics	Perfume	1 bottle	Yardley London Gentleman Classic Daily Wear Perfume for Men	Rs. 649	Yardley London Royal Diamond Perfume for Women	Rs. 1300
Self-Grooming/ Cosmetics	soap	1 bar- 125 grams (Wildstone) 1 bar- 100 grams (Dove)	Wild Stone Forest spice 125gram	Rs. 50	DOVE Cream Beauty Bathing Bars	Rs. 58
Self-Grooming/ Cosmetics	Moisturizer	1 unit	NIVEA Men Moisturizers Cream	Rs. 80	NIVEA Creme	Rs. 99

("AXE Dark Temptation Deodorant Spray - For Men - Price in India, Buy AXE Dark Temptation Deodorant Spray - For Men Online In India, Reviews & Ratings | Flipkart.com", 2021), ("Dove Go Fresh Cucumber 150ML - DEODORANT - For WOMEN", 2021), ("Fair & Lovely Advanced Multi vitamin fairness - Price in India, Buy Fair & Lovely Advanced Multi vitamin fairness Online In India, Reviews, Ratings & Features

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Lafferty in his findings revealed that the “young girls” clothing items cost more than the boy’s clothing items. It has also been seen that women tend to pay a 13% higher rate for personal care product (for example deodorants). In this study, the gender marketing has also been revealed highlighting the economic disparity that is brought down by different businesses. In other words, brand is trying to take the opportunity to make the items overpriced, that are marketed for the females. And, this has been taken as a “norm” for “female consumption”. In this case, the phrase “norm” is important. Most of the women do not even consider the pricing as “overpricing”, and the problem starts arising from that very viewpoint. Another important aspect that this study put forward is that the “Gendered Tariff Rates”. The author argues that in many instances, tariffs are imposed only on those imported goods which are designed for the female counterpart. This segment of “goods” majorly includes clothing items. It has been confirmed that “On average, clothing imports for women are taxed at a higher rate than clothing imports for men—15.1% compared to 11.9%” as per the Joint Economic Committee Report, US Congress 2016. This is one of the many reasons why the fashion industry is playing so harsh against women (Lafferty, 2019).

On top of that, there is a segment of lady-consumers who are too conscious about the pricing of the clothes they wear or the accessories they carry as these price tags symbolizes a particular status, without looking much into the quality that the product is offering. A classic example of this case can be the Birkin bags, that

ironically manufactures bags for only women, and are sold majorly to influential celebrities that helps them to carry a status symbol, serving the users aesthetically, more than functionally (Alux.com, 2018). Another epic example can be Victoria's Secret, that again carries a status symbol, more than serving functionally. Let alone this one brand, most of the brand that are involved in garment retailing industry (especially innerwear segment), the fairer sex is required to pay a lot more amount to acquire these very essential pieces of clothing (for daily need) if compared to the male counterpart (Mzezewa, 2018). Many other essential item-like tampons, sanitary napkins, razors, hair oils etc. also face such price discrimination solely based on the gender-based marketing, even though the basic ingredients remain the same for the different products.

As discussed in the Literature Review, there is a "cost" of doing femineity as per the study "The Cost of Doing Femininity: Gendered Disparities in Pricing of Personal Care Products and Services". In this particular study, certain examples were drawn that need special mention. When it comes to the hair cutting service, the argument can be made that women hair dressing takes "more time" than men. But it has been found out the hair cutting technology for both the genders are very much similar, and as far as the 'training' is concerned which is required to work at a men's hair salon takes the same amount of time which is required to work at a Unisex hair salon or Women's hair salon. Also, there is not much significant wage difference between the hairdresser of a man than that of a woman. So the argument that tries to establish that women "need" to pay more for these basic grooming services is completely flawed. Similar arguments have been drawn for the dry-cleaning services as well. Dry cleaners explained that men's shirts can be machine pressed, while women's shirts are required to be hand pressed. However, as per the findings of the study, even though no significant difference has been found when it came to suits and blazers of men and women, but, mentionable differences has been observed when comparing the dry-cleaning charges of men's shirt and women's shirt. When it comes to personal care products like body spray, differences could be observed, although the degree of variation is there. For some products, the price difference is significant and, in some cases, they are not much significant. The data used in this study typically shows that women tend to pay "more". Now, it must be kept in mind that the sample used in this study is limited within a certain part of the United States (Duesterhaus et al., 2011).

However, in a country like India, where sanitary napkins are still viewed as "Luxury" items and where



many of the rural women do not even have the idea of “Self-Grooming”, there are significant price differences between the razors sold for men and women as well as hygiene products for men and women (“Amazon.in: razor for women cartridge”, 2021).

Here, the problem lies in the fact that in most cases, women are seemingly not bothered about the price discrimination or fails to recognize that price disparity exists. As the study “The Cost of Doing Femininity Gendered Disparities in Pricing of Personal Care Products and Services” already confirms that women “tend to pay more” and also opined that it may come from a cultural belief (as it says the ladies to look beautiful), it is quite understandable that most of the women will not consider thinking about the price disparity, especially who do not belong to the working class and is dependant financially on a male counterpart. Therefore, to end this price disparity the women need to recognize and address the existence of such pricing disparity. In the study called “Assessing Pink Tax Variations and Price Discrimination” by Charles Scheland, pink tax has been described as an intersectional issue and the instance of personal care goods market has also been identified, where the occurrence of pink tax is too vigilant. In this context, the example of regressive tax can also be drawn. As per the definition, the regressive tax is a tax that is applied uniformly, irrespective of the earning level of individuals. Scheland argued that pink tax can be called an example of regressive tax (even though pink tax cannot be called an official tax) because both the high income group and low income group is paying it. However, this particular study concluded that “The gendered price differentials in the data seem entirely random and uncorrelated to the relative wealth of the CD they were located in.” However, the author also admitted since the data is inconclusive, they do not prove a complete absence of pink tax (Scheland, 2021).

Therefore, some of the researches showed wide differences that proved the existence of pink tax, on the other hand, few studies identified marginal differences. However, no study could completely deny the existence of pink tax cent percent. Now it is already the time to acknowledge the differences and take some serious actions against it.

## **Conclusion**

The existence of pink tax is very much there. From the different research studies, it can be concluded very clearly that the pink tax exists. In some of the sectors, the price disparity is more, and in the other sectors, the disparity is seemingly lesser. However, the awareness is not there at the level which is being desired.

Therefore, solution is to be found out how such taxes can be reduced. There have been several blogs as well, on this topic of most of the blogs lacked valid evidences.

### **Recommendations**

Now that it is evident that the pink tax exists, we should take steps to completely eradicate it. Awareness campaigns can be organized to spread the concept of Pink Tax between both rural and urban women and men. However, it is still can be understandable that women belonging to metropolitan areas do have at least some level of knowledge regarding pink tax in India, due to the access to limited studies and blogs that many of the authors came up with. But this is still an alienated concept for women who live in the rural areas. So, at first, the concept of pink tax is to be introduced and it is to be made sure that the general public know what pink tax is all about. After that the Indian Law can be mend in a way that completely prevents any scope of pink tax. Especially when it is a known fact that brands have started taking unfair advantage of it, and India being no exception, if no action is taken now, it may get even worse in future leading to a bigger price disparity between the sexes, taking the advantage of legal loopholes.

As specified in some of the studies explained earlier, many of the goods intended for women, when imported, duties and taxes are imposed at a comparatively higher level. Therefore, it is quite understandable that the legal loopholes surely exist that sometime encourage pink tax. In the article “Tampon Taxes, Discrimination, and Human Rights “by Bridget J Crawford, the author argued that gendered based tax policies get formed in a culture of silence and secrecy. It has been also pointed out that justice can occur only when the correct information is visible to the citizens and when there is commitment from the legislators towards non-discrimination when it comes to the fiscal policies. A change can be expected at that time when the female consumers will start asking questions about it. (Crawford, 2017). In this regard, there is a popular book as well called “women and their bodies” that describes the science behind menstruation and the fact that menstruation is not choice, thereby indirectly condemning any product marketed for menstruation to be tagged as ‘menstruation’ (Women and their Bodies, 1970).

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**A comparative analysis on the performance of Mudra Yojana from 2015- 2020: - With special  
reference to different sections of the society**

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**Abstract**

Micro Units Development and Refinance Agent (MUDRA) is a finance institution, launched by the Government of India in 2015 as an initiative to finance the micro, small and medium enterprises (MSME), and entrepreneurs across the country who does not have access to the formal banking system. In order to address this problem to the micro and small-scale enterprises, MUDRA loan yojana was started by Government of India in 2015 to provide loan up-to ten lakh rupees to the non-agricultural and non- corporate firms. The concept was to “fund the unfunded”, who instead of being job seekers would be job providers. There are three types of loans under this scheme – Shishu, Kishore and Tarun, depending on the size of the loans.

This paper tried to look into the sole purpose of “funding the unfunded”, the need to understand how the money has been utilised and to what extent this has contributed to improving macroeconomic outcomes as GDP, GNP, unemployment etc.

Data sources in the study have been mainly secondary in nature and available in the government websites (Mudra, RBI, MSMEs), reports, journals, magazines and newspapers. The sources reported number of accounts opened, loan amount sanctioned and disbursed since the year of inception till 2019-20. From some sources data such as number of loans sanctioned and disbursed per account opened pan India has been extracted that is categorised under Shishu, Kishore and Tarun loan accounts.

This paper offers an insight to the impact MUDRA scheme had on the people at the bottom of the pyramid through our analysis for the period of 2015-16, the year of inception of the scheme and until 2019-20 as well as aims to focus on the amount of loans sanctioned and disbursed during the period

of study and to find out if there has been any growth in loan sanctioned and disbursed on yearly basis. Analysis has been made on accounts opened by women entrepreneur, new entrepreneur and minorities, for each category of the scheme and yearly growth percentage during the period of study has been extracted. The advantages and threats that mudra loan may pose on the Indian economy in the near future has been studied along-with the suggestions required for this scheme.

Keywords: - Sishu, Kishore, Tarun, Women entrepreneurs, New Entrepreneurs, minorities

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**Introduction**

MSMEs are the backbone of our economy which is the second largest provider of employment after agriculture. MSMEs contribute to 30% of the GDP of Indian economy. MSME sector acts as a complement to the big industries. It contributes to about 33% of the manufacturing output and 45% of overall exports.<sup>[1]</sup> The MSMED Act was passed in 2006 with an objective to finance the small and micro units as MSMEs play a very crucial role in the development of Indian economy. Many micro units are unable to sustain their business operations due to lack of availability of formal credit or finance to this sector, lack of proper training, lack of implementation of newer technologies etc. Around 63.4 million units throughout the country, MSMEs contribute around 6.11% of the manufacturing GDP and 24.63% of the GDP from service activities and an overall 33.4% of India's manufacturing output. According to National Sample Survey Organisation (NSSO) this sector provides employment to around 120 million people and contributes around 45% of the overall exports from India.<sup>[2]</sup> As per the Sixth Economic Census (2013), there were 58.5 million establishments found to be in operation, out of which, 34.8 million establishments (59.48%) were found in rural areas and nearly 23.7 million establishments (40.52%) were found to be located in urban areas.<sup>[3]</sup> However, banks were reluctant to finance the unregistered units of MSMEs and there was lack of data regarding the demand for credit from the MSMEs and the credit gap.<sup>[4]</sup> Thus, many micro and small units had to shut down because of lack of access to the formal financing system.<sup>[5]</sup> Around 60% of the MSMEs were run by the backward castes. In 2015 MUDRA yojana was launched under the aegis of Prime Minister's Mudra Yojana (PMMY) to finance the MSMEs and the entrepreneurs across India particularly the non- agricultural and non-corporates with loan requirement of maximum up to Rs. 10 lakhs under the three categories: - Shishu, Kishore and Tarun loans.<sup>[6]</sup> The objective of this scheme was to overcome the difficulty of the micro entrepreneurs in accessing the formal credit facilities, lending or borrowing from informal sources or dependence on limited internal resources which slows down the growth of the sector. This scheme is also known as MUDRA Loan Yojana, MUDRA Bank Scheme, Pradhan Mantri MUDRA Yojana (PMMY).

**Mudra as a loan Vehicle:** - The focus of Mudra loan is “funding the unfunded” i.e., funding the majority of the entrepreneurs who belong to the backward classes, women entrepreneurs, and people residing in the rural areas, who do not have access to the formal financial system of the country and thus aiming at job creation and improvement in the GDP of the country. Through PMMY scheme it aims to provide small entrepreneurs to borrow loans from all the Public Sector Banks, Private Sector Banks, Regional Rural Banks, State co-operative Banks, Urban co-operative Banks, Non-Banking Finance Companies (NBFCs), Foreign Banks and Micro Finance Institutions (MFIs). MUDRA was initially established as a wholly owned subsidiary of SIDBI. Loans can be availed by the entrepreneurs for start-ups businesses and also the expansion of the businesses. A Mudra card which is just like a debit card, is issued to the entrepreneurs so as to use it for mitigating working capital requirement. An overdraft amount of Rs. 5000 was sanctioned under Pradhan Mantri Jan Dhan Yojana (PMJDY) was treated as part of Mudra loan.

**Benefits of Mudra Loan: -**

1. “Funding the unfunded”- which means funding those people who do not have access to the formal banking system.
2. Encouraging the backward castes, and new entrepreneurs to avail loan under the Mudra scheme.[7]
3. Expanding the existing micro and small enterprises which otherwise have to utilise their own funds or stall the process of expansion.
4. Providing financial support to the women entrepreneurs with the objective of and both-financial inclusion women empowerment as one of the prime objectives of the yojana
5. Any Indian citizen having a non-agricultural and non-corporate business plan having a maximum requirement of 10 lakh rupees can apply for this loan.
6. No collateral security or guarantor is required for availing loan under the Mudra Yojana
7. The process for application of loan has been quite easy by applying in [udyamimitra.in](http://udyamimitra.in) with a few documents required.[8] There is no middleman between the borrower and the issuing bank/non-banking financing companies (NBFC).

8. Mudra card issued to the borrowers can be used by them for working capital requirements.
9. An overdraft amount of Rs.5000 issued under the PMJDY is also treated as a Mudra loan to the beneficiaries.

**Potential borrowers of Mudra: -**

Micro and small-scale industries in the non-corporate segment and non-agricultural segment are the borrowers of this loan. Proprietorship firms, partnership firms engaged in micro or small manufacturing business, service sectors, fruit and vegetable vending, truckers, shopkeepers, handicraft making, food processing, pottery making, auto rickshaws, beauty parlours are a few businesses to name amongst many who can avail loan under this scheme.

**Table 1: Categories of the loans available under this scheme: -**

<b>Category of Loans</b>	<b>Loan Amount</b>
Sishu Loans	Upto Rs.50,000
Kishore Loans	Rs. 50001 to RS.5 lakhs
Tarun Loans	Rs.500001 to Rs. 10 lakhs

**Source: - Annual Report 2015-16 [www.mudra.org](http://www.mudra.org)**

The Government of India had planned that more focus will be given on Shishu loans. It has been found out that in 2018-2019 almost 88% of loans in terms of loan accounts had been Shishu loans. It was 48 % in terms of value and sanction grew by 15% in comparison to 2017-18. <sup>[6]</sup>

**Literature review: -**

**Dr. S. Gupta (2015)** Mudra: Financial inclusion of the missing middle studied the modalities, functioning, responsibilities and the rationalities of the Mudra scheme to bridge a gap between the demand and supply for credit by the MSME sector.

**Vikash Kumar Mishra (2016)** studied the “Missing Middle” of India’s MSME sector whose requirement is either quite large compared to the micro-organisations (typically between one lakh rupees to ten lakh rupees) or too small for the banking sector catering to the corporate businesses.

Mudra Yojana aimed to provide finances to these non- corporate businesses and concluded how the participation of MFs has benefitted in disbursing loans to this particular sector had to rely on its own resources for business.

**Veena Goutam *et al*** (2017) studied Mudra Yojana as a loan vehicle, performance of Mudra card, and also the performance of Mudra Bank in Haryana and how Mudra Yojana has its prospects in future in improving the accessibility towards getting loans among the rural areas.

**Manish Agarwal and Ritesh Dwivedi** (2017) studied the performance analysis of the Mudra scheme statewise based on caste and category of the scheme and has also done the SWOT analysis. They came to the conclusion that with the introduction of this scheme it would be helpful to the weaker sections of the society. The PMMY will help in the financial inclusion of the society in the positive direction.

**Dr. Kshetrimayum Ranjan Singh** (2018) studied the performance of mudra loans bank-wise, district-wise in the state of Manipur and also the expected outcome of this loan in the backward areas of Manipur and suggested some measures for effective implementation of this scheme.

**Annu and Dr. Manoj Kumar** (2018), studied the state-wise performance of Mudra yojana, identified the top ten states which has been the beneficiary of Mudra Yojana and also studied the utilisation of Mudra loan used by the women entrepreneurs and new entrepreneurs.

**Dr. Asha R Nair** (2018) studied the concept and operation of the Mudra scheme and what are the perception of the beneficiaries who have received loan under this scheme from State Bank of India Pandalam branch.

**Taranjeet Kaur Marathu** (2019) studied product offerings, procedure of the Mudra Yojana. It also studied the legal framework required to avail the benefits of the Mudra scheme. The author has come to the conclusion that though there are some documents needed to avail loan under the scheme, this scheme will help to refinance the small entrepreneurs who does not come under the formal banking system.

**Reshma Raj *et al*** (2019) studied the problems that the applicants faced while borrowing the loans.

One of the major problems identified in the paper is the lengthy processing time of the application of loans.

**Vijay Kumar** (2020) studied category-wise disbursement of Mudra loan and also region-wise performance of Mudra loan since its inception and how Mudra loan have been utilised by the weaker sections of the society which do not have much access to the formal financial system of the country.

**Objectives of the study:** - The objective of study has been divided into primary and secondary objectives.

- i. **Primary Objectives:** - The objective of the study is to make a comparative analysis on whether there has been any growth rate in accessing loans under the three categories of the scheme, i.e. Shishu, Kishore and Tarun, YoY basis during the period of study from 2015-16 to 2019-20 by different sections of the society viz. General Category, Scheduled Caste (SC), Scheduled Tribe (ST), and Other Backward Caste (OBC) on the following: -
  - a. number of accounts opened
  - b. loans sanctioned and disbursed,
  - c. Average amount of loan sanctioned and disbursed per account opened under all the three schemes and Growth rate in terms of percentage increase on YOY basis in loans over the period of study from 2015-16 to 2019-20.
  - d. Which loan has been successful among the three and causes behind it.

- ii. **Secondary objectives:** -

The study further aimed to find out that out of the above-mentioned sections of the society, how this yojana is utilized by: -

- a. Women entrepreneurs
- b. New entrepreneurs and;
- c. Minorities



**Research questions: -**

While government had launched this scheme with the sole purpose of funding the unfunded where a vast majority of the population of India falls under this category, there is a need to understand how the money has been utilised and to what extent this scheme can contribute to improving macroeconomic outcomes as GNP, GDP, Gross Unemployment etc. Moreover, we are also to answer the following questions through our analysis:

- a. The study aims to find out whether there has been any increasing trend in availing loan under different categories- Shishu, Kishore and Tarun. These will be in number of accounts opened, loan sanctioned, disbursed, average amount of loan sanctioned and disbursed per account and growth rate in terms of percentage increase on YOY basis.
- b. Whether there has been increase in loans taken by different sections of the people since its inception from 2015-16 till 2019-20 how different sections of the society are availing the loans. Whether there has been any change in loan availed by the weaker sections of the society like scheduled caste, scheduled tribe and other backward caste.
- c. Whether the purpose of Mudra Yojana in providing loans to women entrepreneurs under Mahila Uddyami scheme which aims for providing loan to the women entrepreneurs' women since the inception of the scheme from 2015-16 till the year of study i.e. 2019-20 has been successful.
- d. Whether there has been any improvement in taking loans from 2015-16 to 2019-20 by the new entrepreneurs and minorities.
- e. It also aims to find out which category of loan is more popular and if a particular category of loan has failed, it has tried to find out the reasons behind such failure.

**Scope of the study: -**

The period of study has been only five years, from 2015 to 2020 since the introduction of the scheme.

- a. Out of the different sections of the society, study has been done only on women entrepreneurs, new entrepreneurs and minorities. Other factors like PMJDY overdraft account, mudra card account etc. has not been taken into consideration due to constraints of time.

- b. Data has been gathered from secondary sources and most of it has been from the website of Mudra.org and there is no primary data collected for the study
- c. Data of new entrepreneur, women entrepreneur and minorities have not been classified as general category, SC, SC or OBC in the annual reports as published in the website of Mudra.org. Thus, in the study, which section of people has availed loan under the women entrepreneurs, new entrepreneurs and minorities could not be determined.

### **Methodology**

Our main source of data will be the secondary sources that is mainly available in websites of the government (Mudra, RBI, MSMEs), reports from labour department of Government of India, annual reports of NABARD Data had also been extracted from different journal paper publications, newspapers and magazines. Most of the data have been compiled from Annual report of Mudra from the website- mudra.org. The data has been categorised into two sections: - first one which studies how different sections of the society viz. General category, Scheduled Castes, Scheduled Tribes, Other backward castes are availing loans under the Mudra scheme. Secondly, the data has been analyzed on the basis of how many women entrepreneurs, new entrepreneurs and minorities have accessed to the different types of loans and growth percentage under different categories throughout the period of study has been done. Descriptive statistical tools like bar graph have been drawn for showing YOY comparison and trend analysis

Through our analysis of data gathered from secondary sources for the period 2015-16, the year of inception of the scheme, and until 2019-20, we wish to offer an insight to the impact the MUDRA scheme had.

Bar charts have been used to compare the growth between the different categories of loan and comparison of year-wise growth of different categories of users has also been analysed. Trend analysis has been studied.

### **Analysis**

A comparative analysis has been made to study the utilisation of loans by the different categories of people around the society under the different schemes- Shishu Kishore and Tarun, in terms of number

of accounts opened, percentage change in taking loans (YOY basis), amount of loan sanctioned and disbursed per account. It also studied the utilisation of Mudra schemes by the women entrepreneurs, new entrepreneurs and minorities on number of accounts opened, percentage change in taking loans (YOY basis), amount of loan sanctioned and disbursed per account.

**1: Number of accounts opened under Shishu scheme by different categories of the society from 2015-16 to 2019-20.**

Figure 1, shows numbers of account opened pan India under Shishu scheme by different sections of the society e.g General, OBC, SC, ST.

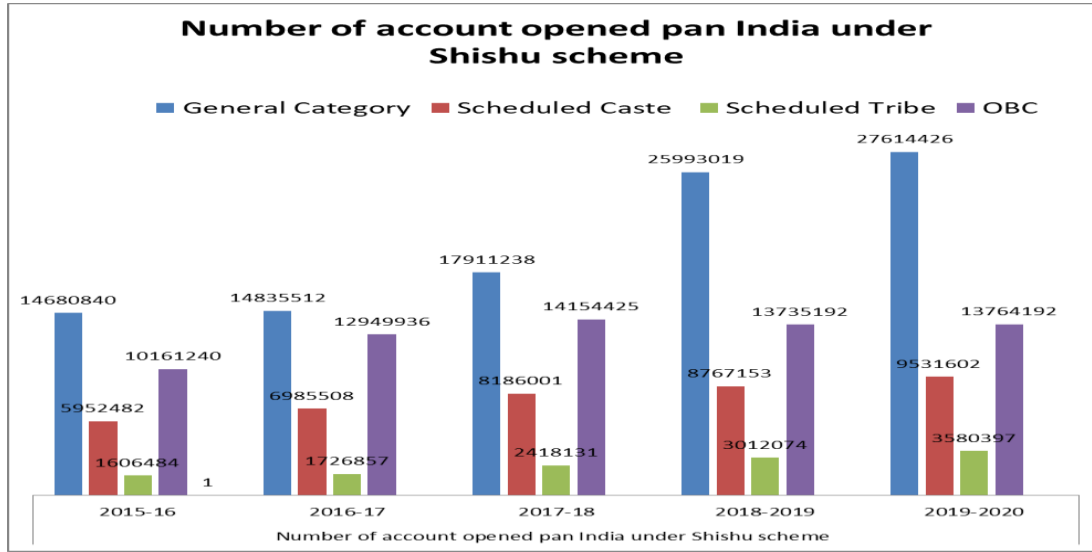
From figure 1, it is evident that people under General Category are the highest beneficiaries of the loan under the Shishu Scheme since inception. There has been a constant rise in availing loans under the Shishu scheme throughout the years of study. 2018-19 has seen a significant jump in opening accounts by the General Categories.

The second beneficiaries among all the sections of the society are the OBCs in opening accounts under Shishu scheme. Numbers of accounts opened by OBCs were at a constant increasing pace for the first three years, but after 2017-18, there has been a marginal decrease in opening the number of accounts in 2018-19 and has been almost the same in 2019-20.

Scheduled Castes (SC) were the third in utilising this scheme, but they were lagging behind the General Category and OBCs to a great extent in number of accounts opened. Out of total number of accounts opened under Shishu scheme only 17% to 19% were opened by Scheduled Caste during the period of study. As seen from the study, there has been a constant rise in opening number of accounts by the SCs over the period of study, which means that they have started availing loans under the Shishu scheme and became more aware of the Mudra Yojana.

Scheduled Tribes are lagging much behind even when compared to the Scheduled Castes, though during the years of study the total number of accounts opened by the STs under the Shishu scheme has doubled from 1606484 to 3580397. They are the last among all the sections of the society to avail

the benefit of the scheme. Out of the total number of accounts opened, only 4.73% to 6.5% of the Scheduled Tribes have opened accounts under the Shishu scheme.



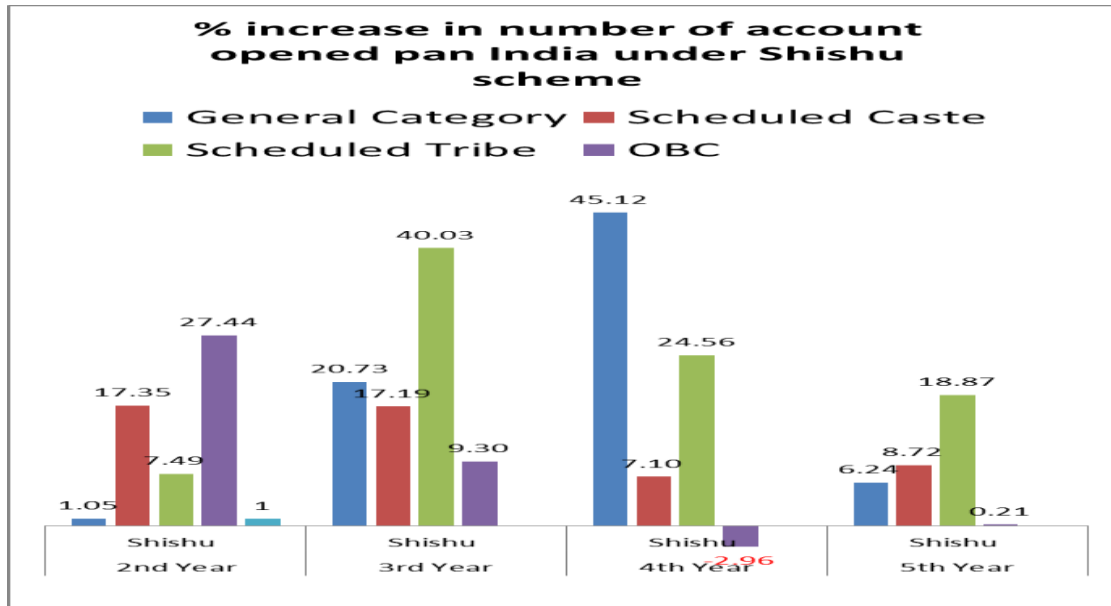
**Figure 1: Number of accounts opened pan India by Shishu scheme by different categories of the society from 2015-16 to 2019-20. [www.mudra.org](http://www.mudra.org)**

**2: Percentage change in opening accounts (YOY basis) under Shishu scheme by different categories of people: -**

Figure 2 below shows percentage change in the number of accounts opened pan India by different sections of the society under the Shishu scheme. The study finds that percentage increase in opening the number of accounts under the Shishu scheme by general category has seen a significant rise from 1.05% in the second year (2016-17) to 20.73% in the third year and 45.12% in the fourth year (i.e 2017-18 and 2018-19) respectively on YoY basis. Percentage increase in the fifth year (2019-20) on YoY basis is 6.24 % which is significantly low compared to previous two years.

There is a significant positive growth in 2016-17, i.e., 27.44% compared to 2015-16, but it started to decline in 2017-18 with 9.38% growth and further in 2018-19 there has been a negative growth of (-2.96%) which means that the number of accounts opened by OBCs has been less than the number of accounts opened by them in 2017-18. In 2019-20, there has been a slight improvement i.e. .21%

higher than the number of accounts opened by them in 2018-19. There has been a decreasing trend in percentage change in number of accounts opened by the scheduled Caste after third year of study. From 2016-17, there has been a nominal decrease in in number of accounts opened, but decrease in percentage change in number of accounts opened in 2018-19 has been quite significant i.e. 7.10% and then 8.72% in 2019-20 on YOY basis. For the scheduled tribes, the rate of increase in number of accounts opened has been increased significantly from 7.49% in 2016-17 to 40.13% in 2017-18, but this rate has decreased significantly in 2018-19 to 24.56 and 18.87 in 2019-20.



**Figure 2: Percentage growth in number of accounts opened by different castes under Shishu scheme from 2015-16 to 2019-20**

**3: Analysis of number of accounts opened pan India under Kishore scheme by different categories of the society from 2015-16 to 2019-20.**

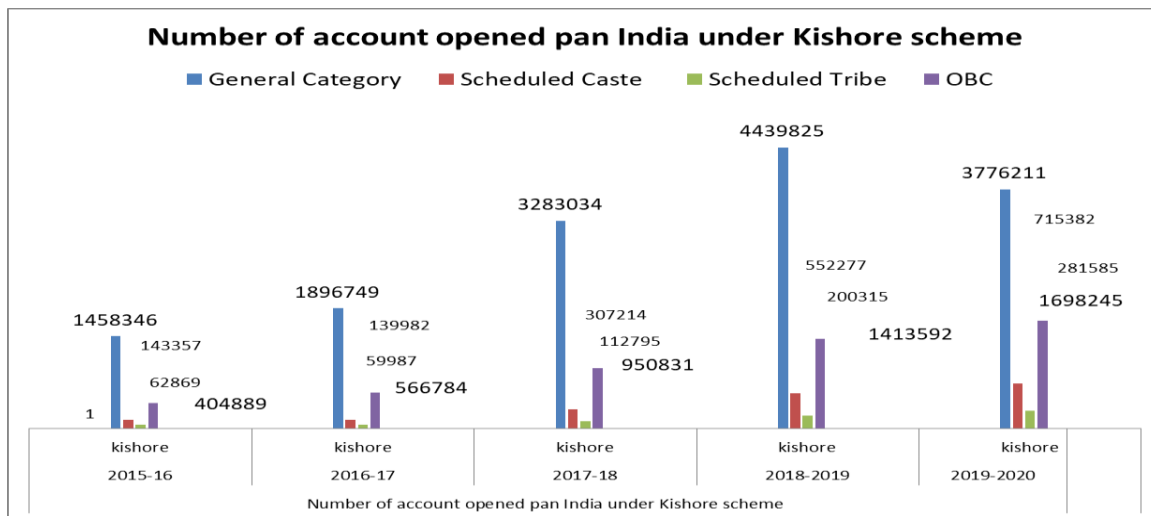
Figure- 3 below shows that the General Category has a positive trend in opening the number of accounts under the Kishore scheme till 2018-19. The number of accounts opened dropped significantly in 2019-20 from 4439825 to 3776211.

The OBCs emerge as the second beneficiaries after general categories under the Kishore scheme throughout the period of study. The same pattern is being observed as was in the case of Shishu loans in case of General Category. There has been a steady increase in opening the number of accounts by

OBCs during the period of study.

2016-17 shows there has been a slight decrease from 143357 to 139982 accounts by the Scheduled Castes, but there has been significant rise in opening number of accounts by the Scheduled Castes from 2017-18 onwards till 2019-20.

Scheduled tribes are lagging behind the others in opening the number of accounts under the Kishore scheme. There has been a significant rise in the number of accounts opened under the Kishore scheme by the Scheduled Tribes during the period of study.

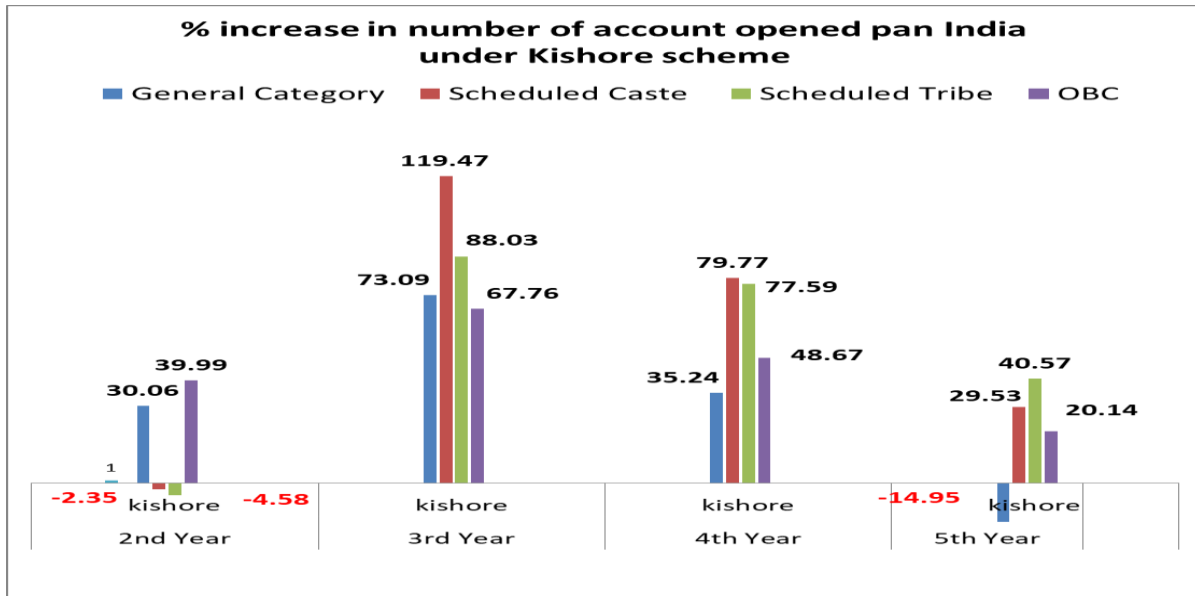


**Figure 3: Number of accounts opened pan India by Kishore scheme by different categories of the society from 2015-16 to 2019-20.**

**4: Percentage change in opening accounts (YOY basis) under Kishore scheme by different categories of people: -**

Figure 4 shows that there is 30.06% growth in percentage increase in number of accounts opened by the General category in 2016-17 compared to 2015-16. This growth has been significant in 2017-18 where there is 73.09% increase in percentage of opening accounts in YoY basis. 2018-19 shows that the percentage of opening accounts by the General Category has decreased from 2017-18 to 34.24% and subsequently in the fifth year, i.e. 2019-20, there has been a negative growth in terms of percentage. There has been a negative growth in percentage change in number of accounts opened for Scheduled Caste in 2016-17 compared to 2015-16, but there has been a mammoth growth of

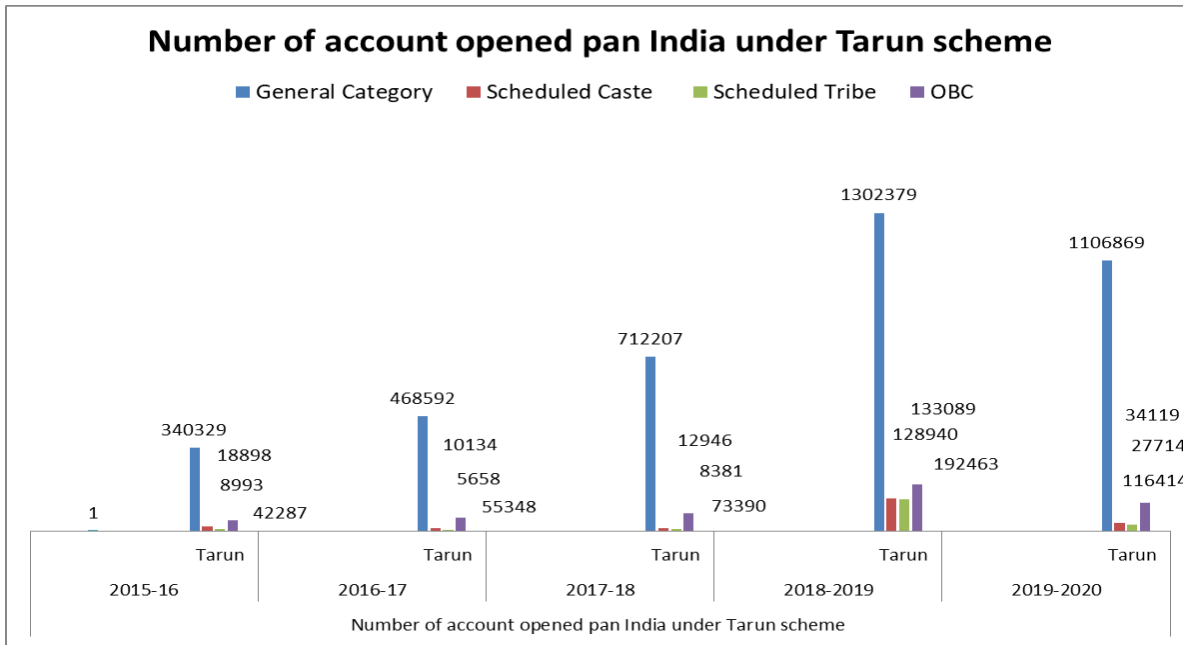
119.47% in 2017-18 compared to 2016-17, followed by 79.77% and 29.53% in 2018-19 respectively in YoY bases. The same trend can be seen in the case of Scheduled Tribes and Other Backward Caste.



**Figure 4: Percentage growth in number of accounts opened by different castes under Kishore scheme from 2015-16 to 2019-20**

**5: Analysis of number of accounts opened under Tarun scheme by different categories of the society from 2015-16 to 2019-20.**

Figure 5 below, shows that just like Shishu and Kishore loans, General Categories have been the highest beneficiaries of Tarun loan, followed by the Other Backward Castes which rose at a constant pace during the period of study. The third among the beneficiaries are the Scheduled Castes and Scheduled Tribes are lagging behind. Maximum number of accounts opened by all the categories is in 2018-19. In case of SC and ST, the increase in opening the number of accounts has been significantly high in 2018-19, which may be as a result of expansion of the existing business or increasing awareness about the scheme by these two categories of people.



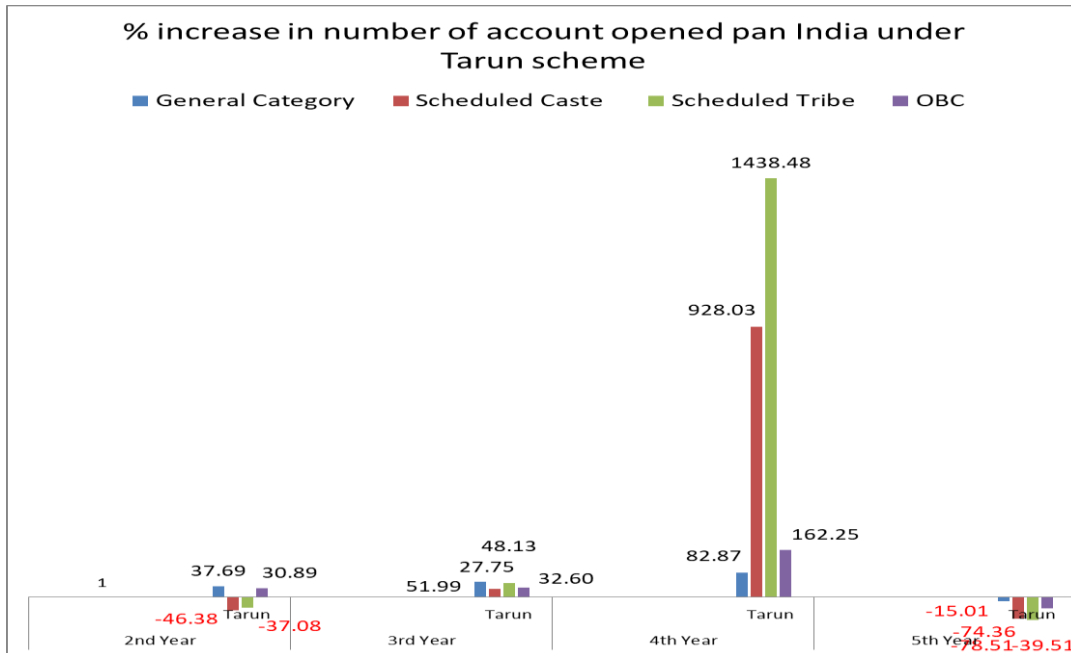
**Figure 5: Number of accounts opened pan India by Tarun scheme by different categories of the society from 2015-16 to 2019-20.**

**6: Percentage change in opening accounts (YOY basis) under Tarun scheme by different categories of people: -**

There is an interesting fact in percentage increase in number of accounts opened under Tarun scheme YOY basis. There has been rise in percentage of number of accounts opened in 2<sup>nd</sup> year, 3<sup>rd</sup> year and 4<sup>th</sup> year, i.e. 2016-17, 2017-18 and 2018-19 respectively by General Category and The OBCs. However there has been a negative growth percentage in number of accounts opened by General Category by 15.01% and OBCs by 39.51% in 2019-20 compared to 2018-19. For scheduled castes and scheduled tribes, there has been a negative growth in percentage change in number of accounts opened under Tarun scheme in the 2<sup>nd</sup> year, i.e., 2016-17, which means that the number of accounts opened by Schedules Castes and Scheduled Tribes as compared to 2015-16 has decreased but, in 2017-18 there has been a positive growth in percentage change in number of accounts opened compared to 2016-17 and in 2018-19, there has been a havoc growth i.e. 928.03% compared to 2017-19. Same trend can be observed for Scheduled Tribes where there has been a massive 1438.48 %



rise in number of accounts opened YoY basis. This symbolises that there has been an awareness and participation by the backward castes in availing loan under Mudra Yojana, which was the objective of PMMY. However, in 2019-20, there has been a negative growth in terms of percentage of number of accounts opened under Tarun scheme across all the categories in India.



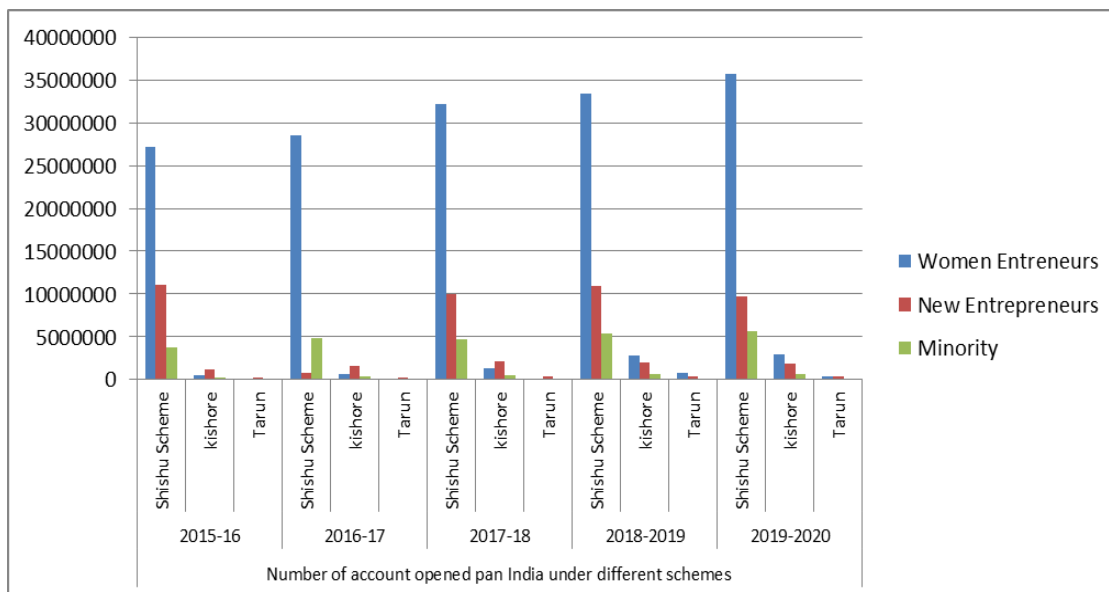
**Figure 6: - Percentage growth in number of accounts opened by different castes under Tarun scheme from 2015-16 to 2019-20.**

**7: Number of accounts opened by the women entrepreneurs, new entrepreneurs and minorities under the Mudra Yojana.**

One of the main objectives of Mudra scheme was to include the women entrepreneurs under financial inclusion and also to provide empowerment to them. Mudra scheme has successfully achieved this objective. Figure 7 shows that during the period of study loan availed by the women borrowers have increased steadily under Shishu scheme and Kishore scheme. In 2019-20, the number of accounts opened by all sections of the people reduced compared to 2018-19, but there has been an increase in borrowings by the women borrowers under the Shishu and Kishore scheme. There has been a dip in number of accounts opened by the women borrowers under Tarun scheme in 2019-20.

2016-17 has seen a massive dip in the number of accounts opened under Shishu scheme by the new entrepreneurs. There has also been a dip in number of accounts opened in 2018-19 and 2019-20 by the new entrepreneurs under the Kishore scheme. Except in 2019-20, where there has been a mild dip in the numbers of accounts opened by new entrepreneurs, all other years have seen a steady increase in the number of accounts opened. The study also finds that in the first three years i.e. from 2015-16 to 2017-18 more than 50% of the new accounts opened under Kishore scheme and around 70 to 75% of number of accounts under Tarun scheme has been by new entrepreneurs.

Out of all the three sub-groups studied, i.e., women entrepreneurs, new entrepreneurs and minorities, minorities have been the lowest among the users of the Mudra scheme. In number of accounts opened under the different schemes, only 9-14% among the minorities have opened accounts during the year of study



**Figure 7: - Number of accounts opened by the women entrepreneurs, new entrepreneurs and minorities.**

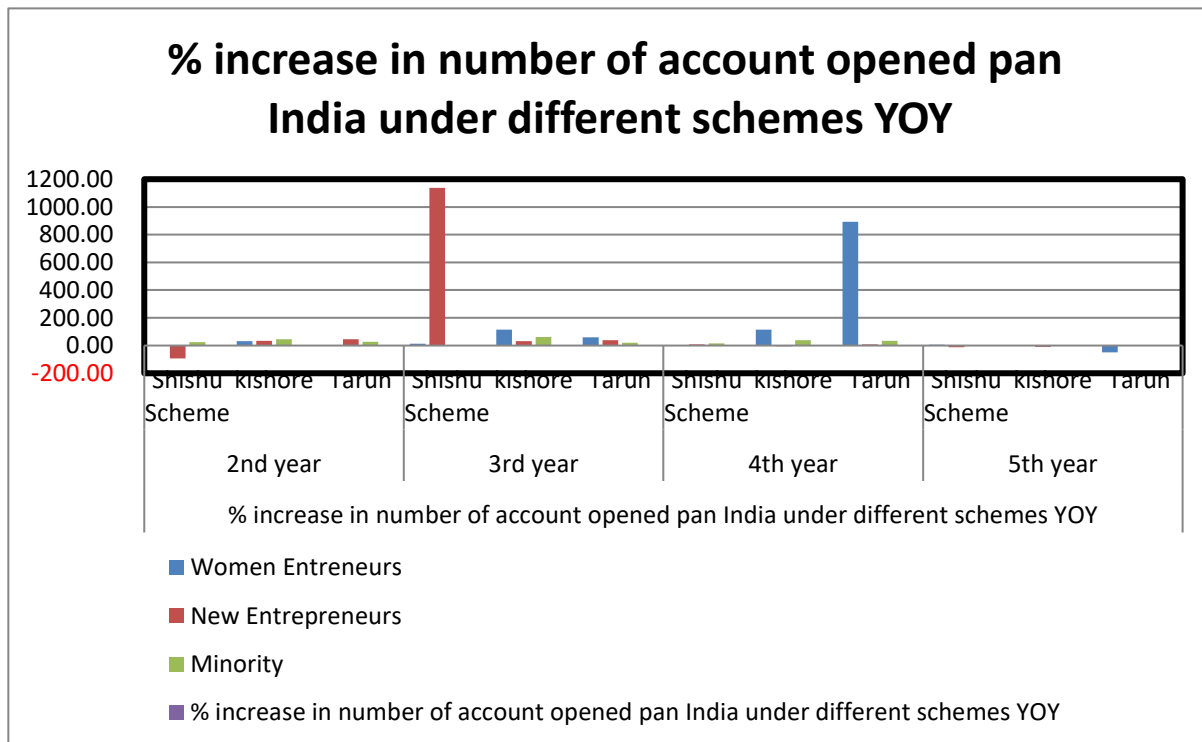
**8: Percentage change in opening accounts: -Percentage change in opening accounts by women entrepreneurs, new entrepreneurs and minorities YoY basis.**

Percentage growth YoY shows that maximum increase in opening accounts by women entrepreneurs

have been during 2017-18 and 2018-19 under the Kishore scheme, which is 113.66% and 115.35% YoY basis respectively. In 2019-20, there has been a marginal increase of 3.93% under the Kishore scheme. Under the Tarun scheme, the percentage change in opening accounts by women entrepreneurs have been negative change of 3.85% and 49.23% in 2016-17 and 2019-20 respectively when compared YoY basis.

Percentage change in number of accounts opened new entrepreneurs under the Shishu scheme scheme has showed a negative change of 92.67% and 11.6% when compared YoY basis. The third year, i.e. 2017-18 has seen a massive growth in percentage increase in number of accounts opened which is 1137.63%. Under the Kishore and Tarun scheme, there has been a decreasing trend from 3<sup>rd</sup> year, i.e. 2017-18.

Minorities share in opening accounts and availing loan has been quite low compared to the other two sub categories in this section. The average percentage in availing loans by the minorities has remained within 10 % to 12.98% within the years of study.

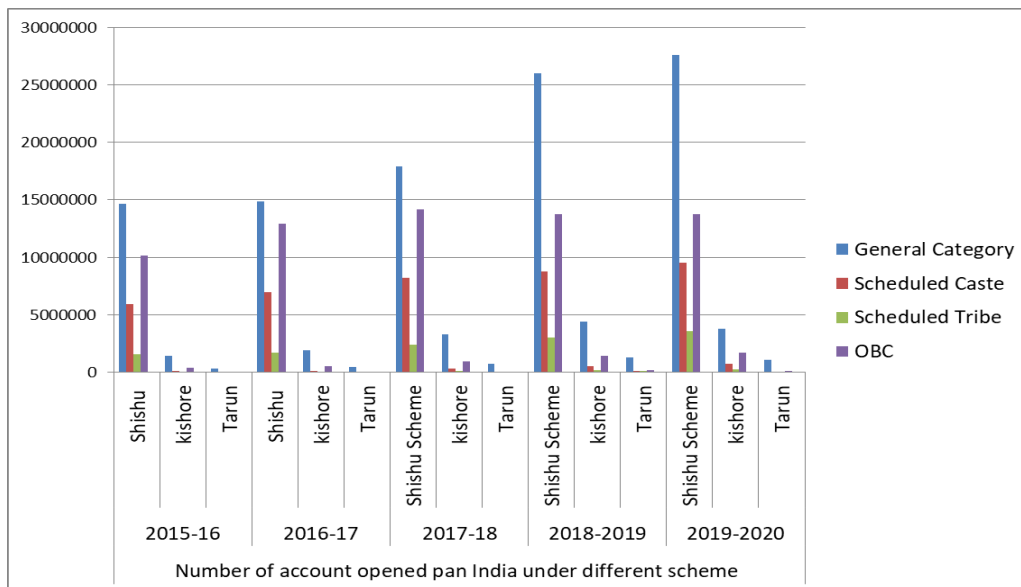


**Figure 8: - Percentage change in number of accounts opened by the women entrepreneurs, new**

**9: Comparative analysis of different schemes- Shishu, Kishore and Tarun schemes availed by different categories of people**

The figure 9 below shows that there has been during the entire period of study, Shishu scheme has been the mostly availed scheme by the borrowers followed by Kishore scheme and then Tarun scheme. One of the main reason for success of Shishu scheme which accounted for nearly 65% of additional employment <sup>[9]</sup> compared to others are:-

- i. In order to boost the promotion of Shishu loans a month long publicity campaign was organised on behalf of the government of India across different corners of the country.
- ii. Shishu loans does not require the entrepreneur to submit the proof of business existence and other documents unlike Kishore and Tarun loans which requires the applicant to submit more documents than the Shishu scheme.



**Figure 9: -Number of accounts opened under different schemes i.e. Shishu, Kishore and Tarun by different categories pan India.**

**10: Comparative analysis of percentage increase YOY basis on the number of accounts opened, loan sanctioned and loan disbursed under the Shishu scheme, Kishore scheme and Tarun scheme.**

Figure 10 shows that percentage of change in number of accounts opened, loans sanctioned and disbursed under the Shishu scheme in the 2<sup>nd</sup> year, i.e. 2016-17 there is increase in loan sanctioned and percentage increase in loan disbursed has been almost same which is around 35.30% and 30.24% respectively. Thus, in this year, whatever loan has been sanctioned under Shishu scheme has also been disbursed. In 2017-18, there has been a sharp decline in percentage of sanctioned and disbursed as well as in the number of loan accounts opened under the Shishu scheme. Another interesting fact is that the percentage increase in loan sanctioned in that year is less than the loan disbursed. The probable reason behind it may be because there must have been some loans from the previous years, (most likely from 2015-16) which has not been disbursed in that year, and has been disbursed in 2017-18. Maximum growth has been observed in the 4<sup>th</sup> year of study i.e. 2018-19 where the growth rate for loan sanctioned has been 42.34% and loan disbursed has been 33.98%.

As represented in figure 11, under the Kishore scheme, the maximum percentage growth in terms of number of accounts opened, loan sanctioned and loans disbursed was in 2017-18. In 2018-19 there has been a decline in percentage growth in number of accounts opened, loan sanctioned and loans disbursed under the Kishore scheme, compared to the previous year where the growth rate for loan sanctioned and disbursed were more than 60% in both loan sanctioned and disbursed as compared to 20.36% and 20.04% in 2018-19. There has been a negative growth percentage in 2019-20 compared to 2018-19 in terms of number of accounts opened, loan sanctioned and loan disbursed.

Figure 12 below shows that maximum rise in growth percentage of number of accounts opened, loan sanctioned and loan disbursed under the Tarun scheme have been in 2017-18 which is 61.98 and 62.93 respectively. 2019-20 has seen a negative growth percentage in number of accounts opened, and the percentage growth in loan sanctioned and disbursed has been around 5%. Thus, it can be ascertained that 2019-20 has seen a decline in the growth rate for all the three types of loans compared to the previous year i.e. 2018-19

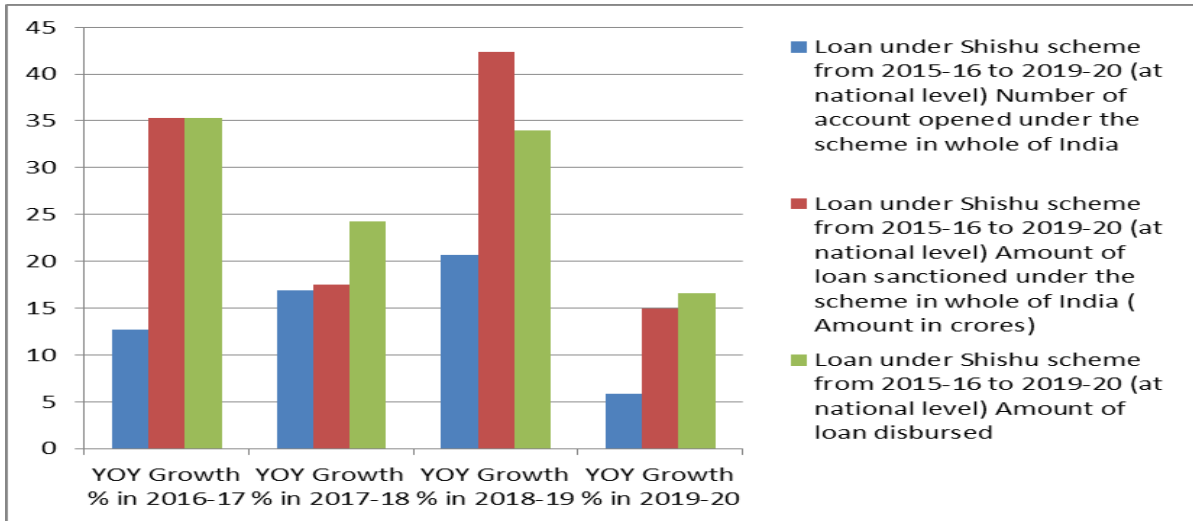


Figure 10:- A trend analysis on percentage of growth YOY basis under Shishu scheme w.r.t. to number of accounts opened, loan sanctioned and loan disbursed by all the categories taken together.

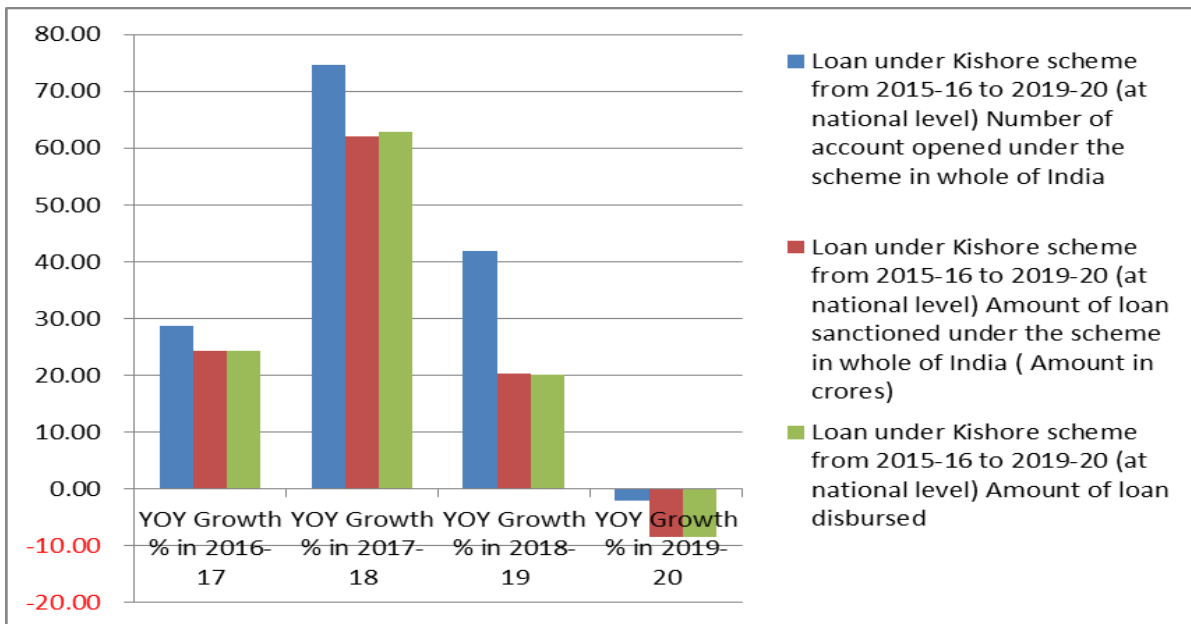


Figure 11:- A trend analysis on percentage of growth YOY basis under Kishore scheme w.r.t.

to number of accounts opened, loan sanctioned and loan disbursed by all the categories taken together

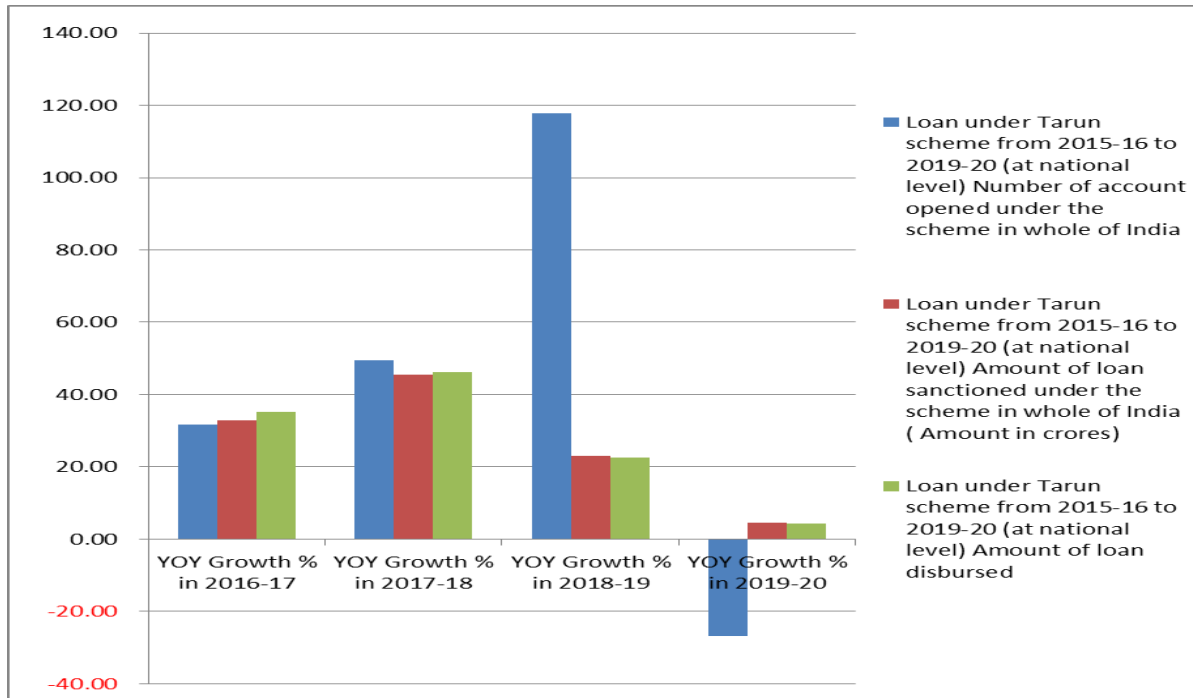


Figure 12:- A trend analysis on percentage of growth YOY basis under Tarun scheme w.r.t. to number of accounts opened, loan sanctioned and loan disbursed by all the categories taken together.

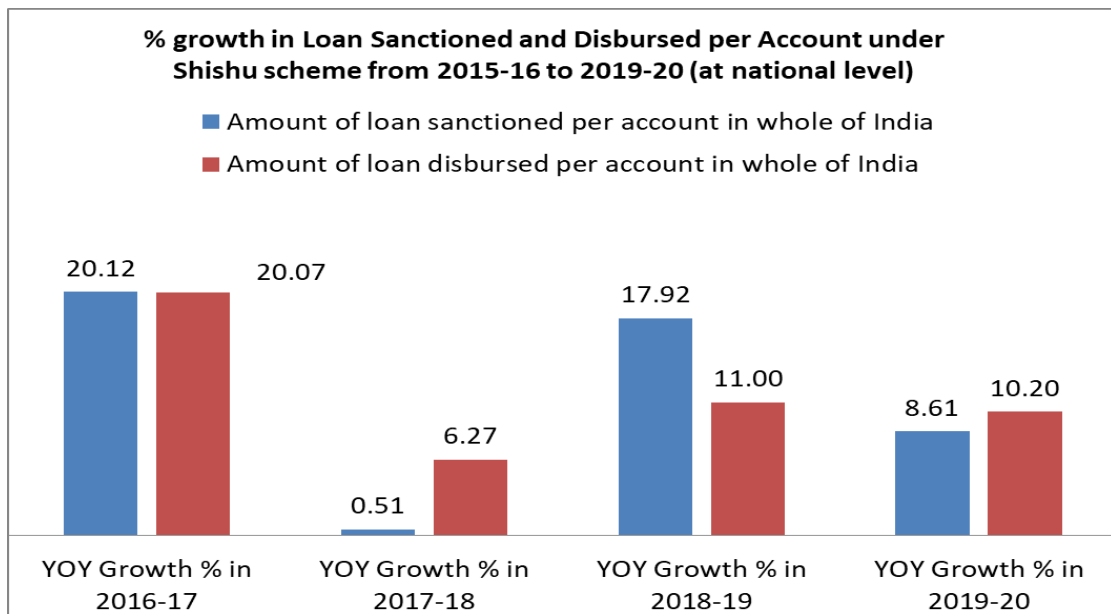
11: Comparative analysis of growth in loan sanctioned and disbursed per account under Shishu, Kishore and Tarun scheme:-

The percentage growth in average amount of loan sanctioned and disbursed per account under the Shishu scheme has declined in 2017-18 to .51% and 6.28% respectively compared to its growth of 20% in the average amount of loan sanctioned and disbursed previous year. However, in the consecutive years, percentage growth in amount of loan sanctioned and disbursed per account has increased.

Under the Kishore scheme, the percentage growth in average amount of loan sanctioned and

disbursed per account has shown negative growth when compared to the previous year throughout the period of study and the maximum negative growth has been in 2018-19. It means that the amount sanctioned and disbursed in this year has been minimum compared to what has been sanctioned and disbursed in the previous year, i.e. 2017-18. Thus, it means, that though the number of accounts opened under the Kishore scheme may increase every year, the amount of loan sanctioned and disbursed declined every year compared to the previous year.

Under the Tarun scheme, the study shows that in 2016-17 there has been a nominal increase in percentage of loan sanctioned and disbursed per account. However, in 2017-18, and 2018-19, there has been a negative growth of 2.62% and 43.48% in percentage of loan sanctioned per account. It means, that the amount of loan sanctioned in that year compared to the number of accounts opened has been 2.62% and 43.48% less than the previous year respectively. However, in 2019-20, Tarun loan has increased to 42% compared to the previous year i.e.2018-19.



**Figure 13:- Percentage growth in loan sanctioned and disbursed per account under Shishu scheme**



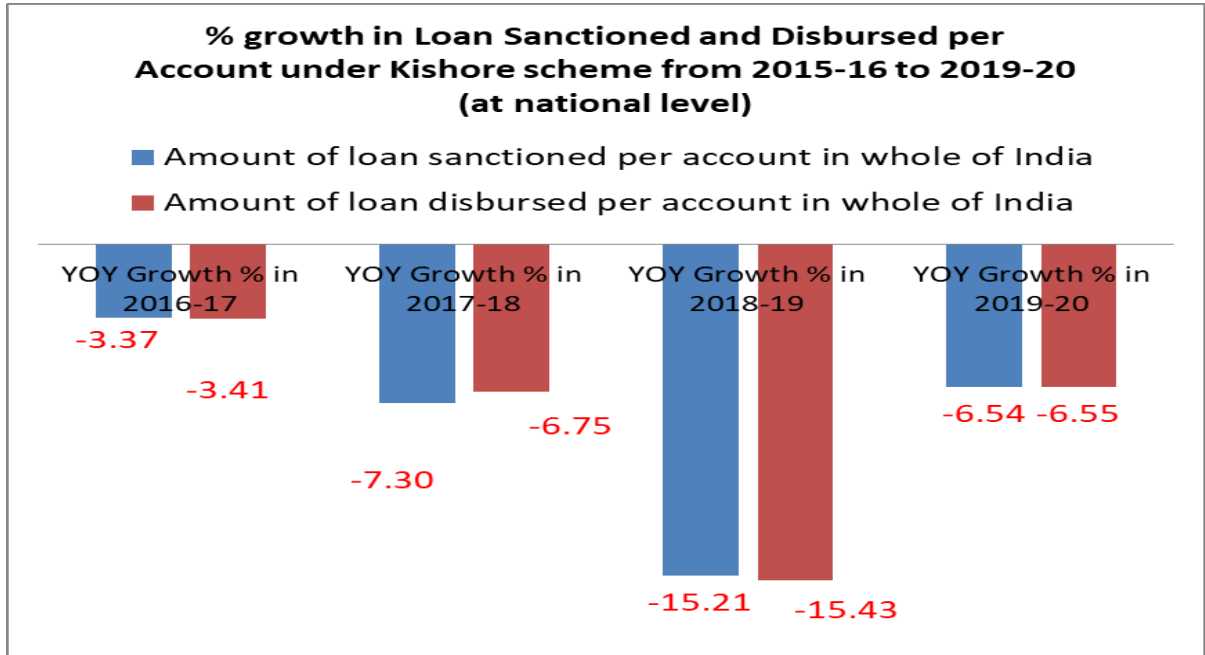


Figure 14:- Percentage growth in loan sanctioned and disbursed per account under Kishore scheme

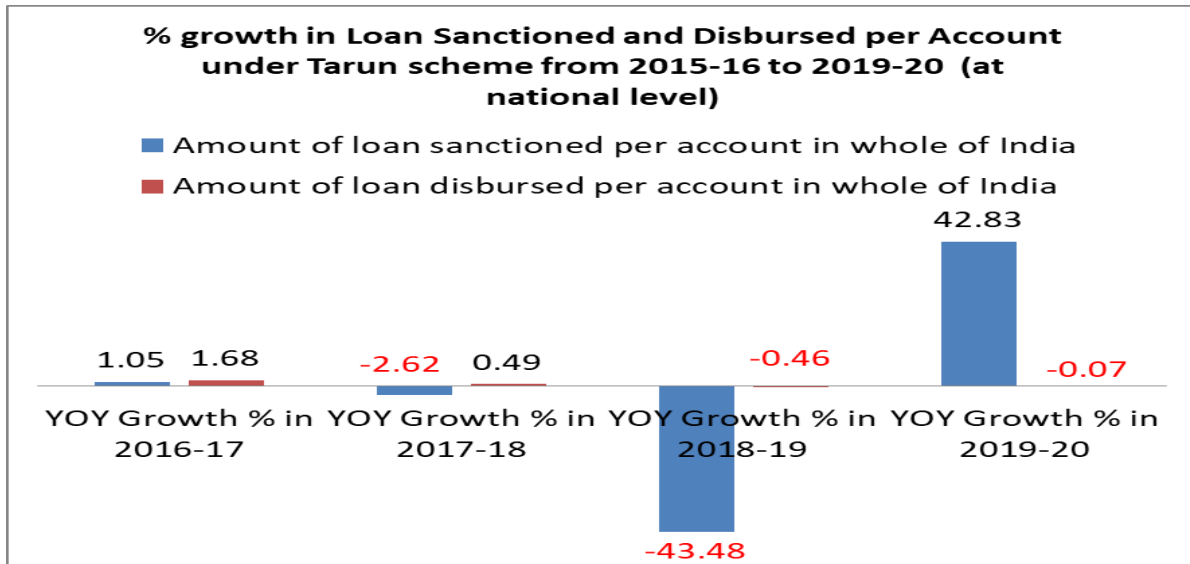


Figure 15:- Percentage growth in loan sanctioned and disbursed per account under Tarun scheme

**Threats posed by the scheme on Indian economy: -**

- i. Former RBI Governor has warned the government regarding the indiscriminate waiver of loans and ambitious credit targets can pose a threat in the economy in the near future.<sup>[10]</sup>
- ii. Critics of the scheme are of view that many of the best practices followed during loan sanction and disbursement have been neglected.
- iii. The quantum of bad loans has shot up significantly from Rs. 7,277.32 crores in March 2018 to Rs. 17,250.73 crores in March 2019.
- iv. Since the amount of loan sanctioned under Shishu Scheme has been up-to INR 50,000 most of the people who have taken loan has started very small micro businesses and that has been more labour intensive within very small level.

**Conclusion:**

- i. It can be concluded from the study, that among the Backward Castes, the Scheduled Tribes are lagging behind the others, in all the schemes during the period of study except in Tarun scheme in 2018-19
- ii. One of the main objectives of Mudra Yojana women empowerment, and Mudra scheme has been very popular among the women entrepreneurs. Around 65% of the borrowers of Shishu loans were women entrepreneurs
- iii. It can be concluded that backward classes have started taking loan under this yojana, however, Scheduled Tribes have been lagging behind the other backward castes. Out of the total loan sanctioned and disbursed only 5 to 6% among them are scheduled tribes and only 16 to 17% are Scheduled
- iv. Castes.
- v. Minorities are also lagging compared to the women entrepreneurs and new entrepreneurs. Only 11 to 12% of the minorities during the year of study have taken loan.

- vi. In 2019-20, there has been a negative growth in availing loan among all the sections of the society, which may be due to the slackness of the economy and followed by lockdown from mid- March 2020
- vii. Shishu loans have been most popular among the three loans.
- viii. In comparing the growth rate on YOY basis, it was found that in 2019-20, percentage of growth on loans sanctioned and disbursed has been negative in case of Kishore and Tarun loans. It means that There has been decline in loan sanctioned and disbursed in 2019-20 compared to 2018-19
- ix. Though there has been concern among the critics regarding the threat that Mudra Yojana will pose in near future because of quantum of bad loans, the Non-performing Assets under Mudra Yojana has been around 4% compared to 10 % average in the banking sectors.

**Suggestions: -**

- i. The amount of money that is being sanctioned and disbursed in Shishu loans, which are availed by the maximum borrowers (i.e., 65%) has been less than Rs. 50,000. This amount has not been sufficient to expand or set up any capital-intensive businesses. Thus, the amount of loan under Shishu scheme should be increased.
- ii. Reasons for failure in participation of scheduled castes, scheduled tribes and minorities have to be ascertained and measures have to be taken to boost up their participation in availing loans.

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required to apply for Kishore or Tarun Loans

## Stakeholder Engagement in Realization of CSR

\* Himanshu Sekhar Panigrahi

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### Abstract

Stakeholders are those who are influenced by or can influence a business' decisions and actions. They have a rightful interest in the company's business. Stakeholder engagement is the process in which the needs and expectations of various stakeholder groups are integrated as per priority into company's strategies and operations. This is now critical for effective implementation of the company's Corporate Social Responsibility (CSR) agenda. The need to adopt stakeholder engagement is growing up these days when multiple issues and challenges are mounting up for businesses and CSR is being taken up earnestly. It creates a win-win situation for both the company and its stakeholders.

The process of stakeholder engagement is continuously evolving. It has been and is being practised in many ways. However, there are certain general principles required to be adhered to for getting desired outcome from the process. This conceptual paper hints upon those principles and narrates a basic fit-into-all methodology of stakeholder engagement as a key part of CSR. The paper also analyses the benefits and challenges of stakeholder engagement.

**Keywords:** Stakeholders; Stakeholder engagement; CSR; Stakeholder mapping; SDGs

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## **Introduction**

The landscape of Corporate Social Responsibility (CSR) across the globe has been seen expanding rapidly during the last couple of decades. With this, huge amount of investment has been made on CSR projects of various thematic areas. While many such projects have yielded positive results, some have failed to get satisfactory outcome. Studies have identified several factors for failure of these projects. And, one of the key factors is the lack of consideration for ‘Stakeholder Engagement’ as an essential process for CSR practices. Stakeholder engagement has been generally viewed so far as needless and secondary. That is why it has been reflected in practice as a mere tick-box exercise with low level of engagement or very limited to few stakeholders.

However, the approach of stakeholder involvement must be seen as one of the CSR fundamentals that help in creating a win-win situation for both the company and its stakeholders. As indicated in the Stakeholder theory of R. Edward Freeman (1984), devoting time and resources in attending to stakeholders’ interests is a rational managerial endeavor. It is necessary for the company’s efforts towards realizing the triple bottom line i.e. people, planet and profit that corresponds with the social, environmental and economic dimensions of the concept of sustainable development. Needless to say, Stakeholders are aware of and well connected with their socio-economic situation and environment. Understanding needs and expectations of stakeholders is a prime requirement while designing CSR strategies. Engagement with the stakeholders is essential for effective implementation of CSR projects and desired value creation for the beneficiaries as well as the company.

## **What is Stakeholder Engagement?**

Stakeholder engagement is the continuous and systematic process of involving and interacting with stakeholders of the practitioner organization or company and management of relationships with them. It is a tool employed by companies to get a good understanding of stakeholders’ perspectives on important issues and in decision-making exercise. In this process, matters of mutual interest for the company and the stakeholders are taken up in a strategic manner. Here,

information is exchanged, issues are identified, and solutions are deliberated. Over the period stakeholder engagement has evolved from reactive to proactive response.

So, who are the stakeholders? For the business and CSR situation, stakeholders are those who are influenced by or can influence a business' decisions and actions. They may be affected or affect positively or negatively. They have power to affect success and failure of business bodies at any time and situation. The range of stakeholders includes employees, shareholders, consumers, customers, suppliers, communities, unions, governments, regulators, NGOs, media houses, etc. Stakeholders possess power, legality and exigency depending upon their types. In one way, stakeholders can be bracketed into Internal Stakeholders and External Stakeholders. In another way they can be categorized as Primary Stakeholders and Secondary Stakeholders depending upon the characteristics of the particular company. Primary stakeholders have direct impact on the company. Secondary stakeholders though do not have direct impact, can influence primary stakeholders.

### **Benefits of Stakeholder Engagement**

Stakeholder engagement benefits both the sides by creating 'shared value'. It helps the business house to measure opportunities and threats. Through this process issues of relevance are identified and solutions to conflicts are derived by continuous dialogue. By this mechanism the company can ensure and display accountability and transparency. The company gets competitive advantage from this engagement. This process helps in developing reputation capital and obtaining social license. The company gets better access to resources and markets. Tapping into stakeholder wisdom is a benefit the company gets by this process. All these ultimately lead to improved financial performance of the business in a sustainable way. On the other side, stakeholder engagement process makes the stakeholder groups more informed. They can analyze their concerns in a systematic way. Their expectations are aligned with the business goals and strategies. The process augurs well for sustainable development of the society as a whole.

### **Principles of Stakeholder Engagement**

For effectively engaging with stakeholders the companies should follow certain principles. Here are these principles which may not be limited.

- a) While identifying the stakeholders the principle of inclusiveness and diversity should be maintained with a 360 degree approach. Sometimes the seemingly unimportant stakeholder is missed out, but later it turns to be important. Hence, fair participation need to be ensured.
- b) The engagement process must focus on issues that are of importance and can put in value to the company. It should be ensured that the process helps in decision-making on the company's objectives.
- c) Stakeholder engagement should be a proactive initiative, not a reactive one. The earlier the process is started the better.
- d) The process of stakeholder engagement must be considered as continuous and dynamic as it changes always.
- e) Effort should be put to connect stakeholders' interest and expectations with the goals and objectives of the company.
- f) The format or set-up of the engagement should be appropriate and comfortable for all looking at the type of the stakeholder groups.
- g) The way and substance of communication with stakeholders are vital. It should have clarity and purpose. The language has to be simple and understandable to all.
- h) Sufficient scope must be there for dialogue with participation from both the sides. Stakeholders should be encouraged to share their opinion and feedback.
- i) The company should be open, honest, sensitive and responsive to the issues and concerns of different stakeholders.
- j) The outcomes of the process should be kept in order as prioritized and agreed upon by both sides.
- k) The process and outcome of engagement must be documented properly and can be shared.



- l) As stakeholder engagement is a continuous process, decisions agreed and commitments made during the process should be put into action. Then only long-term trust among stakeholders can be built upon and the cyclic process can continue sustainably.

### **Methodology of Stakeholder Engagement**

The process of stakeholder engagement consists of a number of activities and interfaces executed in a cyclic manner throughout the life of the business or CSR Programme. It can be carried out by using the Deming cycle method- Plan, Do, Check and Act (PDCA) for continuous improvement of the process. The general steps involved in the process are as follows:

#### **a) Creating Objectives of Engagement**

This initial step decides the ‘why’ of stakeholder engagement in respect to the vision and mission of the company or programme. General needs and expectations of stakeholders must be understood here. The value of investing in engagement can be measured in this step. The objectives, scope, responsibility and timeline of engagement should be spelt out.

#### **b) Stakeholder Mapping**

This is the most important step which comprises of three sub-steps i.e. Stakeholder Identification, Stakeholder Analysis and Stakeholder Mapping. It gives insight of the details of ‘who’ are to be engaged with. This step delivers a relevant and prioritized list of important stakeholders of the business.

Identification involves listing of the people and groups who have stake or interest now and may have in near future in the business or CSR programme. The list should be diverse. The list is liable to be modified as the situation evolves in ways like addition of new stakeholders and change of stakeholders’ expectations. Here, care must be taken that no important and potential stakeholder is excluded from the list.

After identification of stakeholders, they should be analyzed group-wise to know their significance and the impact they can create upon the company. Analysis helps in understanding their connection with the matters pertaining to the objectives of engagement. Some of the key

aspects to be considered while analyzing are- the willingness of the stakeholders to be engaged; impact, positive or negative, they can cause; contribution they can make; etc. Each group of stakeholder can be evaluated and be given rating according to these aspects. Stakeholders are required to be prioritized with the help of this evaluation outcome.

Stakeholder mapping is the exercise that further analyses the requirement and urgency of engaging with different stakeholders. Here, stakeholders' standing and relationships are observed by using some criteria specifically vital for the business. This exercise also studies the connection among the prevailing issues of stakeholders. Mapping can be done with the common matrix of willingness-impact-contribution or any other mix of criteria as required. As an outcome of this activity, stakeholders are classified in the scale of importance for the business.

#### **c) Developing Engagement Plan**

Once the stakeholders are identified and mapped, plan for engagement with them needs to be devised. For this multiple approaches as suitable are to be taken up. Some of the key and effective approaches of engagement are- Consultation, Collaboration and Innovation. In consultation, feedback and input are sought from stakeholders. Collaboration approach is the two-way dialogue based on mutual understanding and finding solutions. Innovation approach refers to joint initiatives for addressing common issues. For different approaches different formats like meetings, focused group discussions, conferences, partnerships, etc should be used. While making the plan for engagement, general aspects like stakeholder profile, cultural dynamics, familiarity with issues, way of facilitation, frequency of use of formats, ambience of chosen venue, logistic arrangement, and documentation of process and output should be considered. In every approach, communication is a vital factor. Scope should be there in the plan for adjustments and modifications during engagement.

#### **d) Executing Engagement Plan**

Execution of engagement plan consists of- a) informing the stakeholders, b) organizing the engagement events, c) documenting. For informing and inviting the stakeholders for participation, appropriate techniques of communication ought to be used looking at the convenience of different stakeholders. While organizing events of participation, sufficient scope

must be created for stakeholders for sharing their expectations and opinions. Facilitating team needs to manage the events by adhering to the agenda, avoiding controversial topics and diminishing misunderstandings. During engagement the entire process and outputs must be recorded systematically.

**e) Managing Post-engagement Activities**

Every cycle of engagement process should be assessed after its completion to verify if the used approach is executed effectively and engagement objectives are achieved. As identified by the assessment, necessary corrective and improved measures must be incorporated in subsequent plans. Further, as stakeholder engagement is a continuous process, keeping stakeholders informed and taking their feedback regularly should be incorporated in long-term strategy.

**Conclusion**

The concept and practice of stakeholder engagement has evolved a lot. And, its importance is growing up in this age when there are several challenges to global sustainability. In the time of Sustainable Development Goals (SDGs), role of all stakeholders has become critical. Particularly for business sector, which is expected and urged to contribute significantly towards SDGs, maintaining a solid relationship with its stakeholders is not an option, rather mandatory. Needless to say, there are several challenges in executing stakeholder engagement process. It is not so easy to transform information from stakeholders into business intelligence. While executing the process at the ground level confusion may crop up in prioritizing stakeholders as well as their issues due to assorted factors. Despite the challenges it throws up stakeholder engagement must be embraced by all type and size of business.

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## **A Qualitative Study on COVID – 19 and its Impact on Private Sector Employees in India**

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### **Abstract**

From the start of the pandemic, COVID-19 had a huge impact on private sector employees. Many people lost their jobs and many people had to suffer from reduction of salary. Some companies provide facilities to the employees while others had to cut off employees. The companies also suffered a lot from the pandemic. Many companies had to shut down because of earning less revenue. The objectives of the present study are to find out the impact of COVID-19 on private sector employees and to find out the present situation of the corporate employees.

The qualitative analysis in our research and thus tested the Inter Reliability Rate through Kohen's Kappa testing. A total of 20 participants participated in the interview where the participants are/were working in a private sector company during COVID-19. After the interview process an independent coder was chosen who has sufficient experience in his field. After the interviews were coded by us and the same was also done by the independent coder. The results of the study shows that work load, nature of work, job security, health facilities, psychological effect, alternative source of income are the major factors which are having the great impact on private sector employees in India.

Keywords: COVID-19, Private Sector, Corporate employee

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## **Introduction**

The unprecedented COVID-19 pandemic, which has quickly developed into a global humanitarian crisis and economic calamity, has raised the stakes enormously and introduced a new layer of complexity. While governments around the world have implemented quantitative easing initiatives to help markets function, these measures are likely to be ineffective and will not cure what ails many distressed companies, particularly private enterprises. As a result, private company finance professionals should be ready for a harder credit environment, and should be proactively re-evaluating their capital needs to detect potential liquidity mismatches and strive to bridge the gaps, regardless of where their company is on the credit spectrum. The COVID-19 pandemic has created a level of uncertainty which few private companies have ever had to face. Some companies in India are temporarily halting business or offering unusual assistance to employees as a devastating wave of the coronavirus sickens and kills hundreds of thousands. In order to prevent the human to human transmission of the novel coronavirus, the government has imposed a nationwide lockdown leading to the shutdown of industries and public transports. Due to the shutdown of factories and workplaces, local labourers, and migrant workers had to deal with the loss of income, food shortages, and uncertainty about their future. Thousands of migrant daily workers began walking back to their native places, with no means of transport due to the lockdown. In response to this, the Central and State Governments took various measures to help them and also arranged transport facilities for the workers. Many migrant workers also died due to starvation, suicides, police brutality, exhaustion, road and rail accidents, and denial of timely medical care. There are about 139 million daily labourers in the country approximately, according to the World Economic Forum. The International Labour Organization has said that due to the pandemic and the lockdown, about 400 million workers have been poverty-stricken (Titus Lalith Antony P., Leslie Rani, Brundha M. P., Jothi Priya, 2020). COVID-19 has affected people in some way or another, some people got advantage of that but most people were at a disadvantage especially the ones that work for private sector. Many companies thus far shut down because they were unable to generate enough revenue.

Not only that, paying the employees and staff got impossible. The main objectives of our study is to find out the impact of COVID–19 on private sector employees and also to find out present situation of the corporate employees.

In line with our objectives of the project we can discuss that we have positive and negative impacts of COVID–19 on private sector employees as literature review.

### **Literature Review**

Talking about the positive impacts on private sector company, it is considered that it's long-term impact on the economy has yet to be revealed and unfortunately, some businesses have collapsed due to the unexpected pressures endured. However, amongst the catastrophe and devastation that the global economy faced, grew a surge of creativity, innovation and adaptability by many businesses in a variety of sectors. Also, it provided companies with the perfect opportunity to innovate. Many businesses are now updating their training packages to reflect the needs of today's business operations in order to protect the growth of the company, alongside the wellbeing of staff (Hopkins.J., 2020). A rise in productivity levels was evidenced by it. Although faced with challenges, working from home, and communicating digitally have produced better productivity results than anyone could have expected, the employers get vast time utilizes their efficacy and designing new products. Not only so, it also allowed business to save money and let new job comers (Mizumoto.K., 2020). Also, due to the unprecedented nature of the pandemic and the lingering uncertainty around the lasting effects, leaders and leadership teams took a hard look at their books, revaluated spending and made adjustments to their cash flows, in order to prepare for any potential financial impacts from COVID 19 (Natania, 2020). When a private sector company use save money, they started hiring new employees as their efficiency as company needs. It encouraged a stronger sense of community. Many employees feel their work-life balance is healthier and their general well-being has noticeably improved. Being more present at home has encouraged people to establish or enhance relationships with neighbours and others within the local vicinity. As company encouraging a stronger sense of community to all employees to get positive vibes to work free without risk.

Moreover, Private sector companies have said it will reimburse affected employees and family members if their treatment costs exceed the insurance coverage. Employees who have contracted or recovering from Covid-19 are given 21 days of additional paid leave by the company. Some companies in India are temporarily halting business or offering unusual assistance to employees as a devastating wave of the coronavirus sickens and kills hundreds of thousands. In order to prevent the human to human transmission of the novel coronavirus, the government has imposed a nationwide lockdown leading to the shutdown of industries and public transports (Titus Lalith Antony P., Leslie Rani, Brundha M. P., Jothi Priya, 2020).

“We have an ageing population. If we have shrinking employment in urban places, if the better educated graduates or postgraduates are the ones who are losing jobs, how can we recover the economy from the downslide that we have gone through?” says Mahesh Vyas, the managing director of the Centre for Monitoring Indian Economy (CMIE).

Nine months after the COVID-19 lockdown, India still has 15 million missing jobs when compared to the pre-COVID 19 period, data from CMIE show, with more young people and women losing jobs than older people and men, respectively. Women, for instance, are 11% of the employed workforce but they made up 52% of the jobs lost.

As the economy opened up, these people started getting their jobs again, it looked like a fantastic recovery as well. But gradually we saw losses in the more permanent jobs, salaried jobs, losses in that category increased and then sustained. And that was worrisome. Although the jobs came back, the quality of jobs that came back was not as good.

We see that job losses, no matter which way you cut it, is of a distressing kind. Like it is the urbanites who are losing jobs more than rural jobs, women who are losing jobs more than men losing jobs. It is graduates and post graduates who are losing jobs more than others who are losing jobs. Youngsters losing jobs and not the older people. The composition of this loss of jobs is worrisome. If we have an ageing population, if we have shrinking employment in urban places, if the better educated graduates or postgraduates are the ones who are losing jobs (Govindraj Ethiraj, 2021).



## Research Methodology

### *Participants for Qualitative method*

Research is an endeavour to discover answers to intellectual and practical problems through the application of scientific method, It is the systematic process of collecting and analysing information or data in order to increase our understanding of the phenomenon about which we are interested or concerned, so for our project work on the topic. The impact of Covid – 19 in private sector employees we collected the data from all over the Nation for better and accurate results. We look upon the several factors for collection of data to provide a depth of understanding of raw data, as we are concerned about the qualitative method involve the collection of data, analysis and management of data. Choosing participants is the most important part for the research as shown in Table 1.

**Table 1: Distribution of Sample**

State/ District	No. of company	Age	Male	Female
North 24 Parganas	7	>20	5	2
Maharashtra	4	>30	4	0
Tamil Nadu	1	>40	1	0
South Kolkata	7	>50	6	1
Telangana	1	>60	1	0

*Source:* Authors own study

### *Survey Instrument*

The initial instrument was created based on information found in the literature. This instrument had 8 items to follow up the effect of COVID-19 on private sector employees. We conducted a focus group interview with 20 respondents.

**Table 2: Description of questions**

Scale Item	Coding
What was the effect of COVID-19 in your work environment?	Effect
Do you prefer to work from home or work from office?	Work from
Did you lose your job? Did you suffer any reduction of salary?	Lose/Reduction
Did your office/company provide you with any facilities during lockdown?	Facilities provided
Did you face any transportation issue while going to work?	Transportation issue
Were you afraid that you might lose your job and what other problems you faced?	Loss/Problems
Did your colleagues lose job or had any reduction in salary and any other problems they faced?	Situation of colleague
What was the effect of COVID-19 in your work environment?	Effect

*Source:* Authors own study

***Coding Manual***

We have chosen an independent coder who has sufficient experience in his field and is suitable and eligible enough for coding. Each and every question is recorded through mobile phone and after that coded carefully. Similar process is also done by the independent coder with efficiency. It took 1 week to complete the whole process of recording and coding. After 10 days the same process of coding is again done by another coder to find out more precise data.

The coding process started with recording the calls. After that each group members took to their responsibility to listen to the interviews and write down the keywords (important words) one by

one. The independent coder also followed the same process. Then both of the keywords i.e, the keywords of the group members and the independent coder is compared. In this comparison, it is checked whether both of them have written the same or similar keywords. Here the answers come in:

- Yes-Yes (Both the group members and the independent coder written the same keywords)
- Yes-No (A keyword written by the group members and not by the independent coder)
- No-Yes (A keyword written by the independent coder and not by the group members)

After this is completed the coding part is left for 10 days. After 10 days another coder again code the same data and here this is checked:

- No-No (A keyword neither written by the group members nor the independent coder)

After this is complete certain numbers are aligned to Yes and No i.e., for Yes= 1 and for No=0 and then this is recorded in MS Excel which is then sent to Statistical Package for Social Sciences (SPSS) to test the Inter Rater Reliability.

### ***Kappa***

To measure reliability is to measure the percentage of agreement between raters. It involves simply adding up the number of cases that were coded the same way by the two raters and dividing the total number of cases. But raters are expected to agree with each other a certain percentage of the time simply based on chance (Cohen, 1960). Reliability can be calculated using Cohen's Kappa, which approaches '1' as the coding is perfectly reliable and '0' if no agreement is expected by chance.

Kappa is calculated as:

$$K = (PA - PC) / (1 - PC)$$

where the PA= proportion of units in which raters agree.

PC= proportion of units for which agreement is expected by chance.

The percentage of agreement calculation is derived by summing the values found in the diagonals (i.e., the proportion of the time the two raters agreed). This is the proportion of agreement over and above chance agreement.

**Table 3: Kappa Statistics**

<b>Kappa Statistics</b>	<b>Strength of Agreement</b>
<0.00	Poor
0.00-0.20	Slight
0.21-0.40	Fair
0.41-0.60	Moderate
0.61-0.80	Substantial
0.81-1.00	Almost Perfect

*Source:* Authors own study

**Results and Discussions**

We took the Demographic Information from the respondents during the interview and with that information the Table 4 is created. The information include respondent’s name, Age, Gender, Company Name, Company Location, Designation. From the Table 4 we came to know that there are different age groups of different gender (approximately 85% male and 15% female) is working in different companies which is shown clearly in Figure 1.

**Table 4: Demographic Information**

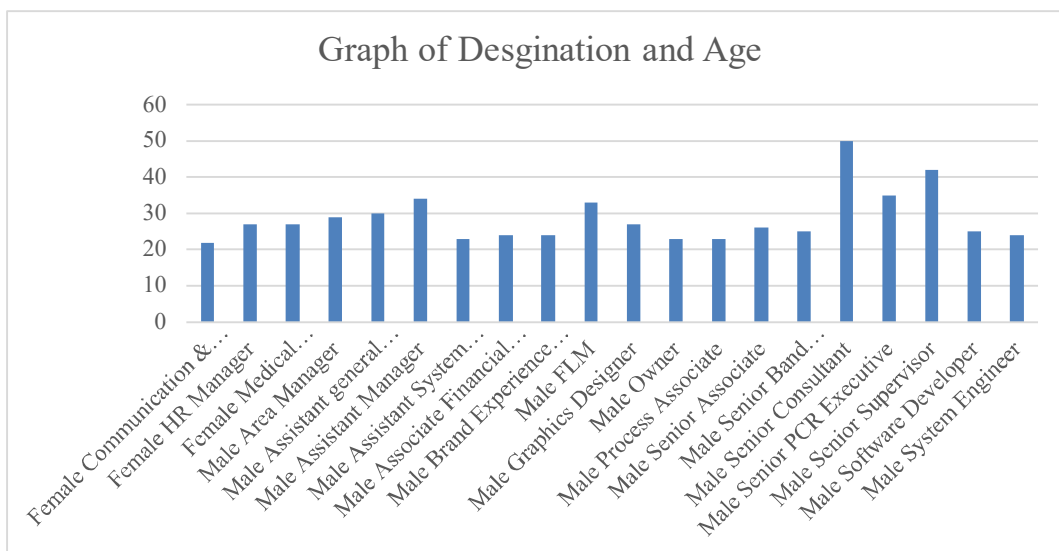
<b>Respondents</b>	<b>Age</b>	<b>Gender</b>	<b>Company Name</b>	<b>Company Location</b>	<b>Designation</b>
Respondent 1	23	Male	TCS	Rajarhat	Process Associate
Respondent 2	25	Male	Infosys	Pune	Software Developer

Respondent 3	23	Male	TCS Ecospace	Rajarhat	Assistant System Engineer
Respondent 4	24	Male	TCS	Delta Park Lords	System Engineer
Respondent 5	42	Male	Asian Paints	Jodhpur Park	Senior Supervisor
Respondent 6	26	Male	TWC	Salt Lake Sector V	Senior Associate
Respondent 7	23	Male	Biyot Ronix	Kasba, Kolkata	Owner
Respondent 8	33	Male	Sun Pharma	Mumbai	FLM
Respondent 9	27	Female	Tata Medical Hospital	Rajarhat	Medical Officer (Emergency Medicine)
Respondent 10	50	Male	Deloitte	Mumbai	Senior Consultant
Respondent 11	24	Male	TCS	Gitanjali Park	Associate Financial Analyst
Respondent 12	35	Male	TV-18 Broadcast Limited	Salt Lake Sector V	Senior PCR Executive
Respondent 13	30	Male	Highlight Event Management Consultancy Pvt Ltd	Park Street	Assistant general manager
Respondent 14	34	Male	The Hindu Group	Chennai	Assistant Manager
Respondent 15	27	Male	Grape Vines Media	Minto Park	Graphics Designer
Respondent 16	24	Male	Clay, Strategy and Design	Mumbai	Brand Experience Manager

Respondent 17	27	Female	True Height Interface Information Pvt Ltd	Salt Lake Sector V	HR Manager
Respondent 18	22	Female	Tomorrow's Foundation	Hossainpur, Ruby	Communication & P.D. Trainer
Respondent 19	25	Male	Amazon	Hyderabad	Senior Band Management Assistant
Respondent 20	29	Male	Havells India Ltd	Dalhousie	Area Manager

Source: Authors own study

Fig 1: Designation and Age of the respondents



From the answers of the interviewers the Inter Reliability Rate is tested through Kohen Kappa testing. The symmetric measure is given below. The kappa value came 0.651 which shows that the strength of agreement is substantial.

		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Measure of Agreement	Kap pa	.651	.047	10.458	<.001
N of Valid Cases		258			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

After Data Analysis, Themes and Sub-themes are categorised as below:

**Table 5: Categorization of Theme and Sub-theme**

Serial No.	Themes	Sub-themes	Codes
1.	Work load	Working Environment	1. Work hour extended. 2. No physical environment. 3. Transition from offline to online. 4. Frontline worker. 5. Disrupted.
2.	Nature of work	Home / Office	1. From Home. 2. From Office.
3.	Job security	Salary	1. Increased. 2. Reduced salary. 3. Didn't get salary.
4.	Health facility	Health	1. Internet Connectivity. 2. Covid test. 3. Vaccination.

5.	Irregularity in transportation	Transportation	<ol style="list-style-type: none"> <li>1. Sometimes provided.</li> <li>2. Sometimes not provided.</li> </ol>
6.	Uncertainty	Uncertainty in the work place	<ol style="list-style-type: none"> <li>1. No.</li> <li>2. Huge down cut of resource.</li> <li>3. Yes, lost job in 1<sup>st</sup> lockdown.</li> </ol>
7.	Psychological effect	Mental depression	<ol style="list-style-type: none"> <li>1. Neighbours have lost jobs.</li> <li>2. Friends have lost job.</li> <li>3. Depression.</li> </ol>
8.	Alternative source of income	Income	<ol style="list-style-type: none"> <li>1. No other source available</li> <li>2. Yes, dual source of income was available.</li> </ol>

Source: Authors own study

From Table 5 the results of the study are found which shows that work load, nature of work, job security, health facilities, psychological effect, alternative source of income are the major factors which are having the great impact on private sector employees in India. During COVID-19, the work load was extended, there was no physical environment to work with and the transition from offline to online affected many employees. The nature of work also changed. There was a whole transition from offline to online which affected many employees who are not virtually active. The work from home also started during this period. The private sector employees faced problems with their job security as many of their salaries were reduced and many employees lost jobs. Although suffering from this, many employees received some facilities like free vaccination and free internet from their companies. While other companies did not provide any facilities. Employees also faced transportation problems during this time as most of the transport system such as bus, auto, metro were closed. Not only that, there was also a reduction of online cabs. Employees were afraid that they might lose their jobs since most of the companies were not



earning enough revenues. Employees were psychologically affected. Many suffered from depression, anxiety. There were also some suicide cases involved. Throughout this pandemic, many people started depending on their second source of income which include freelance work, photography, etc. Therefore COVID-19 affected the private sector employees of India in some way or other.

### **Conclusion**

After conducting the survey, on how covid-19 has impacted the private sector corporate employees, we get to understand more about how covid-19 has affected as well as benefitted the corporate employees of the private sector. It is due to this survey, we got to know the different ways in which the private sector is working at the moment i.e. by preferring (work from home). Also, the work preference of different individuals in different fields, with different age gapping have come in view to have distinct comfort zones when it comes to working. As we can see from the survey, how different individuals are preferring and supporting work from home by counting its benefits while others are still preferring to work from office as per their job demands.

However, the above provided data clearly shows the number of people whom we have interviewed regarding their work preferences and their required followings have been coded. Moreover, this project has helped us to also focus on the effects of covid-19 on the corporate employees so that it can be lessened down in the near future without being much bothersome to the private sector. Not only the project shows the positive sides of covid-19 such as avoiding wastage of time, travelling expenses and obviously, the benefits of working from home but also the negative effects such as shutdown of companies, salary or wage cut-offs, handling the business which requires it's workplace, etc. The survey, interviews, data handling, methodology, etc., clearly shows and helps us to get a better understanding of this project by which we also calculated the inter-reliability rate. The inter-reliability rate was tested through Kappa testing, the result of which was 0.65, which shows that the strength of agreement is substantial. The results

of the study shows that work load, nature of work, job security, health facilities, psychological effect, alternative source of income are the major factors which are having the great impact on private sector employees in India.

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**A Study of Consumer Purchase Intentions for Selected Luxury Fashion Products, with a Focus on Pan India**

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**Abstract**

During the early years, Luxury goods were once seen to be a privilege to own. However, as time has passed and the luxury goods industry has expanded significantly, luxury goods have become more affordable to middle-class buyers. Through this research paper it has been understood that Consumer Perception, Brand Trust, Brand Loyalty, Brand Commitment are directly associated and have significant impact on purchase intention. Consumers purchase intention has the potential to expand the market towards its preferred brand. Customers having trust on the brand and satisfied after using it would be the best possible preferred brand in creating the awareness of purchase effectiveness. Also brands which are at all not popular in the market may have some negative impact, through customer preference analysis, on customer's perception towards the brand. Here, successful brands can effectively improve its visibility and its loyalty attitude on customer's mind to gain popularity in the market place. Brand loyal customers believe in being attached with their preferred brands and love to share their word of mouth in promoting the brand. The most important finding of the study is that brand trust can help organization in effectively recognizing its satisfied customer to expand its market and consumer base. The findings of our study support previous research findings that consumers generally act in accordance with the perceived luxury values of their reference groups. The study's findings also demonstrated that the elements influencing customers' buy intent are more powerful than their influence on functional value, implying that consumers have a favorable brand attitude toward their favorite/preferred brand. Hence the results of this study add to the growing literature of the purchase intention of the consumer towards luxury products by taking into consideration the

impact different variables on consumers' purchase in aspect of luxury goods. The study's findings also demonstrated that the elements influencing customers' buy intent are more powerful than their influence on functional value, implying that consumers have a favorable brand attitude toward their favorite/preferred brand.

**Keywords:** Luxury Products, Purchase Intention, Brand Awareness, Brand Commitment

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## **Introduction**

The dramatic increase in India's ultra-rich population has fueled demand for luxury products, making the luxury goods industry one of the most appealing and fastest expanding areas in the country. Luxury isn't what is used to be. Younger generations' changing consumer ideals place a higher value on trends than on classic emblems. The most significant shift we've noticed is that luxury brands are increasingly focusing on being fashionable and trendy. The luxury business in India has changed dramatically, although the concept of luxury is not new to India. Before the British arrived, India was recognized for its wealth. Even later, many royal families and business classes were customers of western luxury brands, and India has long been a manufacturing outsourcing destination, but due to a strong rising economy and a globalized corporate climate, India has quickly converted into a large market for luxury goods.

The Indian luxury market is about \$18.3 billion and is growing at a compounded annual growth rate (CAGR) of about 25 percent. The modern Indian luxury consumer base is developing, thanks to a growing middle and upper middle class with more disposable income. Because India's client base is continually rising and more liberal in its spending habits, the desire for value proposition is the greatest hurdle for luxury companies. India has emerged as a desirable investment location for multinational corporations, ranking among the world's most promising markets.

The luxury market showed a high growth of 20% in the year 2009 and reached USD 5.75 billion in 2010. In 2012 luxury products have grown at 29% to reach a size of USD2.05 billion well above expectation of 23%. Services have grown at 22 percent to reach USD 0.95 billion and assets have grown at 13 percent to reach USD 2.75 billion. India's luxury market is predicted to triple in size, reaching US\$ 14.72 billion by 2020. (A T Kearney, 2011).

The global demand for luxury products is increasing (Kapferer and Bastien, 2009) with annual luxury sales across the world estimated at \$222 (Deloitte, 2016). This luxury market has showcased continuous growth (Bain & Company, 2014) across the years. As demand for luxury items develops, India's luxury sector is playing an increasingly vital part in the country's economic progress. In recent years, luxury goods, which are seen as indicators of quality and

prestige, have grown more inexpensive and easily available. Consumers search for social statuses in many forms and try to better their social standing by acquiring luxury items and brands.

India's consumer market, previously defined as a pyramid with a small percentage of affluent class with inclination for consuming luxury products and services at the top, a metal class with relatively moderate choice for high-end products in the middle, and a large economically challenged class at the bottom, is rapidly being replaced by a new diamond shape, with a relatively large affluent class at the top, a large middle-class in the middle, and a small economically challenged class at the bottom.

Luxury markets in India are expanding rapidly, and even tier two towns such as Jaipur, Pune, and Surat are seeing growing demand for luxury products. Future research should look at the function includes other critical characteristics such as culture, country of origin, and demographic considerations may serve as moderators or mediators between the model's different constructs. Future investigations in this domain might confirm the findings of this study, which are connected to the connection between buy intention and actual purchase behavior. (Jain, Khan and Mishra, 2017). India is likely one of the hottest destinations for luxury retailing. With income levels increasing, consumers prepared to buy luxury brands are growing in number.

India has one of the world's youngest populations, and the standard of life has risen in tandem with the rise in consumer income (Davar, 2018). In India, digitally influenced spending is presently at around \$50 billion a year and is expected to grow ten-fold by 2025 (BCG, 2017). Luxury brands see their bridge-to-luxury products as a huge draw for the value-conscious Indian consumers.

Based on the above literature the present study aims to examine the following objectives.

### **Objectives of the Study**

The study aims to address:

- To investigate the purchase intention of the Indian luxury consumers towards international luxury brands.
- To assess the purchase intention of consumers towards luxury brands and the role of consumer attachment towards the purchase intention.
- To synthesize the foregoing data and provide relevant managerial implications based on them.

### **Research Methodology**

An empirical study was designed to conduct the research framework and to test the above-mentioned hypotheses. The primary goal of this study is to look at consumer purchase intentions for a variety of luxury fashion products, with an emphasis on the Pan India circle. Thus, the appropriate measurement of various constructs was the focus of this project research. An extensive literature review was performed in order to identify the various factors influencing purchase intentions viz. customer perception, brand commitment, brand loyalty and brand trust mostly in luxury brand choice.

A total of 214 questionnaires response have been received. The survey began with an introduction message encouraging respondents to administer their own comments while assuring them of their privacy. The sampling frames consist of randomly selected 214 respondents using convenience sampling method. The study was based on the development and administration of a structured questionnaire on a virtual platform using Google based forms received mostly from 4 major metros in India and its surrounding sub urban areas. The study's constructs were created using measurement scales adapted from previous research. All constructs are measured using five-point Likert Scale assuming strongly agree (=1) and strongly disagree (=5).

After removing all response bias, a total of 214 valid questionnaires remained, giving a response rate of 95%. The respondents were mostly 66.5% of male and 33.1% of female with a majority aged between 18 to 25 years. Most respondent's monthly average income is below Rs 50000.

The survey tool serves two key purposes: First, to look into the relationships between the many variables in the study, and second, to gather information on the respondent's various features, which may be utilized to analyze the differences across classes.

We followed the standard scaling strategies that are generally available in psychometric literature when designing the scale to measure the various components. All proposed scales were administered to assess the reliability and validity of the proposed measure. We have computed internal consistency reliability by Cronbach- $\alpha$ , which shows the value of Cronbach- $\alpha$  is 0.77.

Since the objective of our study is to investigate the purchase intentions of consumers towards selected luxury fashion products with special reference to pan India circle and also to assess the role of customer perception, brand commitment, brand loyalty and brand trust on consumers purchase intention, factor analysis is employed to establish scale dimensionality. In addition to this, multiple regression analysis is also employed to assess the importance of different variables considered in the study. In this study we have measured different variables using a five point scaling technique.

The results of the factor analysis amply demonstrate that the proposed measure is not contaminated with elements from the domain of other constructs or error. The systematic extraction of factors can be interpreted as supportive evidence of construct validity.

### Analysis & Findings

**Table 1**

<b>Component Matrix</b>					
	1	2	3	4	5
PI1	<b>.633</b>	-.466	.097	.361	.440



PI2	<b>.625</b>	-.393	.188	.162	-.085
PI3	<b>.612</b>	-.200	.445	.478	-.088
PI4	<b>.661</b>	-.176	-.002	-.170	.051
CP1	.440	<b>.681</b>	.020	.175	.361
CP2	-.085	<b>.653</b>	-.494	.210	.162
CP3	-.088	<b>.692</b>	.079	-.563	.478
CP4	.051	<b>.651</b>	.019	.440	.478
BT1	-.170	-.243	<b>.615</b>	-.085	.100
BT2	.175	.004	<b>.555</b>	-.088	.361
BT3	.210	.361	<b>.521</b>	.051	.162
BL1	-.563	.162	-.170	<b>.516</b>	.478
BL2	.358	.478	.175	<b>.584</b>	.478
BL3	-.261	.100	.210	<b>.630</b>	.100
BC1	-.024	.382	-.563	.478	<b>.569</b>
BC2	.071	.039	.478	-.170	<b>.671</b>
BC3	.288	-.313	.100	.175	<b>.695</b>
Extraction Method: Principal Component Analysis. a. 5 components extracted					
PI: Purchase Intention, CP: Customer Perception, BT: Brand Trust, BL: Brand Loyalty, BC: Brand Commitment.					

**Table 2**

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
PI	214	4.00	18.00	9.4016	2.51402

CP	214	4.00	16.00	8.8228	2.34144
BT	214	6.00	28.00	15.1102	3.66638
BL	214	4.00	20.00	9.4966	2.61902
BC	214	4.00	18.00	10.8228	3.14244
Valid N (list wise)					

The table 2 shows the descriptive result of the topic purchase intentions of consumers towards selected luxury fashion products with special reference to pan India circle and the role of customer perception, brand commitment, brand loyalty and brand trust considered for the study. It shows that mean of purchase intentions 9.4016 with maximum and minimum values respectively 18 and 4, standard deviation is 2.51402 which is less than mean. Customer perception shows mean value of 15.1102, the maximum value is 28 and minimum value is 6 with standard deviation 3.66638 which is again less than mean. The variable brand trust with a mean value 8.8228 and standard deviation 2.34144 shows its maximum value 16 and minimum value 4 which is less than mean value etc.

**Table 3**

Multiple Regression Model						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	PI	.394	.073	.365	5.389	.000
	CP	.489	.046	.275	4.109	.000
	BT	.321	.035	.294	3.146	.000
	BC	.521	.055	.316	3.369	.000
	BL	.425	.039	.243	5.153	.000

	Age	-.179	.240	-.068	-.747	.000
	Gender	.167	.167	.066	.998	.001
	Occupation	-.143	.175	-.062	-.816	.415
	Income	-.152	.114	-.075	-1.333	.003
a. Dependent Variable: PI						

**CP: Consumer Perception, BT: Brand Trust, BL: Brand Loyalty, BC: Brand Commitment**

It is found from the above table that the explanatory variables Consumer Perception, Brand Trust, Brand Loyalty, Brand Commitment are significant which imply both the variables have positive impact on purchase intention. The preceding data also shows that, with the exception of occupation, none of the demographic variables, namely age, gender, occupation, and income, are significant. It means demographic variables have impact on purchase intention.

**Limitations**

Due to time and economic constraints, the study concentrates and emphasizes a sample size of 214 from major Indian metropolises. Since the area of study has only been 4 major metropolises in India and also on a select sample of 214 the results may or may not be applicable to other cities in India. Data can also be taken for larger sample sizes to increase the generalizability of the findings. A pan India study across country’s major cities rich data is recommended to further investigate the impact of explanatory variable on dependent variable

**Implications**

The findings of the study mention above have a number of practical implications. This study has reflected the idea the customer satisfaction and brand trust are the crucial factors in determining organizational positions in the market and also to realizing how customers will react while

adopting different strategies to optimize its outcome. Moreover, the research objective was also to determine the impact of different demographic factors on purchase intention. A comprehensive result has been generated, explaining the fact that all existing factors can influence except occupation status of consumer in the market place towards purchase of luxury brands.

### **Conclusions**

It has been understood that Consumer Perception, Brand Trust, Brand Loyalty, Brand Commitment are directly associated and have significant impact on purchase intention. Consumers purchase intention has the potential to expand the market towards its preferred brand. Customers having trust on the brand and satisfied after using it would be the best possible preferred brand in creating the awareness of purchase effectiveness. Brands which are at all not popular in the market may have some negative impact, through customer preference analysis, on customer's perception towards the brand. Successful brands can effectively improve its visibility and its loyalty attitude on customer's mind to gain popularity in the market place. Brand loyal customers believe in being attached with their preferred brands and love to share their word of mouth in promoting the brand. The most important finding of the study is that brand trust can help organization in effectively recognizing its satisfied customer to expand its market and consumer base. The current information which is highlighted from the study also reveals that more and more trust towards the brand can directly impact in effectively positioning its strategy and also in enhancing brand commitment. Customer involvement in brand choice behavior is a long-term sustainable business strategy offering better satisfaction in using the same brand and also trust while considering the brand in their consideration set and referring the same one for others use.

Consumer perception, brand trust, brand loyalty, and brand commitment all had a favourable and significant impact on consumers' purchase intentions for luxury brands, according to the findings of our study. These findings are consistent with previous study, which indicated that customers generally act in accordance with the perceived luxury values of their reference groups. The study's findings also demonstrated that the elements influencing customers' buy intent are more

powerful than their influence on functional value, implying that consumers have a favourable brand attitude toward their favorite/preferred brand. The Indian luxury goods buyers' attitude toward brand devotion also demonstrates that they are youthful and have a lot of experience when it comes to This good brand attitude also demonstrates these customers' devotion to their preferred brand. All criteria are found to have a favourable influence on customers' purchase intention, which is consistent with earlier studies. The influence of brand loyalty on luxury buyers' behavioural intentions can be seen in their perceived values. This could be because Indian luxury customers are shifting from a collectivist to an individualistic mindset. These customers are looking for one-of-a-kind and high-quality items, as well as the functional aspects associated with luxury brands that add to their personal worth. These findings are consistent with earlier luxury goods study conducted in India.

The findings of this study contribute to the growing literature on consumer buy intentions for luxury goods by considering the impact of several variables on consumer purchase intentions for luxury items. To increase the perceived functional value of consumers, luxury marketers should focus on them and build high-quality, unique, and appealing luxury products. This will influence their purchasing decision. Furthermore, the study's findings reveal a significant association between the many variables studied and customers' purchase intentions.

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## **Study of Fintech Revolution: A step towards Financial Inclusion in India.**

\*Atisha Kumari, \*\*Dr. Smita Dutta

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### **Abstract**

FinTech, a mixture of Finance and Technology, is becoming an acceptable factor to advance the digital financial inclusion in India. DFI is defined as the cost saving mechanism to enable hard-to-reach unbanked or underserved population with some cost saving financial services digitally. The rate of FinTech literacy is enabling the people to use and understand the digital finances. There are different FinTech applications extensively used by people in their day-to-day life which has transformed and improved the entire financial sector by bringing out various innovative offering across payments & transfers, financing & banking and capital market & personal financial management, these includes Paytm, PhonePe, Gpay, and so on across different age groups and gender. With the rapid penetration of mobile and internet connection across India, the move towards digital financial inclusion is increasing at a great speed.

This study aims to compute the percentage of people using different Fintech applications, age group wise comparison on fintech literacy, gender wise comparison on fintech literacy and the impact of fintech literacy on digital financial inclusion. In order to collect the data, we have administered a structured questionnaire and following convenience sampling technique we have collected 110 responses which were further used for data analysis process. In order to obtain the results of the objectives stated above, we have used percentage calculation in MS-Excel and basic pie chart functions for first objective, ANOVA-single factor test and T-test hypothesis testing for the second and third objective respectively and for the last objective that is the impact of fintech literacy on digital financial inclusion we have run a regression model in MS-Excel.

According to the test performed it was found that Gpay was the most used Fintech application accounting 60.90%, followed by Paytm and PhonePe which accounts for 48.20% and 46.40% respectively. As per the second and third objective there is no significant difference in Fintech literacy across different age groups as well as different genders. For the last objective we have

found that Fintech literacy has a significant impact on Digital financial inclusion, as Fintech literacy increases it leads to higher level of digital financial inclusion. The government should arrange different schemes and programs in order to educate people of different age groups and across all genders on fintech services so that the people can take charge of their financial life and enjoy it to full extent.

**Keywords:** Fintech, India

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## 1. Introduction

Technology is becoming the driving force of the Indian Financial Sector. With the innovation in Financial Technologies, the finance industry has shown a huge growth over the past few years. The amalgamation of Finance and Technology is known as '**FINTECH**'.

The Financial Stability Board (FSB) defines Fintech as “technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial market and institutions and the provision of financial services”. As per the latest report- “**India Fintech: A USD 100 billion opportunity**” by BCG and FICCI, India is strongly poised to realise a Fintech sector valuation of **USD 150-160 billion** by 2025, translating to an incremental value-creation potential of approximately USD 100 billion. Today, India is one of the largest Fintech markets with highest Fintech adoption rate of **87%** in the globe which is greater than the average adoption rate of 64% across the globe. As per “**MEDICI-India Fintech Report 2020**”, **2<sup>nd</sup> Edition**, India has about **2100+** Fintech start-ups of which 67% of them has been set over the last 5 years alone.

There are different types of Fintech firms which deals with different sections of financial sector like Payment, Lending, Insurance, Credit, Mobile bank, Direct bank transfer (DBT), Investment, Trading and so on. App like **Paytm, PhonePe, G-Pay** provides with different types of payments options, and it is becoming quite popular among rural areas. Some of these have taken different initiative to penetrate the rural areas and provide them with certain financial services digitally. These are driving a **Digital Financial Inclusion** revolution in the country to bring a change in the quality of life of unbanked communities. DFI involves the arrangement of cost saving digital means to reach currently financially excluded or underserved population with a range of formal digital financial services across different age groups and gender.

With the rapid penetration of mobile and internet connection across India, the move towards digital financial inclusion is increasing at a great speed. Government initiative towards **digitalization of financial system and cashless economy** has been helpful in shifting customer focus towards digital alternatives for financial transactions and services. **UPI, BHIM, KYC and**

**Aadhar card** are among the government initiative towards digital financial inclusion. RBI acts as a regulatory body to govern the working of different Fintech firms.

Given this background the present study aims to examine the following objectives:

- To compute percentage of people using different Fintech applications.
- To conduct an age group wise comparison on Fintech literacy.
- To conduct a gender wise comparison on Fintech literacy.
- To study the impact of Fintech literacy on Digital financial inclusion.

We have run different tests like, ANOVA, T-test and regression model, in order to examine our objectives. The remainder of the paper is structured as follows, section two includes the methodology section in which the data collection and data analysis procedure is briefly stated. Then comes the result section in which the objective wise results are stated. And finally comes the conclusion in which the overall closure of the study is framed.

## **2. Methodology**

### **2.1 Measurement Instrument**

The structured questionnaire consists of four sections. The first section includes demographic questions like gender, age, occupation and so on.

Followed by this, the second section consists of one multiple choice question related to Fintech application usage.

The third section consists of items for measuring Fintech literacy of people. This section consists of five questions like adoption of neo banks, awareness on online saving account, online loans and so on, which are specified on a 5-point Likert scale where 5 stands for extremely likely, extremely aware, and strongly agree and 1 stands for not likely at all, not at all aware and strongly disagree.

The last section consists of items for measuring Digital Financial Inclusion of people. It consists of five questions like online payment of bills, online investment and so on. These are again arranged on a 5-point Likert scale where 5 stands for always, extremely likely, and very interested and 1 stands for never, not at all likely and not at all interested.

## **2.2 Data Collection Procedure**

A structured questionnaire was administered via online mode to the people residing in Bihar, Jharkhand, Maharashtra, Rajasthan, and West Bengal. The inclusion criteria are such that the individual must be 18 years and above and should be qualified at least up-to higher secondary level to provide their respective responses.

So, according to the thumb rule (Boateng et al, 2018) the minimum calculated sample size is  $11*10$  i.e., 110. Thus, we have circulated the questionnaire to 150 people, out of which only 110 responded and these 110 responses were used for further test and analysis.

## **2.3 Data Analysis Procedure**

For examining the very first objective, percentage calculation and pie chart has been utilised. A pie chart is a circular statistical graphical interpretation, which is divided into slices or cut by radii to illustrate relative magnitudes or frequencies.

To analyse objective-2, **ANOVA**- single factor test is being executed via Excel. Analysis of variance (ANOVA) is a statistical technique that is used to check if the means of two or more groups are significantly different from each other.

For the study of the third objective, **t-test** is being performed with the help of Excel. A t-test is a statistical hypothesis test that is used to determine if there is a significant difference between the means of two groups.

And for the last objective, investigation is being put forward using **regression analysis** through Excel. Regression is a statistical method mainly used in finance, investing and other disciplines for

the estimation of relationships between a dependent variable and one or more independent variables.

**3.Results**

The results indicate that approximately 49.10% of the respondents were males while 50.90% were females. Most of the participants belonged to the age group of 18-25 years (approximately 72.7%). Around 57.3% of respondents were graduates (Table-1). When probed regarding FinTech literacy, it was found that the individuals belonging to the age group of 18-25 years were mostly aware and used to the fintech application and G-pay was the most widely used application.

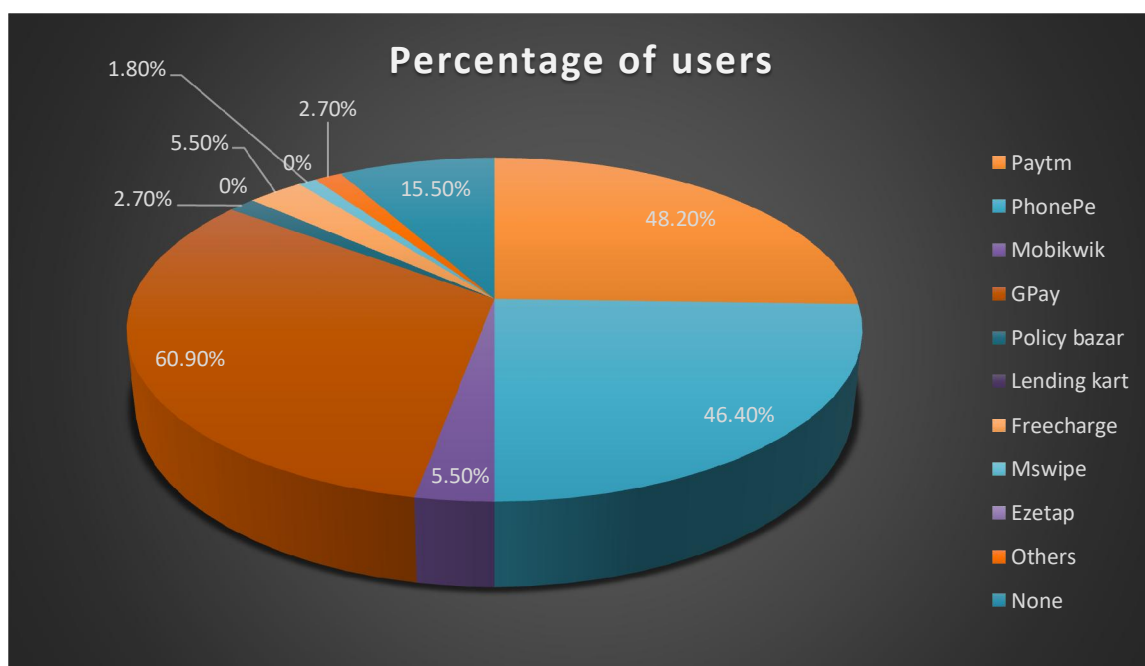
**Table 1: Socio economic details of respondents**

<b><u>Gender</u></b>	
Male	54
Female	56
<b><u>Age</u></b>	
18 to 25 years	80
26 to 35 years	14
36 to 45 years	10
46 to 55 years	5
56 and above years	1
<b><u>Marital status</u></b>	
Married	23
Unmarried	87
<b><u>Educational qualification</u></b>	
Higher secondary	20
Graduation	63
Post-graduation	27
<b><u>Occupation</u></b>	

Student	67
Housemaker	7
Job	29
Business	7
<b><u>Income(annually)</u></b>	
Less than 3 lakhs	71
Between 3 lakhs to 6 lakhs	20
Above 6 lakhs	19

For the first objective, we have drawn a pie chart through basic Ms-excel function to compute percentage of people using different Fintech applications. According to the performed analysis it was observed that GPay has extensively been used by the end user accounting 60.90% of the entire range of FinTech applications followed by Paytm and PhonePe which accounts for 48.20% and 46.40% respectively.

**Figure 1: Percentage of people using different fintech applications.**



Succeeding the first objective, the second one hold to conduct an age group wise comparison on FinTech literacy which has been accomplished through ANOVA test. Summation of the values the FinTech literacy obtained from the Likert scale was put to use.

**Table 2: ANOVA test result for age wise comparison on Fintech literacy.**

**Anova: Single Factor**

**SUMMARY**

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Fintech literacy (18-25) yrs.	80	1380	17.25	23.63291139
Fintech literacy (26-35) yrs.	14	255	18.21429	15.87362637
Fintech literacy (36-45) yrs.	5	78	15.6	29.3
Fintech literacy (46-55) yrs.	10	172	17.2	29.28888889
Fintech literacy (56 & above) yrs.	1	11	11	

**ANOVA**

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	65.697403	4	16.42435	0.702708391	0.591815	2.45821
Within Groups	2454.1571	105	23.37293			
Total	2519.8545	109				

As per the above executed test, p-value is greater than 0.05, which means that the test is insignificant, and we accept the null hypothesis. It further indicates that there is no significant difference in fintech literacy across all age groups.

Considering the third objective, we have put on t-test for gender wise comparison on FinTech literacy. Outcome of the test is shown below. Summation of the values the FinTech literacy obtained from the Likert scale was put to use.

**Table 3: T-test result for gender wise comparison on Fintech literacy.**

**t-Test: Two-Sample Assuming Unequal Variances**

	<i>Fintech literacy of male</i>	<i>Fintech literacy of female</i>
Mean	17.7962963	16.69642857
Variance	23.37281621	22.68798701
Observations	54	56
Hypothesized Mean Difference	0	
df	108	
t Stat	1.201504939	
P(T<=t) one-tail	0.11609178	
t Critical one-tail	1.659085144	
P(T<=t) two-tail	0.232183561	
t Critical two-tail	1.982173483	

The test manifests that the value of p is more than 0.05, which specify that the test is insignificant, and the null hypothesis is to be accepted. Adding to it, it is being inferred that there is no notable difference in FinTech literacy across gender.

Lastly, the fourth objective mounts regression analysis on the impact of Fintech literacy on digital financial inclusion.

**Table 4: Regression analysis result for the impact of fintech literacy on digital financial inclusion.**

**Summary Output**

<i>Regression Statistics</i>	
	0.4709334
Multiple R	7
R Square	0.2217783
Adjusted R Square	0.2145725
Standard Error	3.9758107
Observations	110

**ANOVA**

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	486.509074	486.509	30.7779	2.0794E-07
Residual	108	1707.16365	15.8070		
Total	109	2193.67272			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	10.571836	1.41681437	7.46169	2.294E-11	7.7634648	13.38020	7.7634648	13.380208
Fintech literacy(x)	0.4393976	0.07920233	5.54778	2.079E-07	0.2824049	0.596390	0.2824049	0.5963904



Exhaustive scanning of the above test deduces that the p-value is less than 0.05, which essence that the regression is significant, followed by the rejection of null hypothesis. Therefore, the regression coefficient is not equal to zero. So, Fintech literacy has a remarkable impact on digital financial inclusion.

#### **4. Conclusion**

The amalgamation of technology with financial services is mushrooming day by day, providing many technologies based financial services across people of different community. Due to this a metamorphosis has been set up which has the potential to further advance digital financial inclusion. FinTech is empowering every individual consumer to take charge of their financial lives.

As per the probation, multiple tests were being manifested for attaining diligent effect of Fintech literacy on the users belonging to different age groups, gender, and annual incomes. The test performed demonstrates unequivocal objectives. Pie chart plotted for calculating the maximum usage of FinTech applications exhibits that 60.90% that is 67 out of 110 responses that has been collected uses GPay. ANOVA single factor test and t-test that has been executed that shows there is no significant difference in fintech literacy level across different age group and gender respectively. The regression model demonstrates that the financial literacy has a significant impact on digital financial inclusion.

The very relevant policy recommendation that can follow from all the three findings is such that as the fintech literacy increases, it leads to higher level of digital financial inclusion, which is desirable. The government wants this to increase, thus they should conduct a lot of fintech literacy programmes. It was also found that the fintech literacy level is same across different age groups and gender. Therefore, the fintech literacy programmes that government should organise need to be targeted to both the genders and across all age groups above the age of 18 years. These steps could bring a Fintech revolution which leads to digital financial inclusion in India.

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## **Indian Customer's Online Shopping Pattern During Covid-19 Pandemic: An Exploratory Study**

\*Enakshi Chakraborty, Shourjya Banerjee, \*\*Dr. Smita Datta

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### **Abstract**

The COVID-19 pandemic has pushed consumers to change their shopping habits . The study is about the Indian customers online shopping pattern during COVID-19 pandemic. The main purpose of this study is to understand how Indian customers are doing online shopping in this pandemic, is their proportion increased or not their online shopping pattern like reasons for choosing shopping online, preferable shopping site, frequently buying products, payment method. The data for this study has been collected by circulating a questionnaire on the social media. As per the responses results has been summarised which leads to the conclusion.

**Keywords:** Online Shopping, COVID 19

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## **1. Introduction-**

The COVID-19 pandemic has accelerated the shift towards a more digital world. The changes we make now will have lasting effects as the world economy begins to recover (UNCTAD,2020). Pandemics like COVID-19 result in a disruption in the lifestyle and buying pattern of a consumer. The pandemic has made a trend of shopping online and accelerated the growth of the convenience of online shopping. When the pandemic hits the world and situation getting worse specially in the time of the first wave of COVID 19, traditional shopping becomes difficult, people are increasingly inclined to shop online. Since coronavirus spreads primarily through contact with an infected person (when they cough or sneeze) or when a person touches a surface that has the virus on it, the best way to guard against it is to stay at home. Online shopping is a process of buying products through electronic devices by using internet. Technological innovations are on the rise with has made it possible to do numerous things sitting in the comfort of home. Now a day's technology can provide sophisticated solutions to cope with a pandemic environment.

With the recent COVID-19 pandemic, the presence of which was faced in every sector, created newer and unimaginable challenges for mankind. As a result of the outbreak, shopping malls, grocery stores across the globe were forced to remain closed. The timeline for the closure is longer than anticipated as in many countries including India, proper guidelines and safety protocols are yet to be set for a full proof reopening of the essential stores. As a result, store have experienced panic buying behaviors, empty store shelves, out of stocks, and a large increase in online sales. In online purchasers can purchase anything and from anywhere they want to shop with timely and protected price payment options. Purchasers can compare different products as well as websites or mobile apps to make better shopping.

Now the lockdown is over and now stores started reopen but people need to maintain some restrictions now also, and many will still prefer shopping online from the safety of their homes. Most consumers doing e buying through various online sites or mobile apps which becoming a cornerstone day by day. Restricted movement among individuals, Convenience and Time saving and Digital transformation of local shops are the main drivers of online buying now a days.

Electronic buying can be bright in the coming time. The Covid-19 pandemic has encouraged online shopping activities and online shopping patterns of consumers more rapidly.

Given this background this study aims to examine the following objectives-

- 1) To examine whether the customer is shopping online more during this pandemic time compared to the preceding time period
- 2) To identify the most frequently purchase product in this pandemic.
- 3) To identify the dominant factors behind online shopping during the pandemic.
- 4) To identify the preferred online shopping site for online shopping.
- 5) To identify the most widely used payment method for online shopping.

The rest of the paper has following sections like research methodology, results and conclusion,

## **2. Research Methodology-**

### **2.1 Data Collection procedure-**

The relevant data for examining the stated objectives were circulated by a structured questionnaire. This questionnaire was circulated among online shoppers lived in Kolkata. The inclusion criteria in the sample is those online customers over the age of 18 who buys things from online in Kolkata. The minimum sample size required for this study is  $5 \times 10 = 50$ . I circulated my questionnaire to 71 people out of them 59 responded. 2 people have given a incomplete response. So those responses were not being counted. There are also 4 people who did not do online shopping. So their responses also cannot be counted.

### **2.2 Measurement instrument-**

The structured questionnaire comprised of 2 sections. The first section consists of demographic related questions. The second section consist of total 6 items associated with online shopping scenario. The first question is the screening question that the person does online shopping or not.

The next 5 questions are according to the objectives of the study. This next 5 questions are only applicable to those persons who do online shopping. The items of this sections are in multiple choice and dichotomous types. For multiple choice there are 1 question which is of single select option question and 3 are multi answer select options.

### 2.3 Data analysis procedure-

Tools used for analyzing objective one and five is percentage along with a pie chart for a visual representation and better understanding. In pie chart the data are represented in a circular graph.

Tools used for analyzing objective two, three and four is percentage along with a bar chart. Bar chart is a way of representing categorical data.

### 3. Empirical Results-

#### General profile of the participants-

The results indicate that approximately 44.1 % of respondents are male while 55.9% females. The majority of the participants belonged to the age group of 18-24 years (approximately 74.1%). Majority of the respondents are students (approximately 71.9%). Around 63.2% respondents don't have direct source of income because there are a lot of respondents who are student or home maker.

Table 1: Demographic details of the respondents-

Parameters	Number of respondents
<b>Gender</b>	
Male	26
Female	33
<b>Age</b>	
18-30	43
31-40	6

41-50	6
51-60	3
61-70	0
Above 70	0
<b>Occupation</b>	
Student	41
Businessman/Businesswoman	3
Employed	5
Teacher	6
Homemaker	2
Other	2
<b>Monthly income</b>	
Less than 15000	7
Rs. 15,000-30,000	7
Rs. 30,000-45,000	4
Rs. 45,000-60,000	3
More than Rs. 60,000	0
I don't have any direct source of income	36

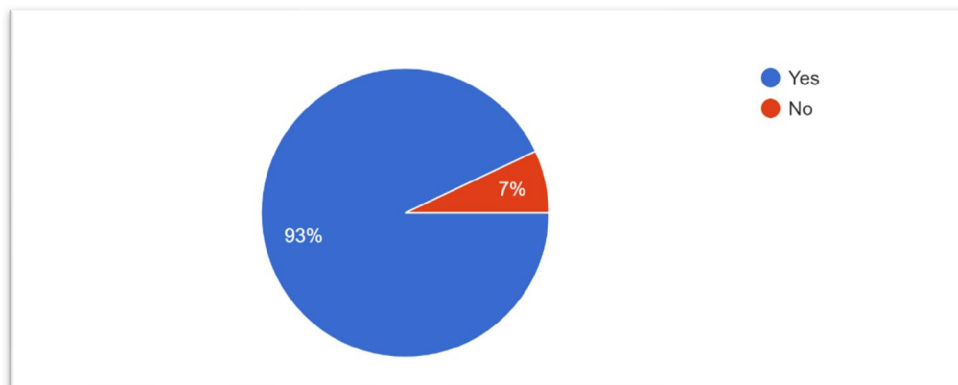


Fig1: Respondent do online shopping or not

As per our screening question that is people do online shopping or not, we can see there are 93% people who do online shopping and there are 7% people who did not do online shopping. Those people who do online shopping our further study is applicable for them only.

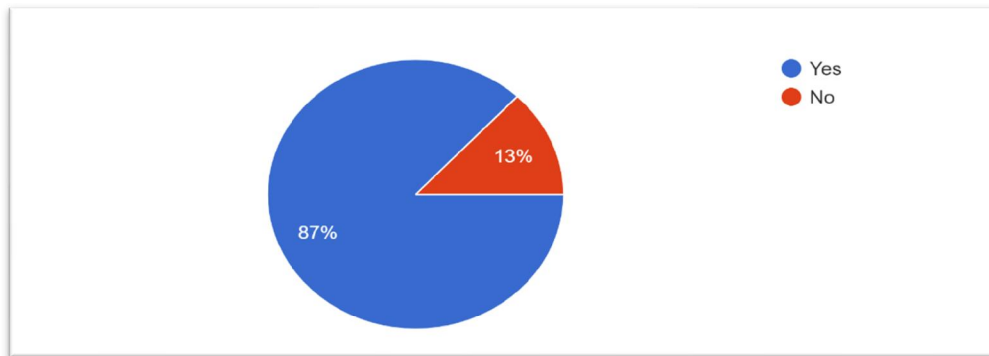


Fig2: proportion of online shopping increased during pandemic or not

Above pie chart shows that there are 87% respondents whose proportion of online shopping increased during this pandemic and there are 13% respondents whose proportion of online shopping did not increased during this pandemic.

As per our first objective in order to examine whether the customer are shopping online more during this pandemic time compared to the preceding time period, this study shows most of the customers are doing online shopping more during this pandemic. This pandemic has made e-Commerce a far more important part for consumers shopping habits than the previous times.



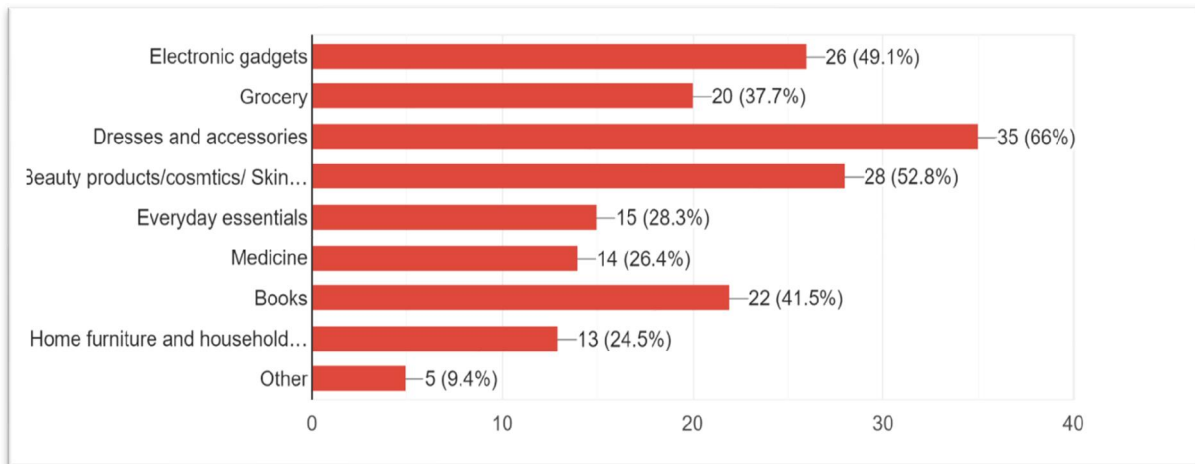


Fig3: most frequently purchase product in this pandemic

In order to highlight the most frequently purchase product in this pandemic which is our second objective a bar chart has been plotted. Above bar chart shows most of the respondents that is 66% of the respondents frequently buy dresses and accessories and 52.8% buys beauty products cosmetics, skin care products from online. Also 49.1% respondents who buys electronic gadgets etc. from online. One reason for this frequently buying of dresses, accessories, beauty products can be our respondents in this study where 55.9% are female. Also a good no of respondents i.e. 37.7%, 28.3%, 26.4% purchased grocery, everyday essentials, medicine from online during this pandemic. Shopping online become a habit of customers in this pandemic where they can get anything and everything in a place.

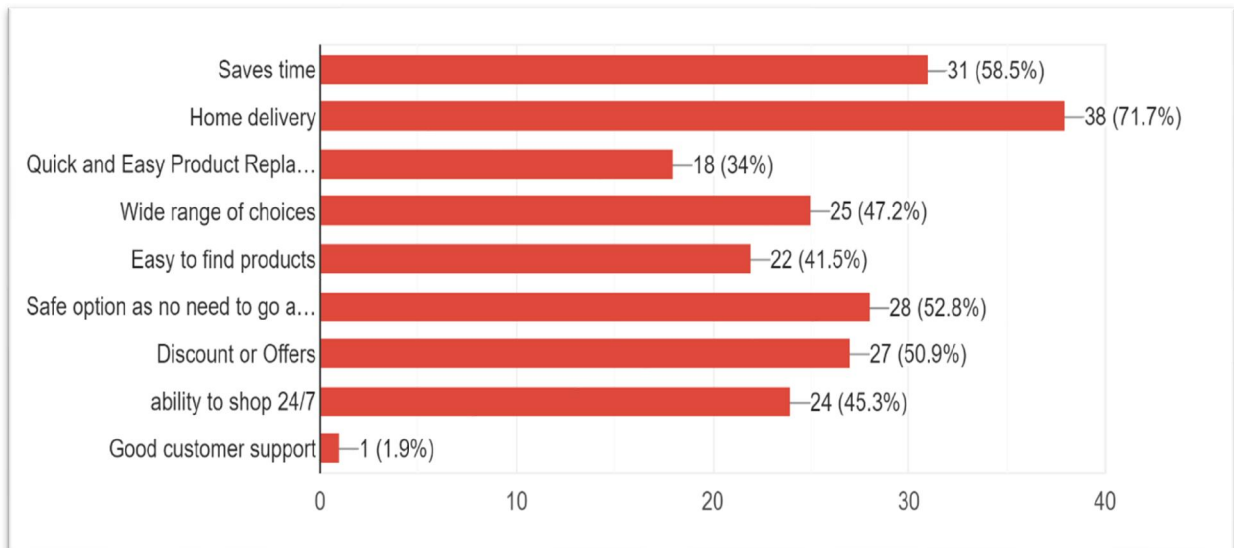


Fig4: Dominant factors behind online shopping during this pandemic

Above bar chart reflects our third objective i.e. why people do online shopping. 71.7% respondents like it because of its home delivery facility, 58.5% respondents think online shopping saves time. In this pandemic situation online shopping is a safe option because here we don't need to go anywhere. Also 50.9% 47.2%, 45.3%, 41.5% respondents prefer online shopping because there are discount or offers, wide range of choices, ability to shop 24/7, easy to find products respectively. Online shopping has some of the major benefits like there are wide range of choices and also its very easy to find a product online. Also we can check product description and product reviews before buying it which makes our purchase decision easy. Also, online shopping sites give a lot of discounts or offers which become a catchy point for customers. Shopping online is very convenient where we can get access of it 24/7 and online shopping sites gives option of product replacement and refund also.

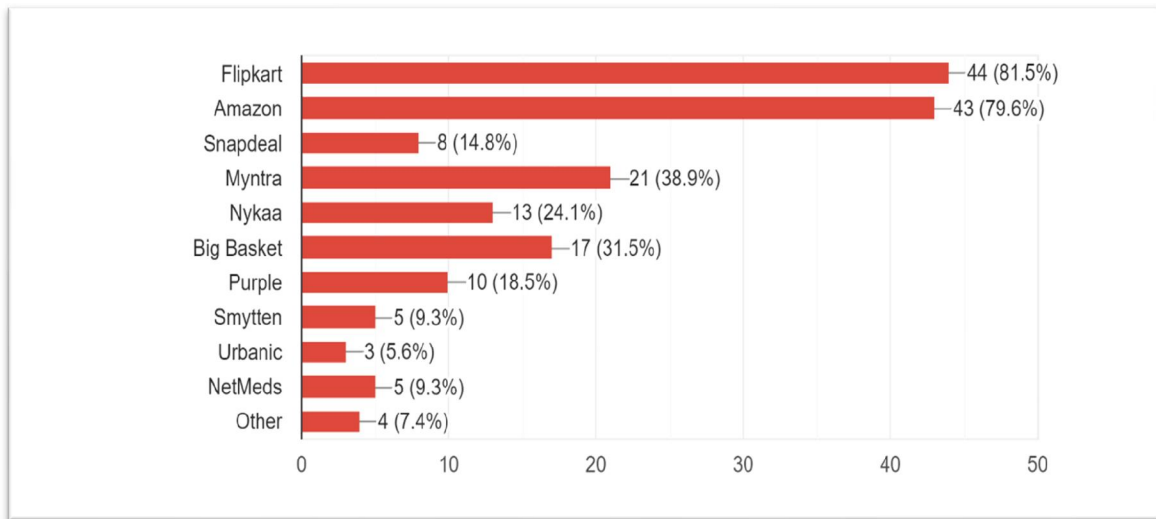


Fig5: preferable online shopping sites

As per our fourth objective in order to highlight the preferred online shopping site a bar chart has been plotted and it is shown that most no of respondents select Flipkart as preference. Above bar chart shows that 81.5% respondents are doing online shopping from Flipkart and 79.6% respondents have selected Amazon.

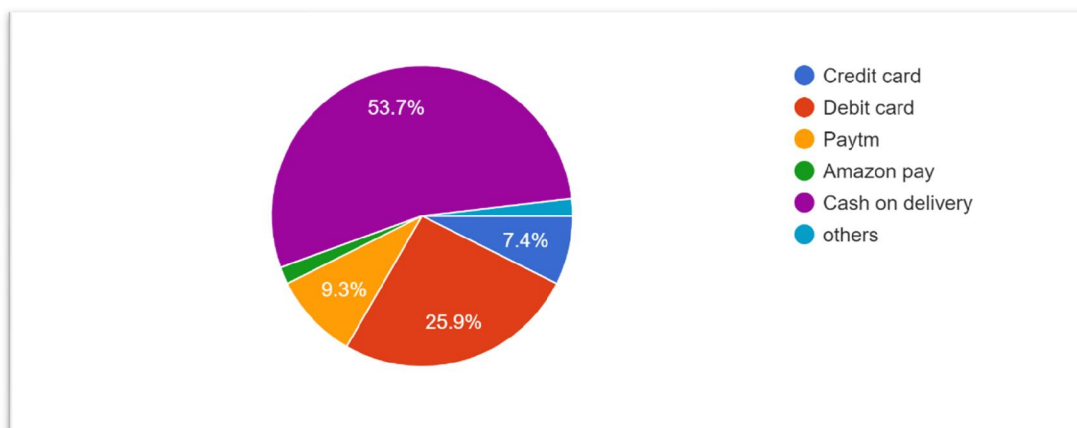


Fig 6: Most widely used payment method for online shopping

In the order to understand the preferable payment method in time of shopping online a pie chart has been plotted. Above pie chart shows that most of the respondents (53.7%) choose cash on delivery as preference. 25.9% people use debit card for payment. Cash on delivery become a convenient option because after getting the product they are paying and sometimes people can also prefer to see the product is it in a good situation or a right product by unpacking it before the payment.

#### **4. Conclusion-**

This coronavirus pandemic has increased the web traffic and showed a jump in shopping online. Our analysis indicated that proportion of online shopping has been increased than the previous times for most of the respondents. Also people are frequently buy from online like dresses , grocery , everyday essential, electronic gadgets etc. in this pandemic situation. As this pandemic comes countries various restrictions have been imposed on going out of homes, going in markets etc. hence people cannot go to markets for buying products. So this is probably pushing people towards online shopping. Online shopping allows people to fulfil their needs staying at home and also there are several advantages like as per our study respondents chose it has home delivery facility, save time, wide range of choices, offers available, refund option etc. it saves time, gives wide range of choices etc. Though many of the respondents do online shopping previously but in this pandemic situation this becomes the easier and safest option for people to buy their essentials. As per our study results Flipkart and amazon become most of the respondent's preference in shopping online and also COD i.e cash on delivery becomes most preferable payment option for many people. So, due to covid 19 most of the people have shifted from offline shopping methods that is going to the nearby stores, supermarkets or malls to buy their daily essentials groceries , medicines to online shopping methods that is ordering all the products online and getting them home delivered with the use of online shopping sites.

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**A Study of Factors Influencing Women Workers' Work Life Balances Belonging to Unorganized Sector**

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**Abstract**

The issue related to the work-life balance is considered to be a very hot topic in the present-day work-life scenario. The research aims at comprehending the various factors or elements that are impacting the work-life balance of women employees/workers. The study focuses mainly on the women employees functioning in the unorganized sector. To attain the viability of the given study, the researcher has taken into consideration both the secondary and primary data research methodology. A structured questionnaire has been used so that various views concerning the research study can be attained in a reliable and valid manner. Based on the attained and evaluated data, the key findings of the research further elucidate five different factors impacting the personal life of the women employees of the unorganized sector. Through the research, it has been observed that the factors have a good level of significance and significant consistency.

**Keywords:** Work life balance; unorganized sector; women workers; unorganized sector and women employees; factors impacting work life balance

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### **Introduction**

Work-life balance is a broad concept including proper prioritizing between “work” on one hand, “life” on the other. Organized sector workers are distinguished by regular salaried jobs with well defined terms and conditions of employment and fairly comprehensive social security protection. The conditions of work in the unorganized sector were unsatisfactory, the illiteracy, poverty and indebtedness forced them to work for lower wages and under unjust conditions. Women work in unorganized sectors for low wages due to low level skills, ignorance and thus face high level of exploitation.

Work may be defined as activities carried out by human beings for carrying purposes. Activity is an important aspect of life, essential for growth and health. Sometimes activity is engaged in for its own sake, sometimes it is reflexive, and often it is purposive with an end, object, or purpose in view. Purposive activities are termed as work. Work life balance is helping employees to balance competing work and non-working demands. Reasons for work life are increased women in workforce and changing family pattern, ageing population, technology, downsizing and corporate inertia.

Today’s workers have many competing responsibilities such as work, children, housework, volunteering, spouse, and elderly parent care, and this places stress on individuals, families, and the communities in which they reside. Women workers have dual responsibility for home and work. There are various reasons for pitiable conditions of women in unorganized sectors i.e. gender discrimination, poverty, lack of basic knowledge, ignorance of government, and inadequate laws which are failing to prevent them.

The Unorganized sector covers most of the rural labor and a substantial part of urban labor. It includes activities carried out by small and family enterprises, partly or wholly with family labor. This sector is marked out by low incomes, unstable and irregular employment, and a lack of protection either from legislation or trade unions. The workers in the unorganized sector, are so scattered that the implementation of the legislation is very inadequate and ineffective.

The purposes of this study are to understand the impact of work-life balance of women workers belonging to the unorganized sector and to explore the factors which influence the work-life balance of women workers belonging to the unorganized sector.

### **Literature Review**

Work-life balance is a broad concept including proper prioritizing between "work " on one hand "and life "on the other. Organized sector workers are distinguished by regular salaried jobs with well defined terms and conditions of employment and fairly comprehensive social security protection. Women work in unorganized sectors for low wages due to low-level skills, and ignorance and thus face a high level of exploitation (Sastry & Nagajyothi, 2017). Increasing demand, rising awareness among women, increasing stress levels, increasing family levels, etc. have made it difficult for people to cope with their work and family lives. With increasing stress levels and demands at the workplace, attrition rate in the organization is increasing. Therefore, the present-day organizations are required to create a flexible environment which would help employees to manage their work and family together (Mohanty & Jena ,2016).

In recent times the importance of work-life balance is felt very seriously. In the case of working Women, the topic is more important as they are working and at the same time they have to look after their family responsibilities also (Patanik, *et. al.*, 2014). Work-life balance is the term used to describe the balance that an undivided I needs between time allocated for work and other aspects of life. Areas of life other than work-life can be, but are not limited to personal interests, family, and social or leisure activities (Joseph,2013). The work-life balance is one of the fastest emergent trends in the world over the past two decades has been increasing ease the employees in the unorganized sector (Bharathi & Kannappa, 2019).

### **Methodology**

Both primary and secondary data had been used in the research method. Non-probability judgmental sampling method was used to collect primary data from 50 (n = 50) people of West Bengal. Structured self-developed questionnaire had been used to collect the data. Online questionnaires were used to collect the data. SPSS was utilized as the tool for analysis. Five-



point Likert type scale where Strongly Agree =5 and Strongly Disagree = 1 with 15 items was utilized.

### Analysis & Findings

#### Demographic Profile Analysis:

50 responses from around West Bengal were collected and used for analysis. An illustration representing the respondent demographic percentages is shown in Table below.

Demographical Profile	Description	Frequency	Percent
Age (Years)	18-29	16	30.8
	30-39	20	38.5
	40-49	13	25.0
	Above 50	3	5.8
Working Experience	0-5 Years	20	38.5
	6-10 Years	17	32.7
	11- 15 Years	10	19.2
	Above 15 Years	5	9.6
Monthly Income (Rs.)	Up to 6000	8	15.4
	6000 - 8000	12	23.1
	8000-10000	8	15.4
	10000-12000	12	23.1
	Above 12000	12	23.1
Marital Status	Married	36	69.2
	Single	14	26.9
	Widows	2	3.8
Family Type	Joint Family	15	28.8
	Nuclear	37	71.2
Family Size	Up to 3	23	44.2
	4 & 5	21	40.4

	6 & Above	8	15.4
<b>Dependents</b>	1 & 2	42	80.8
	3 & 4	8	15.4
	More than 4	2	3.8
<b>No. of Children</b>	Up to 2	44	84.6
	More than 2	8	15.4
	<b>Total</b>	52	100.0

**Interpretation:**

These figures illustrate the range of age, working experience, monthly income, marital status, family type and size, number of dependents & number of children.

**Behavioral Analysis****Reliability Test:**

Cronbach's Alpha	N of Items
.705	15

Table above shows the value of Cronbach's Alpha is .705 excluding demographic profiles. As the value of Cronbach's Alpha reliability coefficient is more than 0.7, it can be interpreted that the items have significant internal consistency (Mahboub & Taber, 2016).

**KMO Test:**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.669
Bartlett's Test of Sphericity	Approx. Chi-Square	300.508
	df	105
	Sig.	.000

The KMO test result is more than 0.6 it can be interpreted as the sample is adequate for factor analysis. The result of Bartlett' test's where significance is .000 (less than 0.5) and Chi-Square value is 300.508 with df 105 establishes a high level of data significance.

### Descriptive Analysis:

Item	Mean	Interpretation
My job gives me energy to pursue personal activities (A1)	3.37	Target groups are <b>neutral</b> towards this statement
My job makes personal life difficult (A2)	3.25	Target groups are <b>neutral</b> towards this statement
I am in a better mood at work because of personal life (A3)	3.19	Target groups are <b>neutral</b> towards this statement
My work suffers because of my personal life (A4)	2.54	Target groups are <b>neutral</b> towards this statement
I neglect personal needs because of work (A5)	3.88	Target groups are in <b>agreement</b> with this statement
I find it hard to work because of personal matters (A6)	2.67	Target groups are <b>neutral</b> towards this statement
I miss personal activities because of work (A7)	3.90	Target groups are in <b>agreement</b> with this statement
My personal life suffers because of work (A8)	3.35	Target groups are <b>neutral</b> towards this statement
I am too tired to be effective at work (A9)	3.33	Target groups are <b>neutral</b> towards this statement
I put personal life on hold for work (A10)	3.63	Target groups are in <b>agreement</b> with this statement
My personal life drains me of energy for work (A11)	2.87	Target groups are <b>neutral</b> towards this statement
I struggle to juggle work and non-	3.35	Target groups are <b>neutral</b>

work(A12)		towards this statement
Personal life gives me energy for my job (A13)	3.69	Target groups are in <b>agreement</b> with this statement
I am happy with the amount of time for non-work activities (A14)	2.87	Target groups are <b>neutral</b> towards this statement
I am in a better mood because of my job (A15)	3.62	Target groups are in <b>agreement</b> with this statement

The table above shows the attributes and their mean values. It can be understood from the data that women workers' are in agreement with 33.33% (A5, A7, A10, A13, A15) of the statements and 66.67%(A1, A2, A3, A4, A6, A8, A9, A11, A12, A14) are neutral towards the statements.

### Conclusions

The present study has tried to analyses that which factors influence women workers' work life belonging to unorganized sector. This study basically focuses on vegetables and fruit vendors, newspaper vendors, maids, caretakers etc. Exploratory Factor Analysis (EFA) was conducted on collected data. This data indicates five different factors that affects the women workers' personal life. The data analyzed has depicted factors like Personal Needs and Wants, Personal Time and Energy, Concerning Personal Life, Passion for Balancing Personal & Professional Life and Effect on Mood and Energy are the significant factors that affect women workers' daily life.

The purpose of this research was to find out how personal life of the women workers from unorganized sectors is affected by those five factors. However, the result shows that 33.33% of the workers' neglect their personal needs, miss their personal activities because of their work pressure. They put their personal life on hold for their work but they also agreed that their personal life gives them energy to continue their jobs and they were also in better mood because of their job. The result also indicated that 66.67% women reacted neutral towards the remaining statements of the questionnaire.

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**A Study on Shifting Perceived Value of E-books in Light of COVID-19 Pandemic**

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**Abstract**

The research study titled “*A study on shifting perceived value of e-books in light of Covid – 19 pandemics*” aims in exploring the value of e-books among guardians and students. It also aims in understanding the changing behavior of students toward the purchase of e-books. It will also help in comprehending the future preference or trends linked with the format of books purchased. The research study will help the researcher in identifying the variations in everyday life initiated by the pandemic related to the books. Both primary and secondary research methods have been taken into consideration for the evaluation of the research data. Based on the collected data, the researcher has evaluated it and has presented research findings. Here the researcher has highlighted both the perspectives, the traditional books, and e-books. Traditional books tend to have an emotional value compared to e-books. Moreover, with the adoption of various applications of technology, E-books can be searched or accessed easily. E-books are preferred as they are more affordable than the printed copy version.

**Keywords:** Traditional books; e-books; the perceived value of e-books; the perceived value of e-books during the Covid pandemic; shifting the perceived value in the pandemic.

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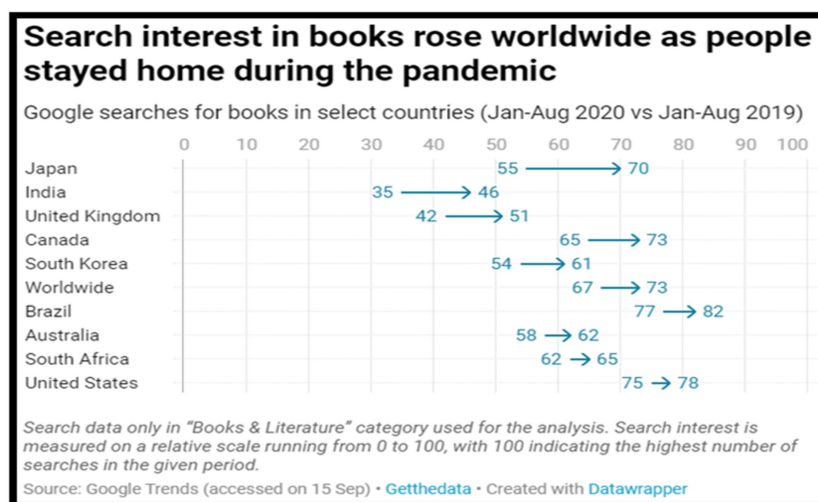
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### **Introduction**

Books have always been a reliable source of information and knowledge for readers, and play a key role in bridging the gap between the dark ages and the hyper-connected telecommunication world. Like most industries, the book industry is undergoing a lot of changes (trade books, educational books). Internet marked the shifts in sales, distribution channels, publishing, and also the means to display the content. With the implementation of new technologies in the mentioned features the industry witnessed a decline in printed book purchases since 2009 (recession) (I.T. Strategies, 2013). Digital concepts of books were first introduced in 1971. It was made more and more relevant and effective with the advent of amazon's Kindle book readers in the year 2007 (Anderson, 2009). In the year 2010 Apple released i-Books, and i-Bookstore on its dedicated app, Google launched its e-bookstore, and Amazon's e-book sales outnumbered its hardcover books (Government Book Talk, 2014). Considering the lockdown limitations, the efforts directed towards reducing human contact e-books were widely in use in place of their printed counterparts. According to UNESCO in April 2020, around 1.5 billion students were out of school and college during the pandemic. Educational institutions had no option but to acclimatize to digital education. Many publishers extended their support by providing digital copies of their books to the students free of cost for a limited period of time to support e-learning during school and college closures. The adoption of e-learning meant easy accessibility, greater reach, a cheaper mode of education, flexibility, and an overall increase in the learning potential of students during the pandemic (Dhawan, 2020).

Fig 1. The search of books during the COVID-19 pandemic



With the onset of the corona pandemic and all businesses, shops, departmental stores, and educational institutions being closed for an undetermined period of time Google trend data shows the online book search this year is comparatively higher than the last year (Sahidi, 2020).

### Research Objectives

The objective of the research titled "*A Study on Shifting Perceived Value of E-book in Light of COVID-19 Pandemic*" is as follows:

- To reveal and explore the value of e-books among students and their guardians.
- To explore the changing attitude towards the purchase of e-books.
- To reveal the future trend of preference of the format of the book purchased.
- To explore the variations in daily life brought about by the pandemic with respect to books.

### Literature Review

A book is no longer just a stack of pages bound together with full of knowledge. In the last several years, e-books became a mainstay of the publishing industry. However, the fall of printed books with the introduction of e-books has not materialized as forecasted. In 2020, the printing industry witnessed a rise in sales of 8.2% over the year to a total of 751 million copies. To understand the adaptation of digital reading it is important to know the advantages of digital books over printed books. E-books come with the benefit of accessibility, and portability and



also has the feature of annotation in case the reader wants to highlight, or note something in the e-book, readers can customize the e-book as per their requirement of changing the font, size, and brightness. They have to schedule reading sessions as battery power is needed to read on e-readers or on their phones (Leonhardt, 2017). Handling a hard copy of a book provides emotional touch (Evensen, 2020). Moreover, e-readers may experience strain on the eye. But, e-books may save readers a fortune as they cost less certain websites and organizations offer some free downloadable books (Mc Maken & Battle, 2021). E-books were preferred due to quick access and easy ownership. Thus, e-books have firmly established a place in people's life due to their convenience of readability (Zhang & Kudva, 2014). Although e-books may seem to help the publishing industry, they can be a bit daunting for readers. The price gap between e-books and print books is closing. The E-book might be priced about the same as the paperback edition but of course less than the hardcover (Mc Maken & Battle, 2021). But the readers may have to deal with the fear of losing their books entirely in case of any technical damages (Mc Learn, 2008). During the COVID-19 pandemic, 45% of people bought a printed book whereas 23% bought an e-book. Smartphones, tablets, and e-readers are using e-books more over the past few years with the help of their electronic devices to read (Richter, 2021). The e-reader version of a book is cheaper than a hardcover or paperback and often online book providers offer discounts on books for attracting first-time buyers. Online books are easily downloadable and can be stored on the device. Due to this pandemic situation, many online service providers started focusing on critical factors that can be detectable and are visible to the readers, also focusing on marketing strategies to increase acceptance of their books in a crowded digital marketplace. Tech-savvy readers are more likely to recommend others online via blogs, social media, etc. (Grand View Research, 2020). In general print books occupied a larger share in the Indian book market but during the covid-19 pandemic, the printing sector has seen a marginal increase in the consumption of the online versions of the book. The factors that facilitated the growth of the consumption to a significant extent can be accessed directly at home; due to the lack of physical form e-books are naturally preferred to physical books as it minimizes the risk of spread of the virus and again cheaper and accessible. With the ongoing of pandemic and a mass layoff in the working force, people were found to be reading books and the cheaper cost of the books seemed to facilitate the process. (Jones, 2020). Audiobook has been reintroduced in such a scenario when

readers are quite astray from traditional books due to unavailability and this worked as a catalyst to make them more inclined to e-book and audiobooks. Audiobooks started increasing in various portals like Audible, Scribd, Google Play Books, Apple Books, etc. (Sarfara, 2021). Listening to podcasts has also accelerated exploration during the Pandemic. There are so many newly launched applications only for listening story, news, and reading books. (Sarfara, 2021).

**Hypothesis 1:** Due to easy access, availability, and healthy option, e-books will be the first preference for students even in absence of Covid-19.

**Hypothesis 2:** Hard copies of books are more preferred than their e version due to more comparative emotional attachment of readers.

**Hypothesis 3:** In the post-pandemic era e-book and e-newspaper will be the first preference due to their low cost.

**Hypothesis 4:** Fear psychosis during the COVID-19 pandemic impacted the purchase of e-books.

**Hypothesis 5:** Technical complexities of handling is a hindrance for readers to prefer e-books to printed book.

### **Research Methodology**

The current study is all about changing the obligatory perception regarding e-books compared to the traditional book after the Covid-19 pandemic. Since students were compelled to study e-books, our study has concentrated on the preferences of e-books among college students. This study is based on primary and secondary data analysis. Primary data has been collected through the Opinion Survey method, circulated through a google form containing twenty- four questions. 102 students and guardians have given their responses. The opinion of the respondents collected on a 5-point Likert scale anchored from strongly disagree to strongly agree. Strongly disagree was coded as 1, whereas, disagree, maybe, agree, and strongly agree respectively as 2, 3, 4, and 5. The so-coded data were analyzed by using the chi-square test with the help of MS Excel and other software.

**Analysis & Findings**

It is found that the majority of the respondents, 52.9% and 47.1% are Male and female respectively, 27.5% are from the category of monthly income within 25,000 to 50,000, 22.5% are from below 25,000 and 20.6%, 15.7%, 13.7% are above 75,000 to 1,00,000, within 50,000 to 75,000 and beyond 1,00,000 respectively. The majority of the total respondents (82.4%) are from the age group 18-23 and 8.8% are from 24-29, 77.5% are student and 11.8% are service professionals. 52.9% are pursuing their Bachelor's degree, whereas 38.2% have not yet passed 12th standard and 7.8% are pursuing Master's degree. 45.1% of the respondents agreed and 12.7% strongly agreed. 46.1% and 22.5% have agreed and strongly agreed respectively. Moreover 47.1% of the respondents agreed and 35.3% strongly, again 44.1% of the respondents agreed and 16.7% strongly agreed to the cost effectivity than physical books. 38.2% are undecided, whereas 31.4% have agreed and 10.8% have strongly agreed. 41.2% of the respondents agrees and 21.6% of the respondents strongly agrees to this. Whereas 24.5% are undecided. Although 30.4% and 15.7% of the respondents agreed and strongly agreed respectively, but 43.1% of the total respondents could not come to a decision regarding this. 36.3% of the respondents agreed and 20.6% strongly agreed to the frequent need of charging the devices is a hindrance for the readers again 38.2% agreed and 39.2% strongly agreed to the presence of an emotional attachment of physical books.

However, 43.1% agreed and 17.6% strongly agreed to the higher accessibility with respect to e-books. 45.1% have agreed to the statement and 25.5% have strongly agreed. 35.3% are undecided whereas another 35.3% have agreed to this. Majority of the respondents (52%) have agreed to the positive influence of free digital books whereas 31.4% are biased to take a decision. 46.1% have agreed and 32.4% are undecided about the influence of online start-ups dealing in e-magazines and e-newspapers. The majority of the respondents (42.2%) are undecided regarding the healthy accessibility of e-books whereas 24.5% and 16.7% have agreed and strongly agreed respectively. The majority (41.2%) are undecided, 25.5% have agreed whereas 20.6% disagreed. The majority (44.1%) are undecided, 20.6% have agreed whereas 19.6% have disagreed. Many respondents (36.3%) have agreed, a major portion (40.2%) are still undecided regarding this. The majority (48%) are undecided whereas 24.5% agreed that the fear induced by covid-19 played a major role in influencing the use of e-books. Majority of the respondents (38.2%) are undecided

regarding this where as 30.4% of all the respondents disagreed. This has been agreed and strongly agreed by 54.9% and 19.6% respectively whereas 22.5% are still biased to take a decision. Majority of the respondents (44.1%) are undecided regarding the use of e-book by offline students. whereas 29.4% agreed and 14.7% disagreed. 47.1% agreed and 20.6% strongly agreed. A majority, 45.1% are biased to take a decision, whereas 14.7% strongly agreed and 34.3% agreed.

**Hypothesis Testing**

- I. O: Accessing e-books is a healthy option as compared to traditional book.
- P: In absence of covid-19, the e-book will be the first preference for students rather than physical books.
- H0: O isn't associated with P
- H1: O is associated with P
- We got, p-value = 0.000
- Since, 0.000 < 0.05, the alternate hypothesis can't be rejected.
- Therefore, these two statements are associated with each other.

**Fig.2 - Output of Hypothesis 1.**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	120.404 <sup>a</sup>	16	.000
Likelihood Ratio	75.905	16	.000
Linear-by-Linear Association	31.138	1	.000
N of Valid Cases	102		

a. 18 cells (72.0%) have expected count less than 5. The minimum expected count is .47.

- II. D: E-books are more cost-effective than physical books.
- I: An emotional attachment to reading a book is missing while reading e-books.
- H0: D isn't associated with I.
- H1: D is associated with I.

We got, p-value = 0.002

Since,  $0.002 < 0.05$ , the alternate hypothesis can't be rejected.

Therefore, these two statements are associated with each other.

**Fig.3 - Output of Hypothesis 2**

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.512 <sup>a</sup>	12	.002
Likelihood Ratio	30.005	12	.003
Linear-by-Linear Association	2.690	1	.101
N of Valid Cases	102		

a. 11 cells (55.0%) have expected count less than 5. The minimum expected count is .16.

III. D: E-books are more cost-effective than physical books.

Q: E-newspapers and e-book will replace their respective physical format in post-pandemic situations.

H0: D isn't associated with Q.

H1: D is associated with Q.

We got, p-value = 0.036

Since,  $0.036 < 0.05$ , alternate hypothesis can't be rejected.

Therefore, these two statements are associated with each other.

Fig. 4 Output of Hypothesis 3

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.489 <sup>a</sup>	16	.036
Likelihood Ratio	26.963	16	.042
Linear-by-Linear Association	1.716	1	.190
N of Valid Cases	102		

a. 19 cells (76.0%) have expected count less than 5. The minimum expected count is .24.

IV. L: The threat of Corona infection has motivated people to purchase e-books rather than physical books.

S: Covid-19-induced death is creating fear psychosis which is also a motivation to use an e-book.

H0: L isn't associated with S.

H1: L is associated with S.

We got, p-value = 0.000

Since,  $0.000 < 0.05$ , the alternate hypothesis can't be rejected.

Therefore, these two statements are associated with each other.

**Fig. 5 - Output of Hypothesis 4**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	48.940 <sup>a</sup>	16	.000
Likelihood Ratio	30.774	16	.014
Linear-by-Linear Association	6.546	1	.011
N of Valid Cases	102		

a. 19 cells (76.0%) have expected count less than 5. The minimum expected count is .12.

- V. J: E-books have a higher rate of search ability and accessibility to traditional books.
- G: E-books are vulnerable to loss with technical failures.

H0: J isn't associated with G.

H1: J is associated with G.

We got, p-value = 0.001

Since,  $0.001 < 0.05$ , alternate hypothesis can't be rejected.

Therefore, these two statements are associated with each other.

**Fig. 6 - Output of Hypothesis 5**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.978 <sup>a</sup>	16	.001
Likelihood Ratio	38.412	16	.001
Linear-by-Linear Association	.170	1	.680
N of Valid Cases	102		

a. 17 cells (68.0%) have expected count less than 5. The minimum expected count is .15.

### Conclusions

Books are an important part of daily life from the perspective of both education and entertainment. We found that people value e-books over hardcopy because it's a healthy option, also found that fear of death and corona infection worked as a catalyst for people to purchase e-books. In favor of traditional books, some readers still value the emotional attachment of the books rather than the cost-effectivity where e-books are a bit cheaper. But the technical failure is not a hindrance to the purchase and use of e-books. So, summarizing all the data and findings here it can be said that e-books are valued over traditional books in every aspect and this will remain prevalent even when the COVID-related restrictions are lifted.

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## Impact Of Brand Image On Customer Loyalty Towards Luxury Apparel

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### Abstract

The research aims in comprehending the perceived quality, which is one of the significant components linked with the brand image in relation to customer loyalty towards luxury apparel. The research aims in studying the relationship between brand image and customer attitude related to luxury apparel. The study was conducted in Kolkata, West Bengal, India. Primary research methodology has been used to collect first-hand information through questionnaire distribution. A secondary research technique has been implemented to attain reliable, viable, and authentic research topic-related information, which has been highlighted descriptively in the literature review section. Based on the data collected, the researcher conducted the evaluation/analysis. The researcher has presented the data evaluation through the validity and reliability test. From the research findings and solution, it could be viably put forward that customer satisfaction plays a very important role in increasing the loyalty of customers toward the brand image of luxury apparel.

**Keywords:** Brand Image, customer loyalty, luxury apparel, brand image and luxury brand, consumer loyalty and luxury apparel, consumer behaviour, and luxury apparel.

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### **Introduction**

A dazzling array of luxury brands is now wooing Indian customers. Luxury consumption has received a great deal of interest among marketing scholars. Little is known however about how to optimize the market and manage customer expectations with regard to this specific consumption context (Vigneron and Johnson, 2004; Wiedmann, Hennings, and Siebels, 2010). Brand image is important for any business. When consumers buy a product or service, they are buying what a brand stands for. Fierce competition forces a good organization to get a competitive advantage over the competitor to remain in the market and get a good market share. The price deduction may not be a good policy for an organization having strong brand equity as it affects the equity negatively (Yoo, Donthu, and Lee, 2000). Launching a new product is a very risky affair as the rate of failure is very high due to a number of factors such as high competition for shelf space and heavy advertising costs. Brand image is the strongest way of forming the basis of consumer behaviour. Perceived quality, one of the integral parts of brand image, has a relationship with the parent brand and the attitude of the consumer towards the brand extension.

### **Research Objective**

The objective of our research paper is to study various dimensions of customer loyalty.

### **Literature Review**

Luxury Products are defined as goods with a high price, extraordinary quality, and security. The absolute change in consumer tastes and preferences has been shifted to luxury apparel brands which motivate a researcher to focus on valuable strategic and marketing managerial implications with more detailed insight into the concept of luxury apparel brands to focus upon new strategies (Vashi & Shah, 2020). Luxury brands are characterized by elements such as a superior level of attractiveness and quality, size, consumer approval, individual desire and imagination, and international brand identity (Kapferer, 2001).

Brand image can be described as the observations about a brand as reflected in the memory of the consumer's brand association (Keller, 1993; Anwar *et al.* 2011). (Teimourpour &

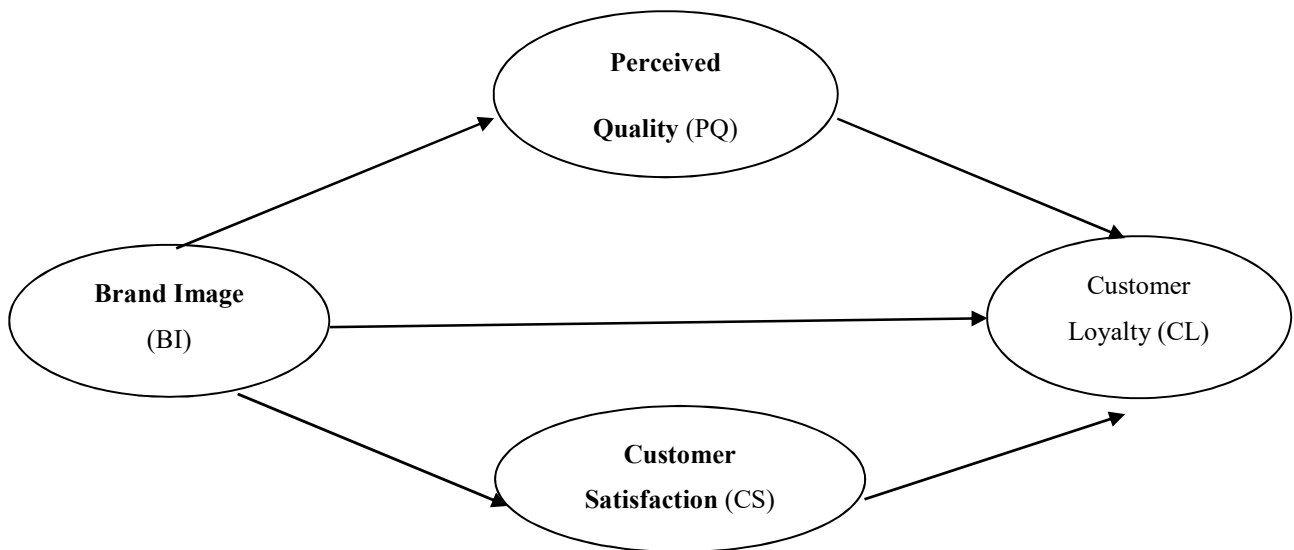
Heidarzadeh, 2011). Cho *et al.*, (2015) provided numerous conceptualizations in their review of brand image literature

Customer loyalty refers to a customer’s deeply-head commitment to continue purchasing a preferred brand consistently over time rather than switching to a different brand (Oliver, 1997; Wankel, 2009).

According to this thinking, (Lancaster, 1971, in Caruana *et al.*, 2000), some authors in the past somehow even equated the concepts of perceived quality with perceived value and that entailed that many practitioners failed to distinguish between the concepts of perceived quality and perceived value and often used the terms interchangeably (Caruana *et al.*, 2000). Olshavsky (1985, in Rowley, 1998) views quality as a form of an overall evaluation of a product. Similarly, Holbrook and Corfman (1981, in Rowley, 1998) suggested that quality acts as a relatively global value judgment.

**Model and Hypothesis Development**

- Model Development:



The customer loyalty model is the proposed model for our research paper. This model enables us to know the factors that affect customer loyalty. The model consists of four factors. They are Brand Image (BI), Perceived Quality (PQ), Customer Satisfaction (CS), and Customer Loyalty (CL). The Customer Loyalty Model is a conceptual framework that highlights how they are affecting Customer Loyalty and also how these four factors are interconnected with each other.

- Brand Image (BI) is the general impression of a product held by a real or potential customer.
- Perceived Quality (PQ) is the impression of excellence that customer experiences about a product, brand, or business, derived through sight, sound, touch, and scent.
- Customer Satisfaction (CS) is a measure of how products and services supplied by a company meet or surpass customer expectations.
- Customer loyalty is a commitment between a customer and a brand that causes the customer to make repeat purchases.

**Table 1: Derivation of Hypothesis**

<b>Sl No.</b>	<b>Description of Hypothesis</b>
<b>H1</b>	Brand Image (BI) is positively related to the Perceived Quality (PQ) of a product of that particular brand, for a consumer to use a particular brand
<b>H2</b>	Perceived Quality (PQ) is positively related to Customer Loyalty (CL) for a particular brand.
<b>H3</b>	The brand Image (BI) of a particular brand is positively related to Customer Loyalty (CL) for a particular brand.
<b>H4</b>	Brand Image (BI) is positively related to Customer Satisfaction (CS) for a particular brand.
<b>H5</b>	Customer Satisfaction (CS) is positively related to Customer loyalty (CL) for a particular brand.

**Research Methodology**

All the data that has been collected through the primary sources are by using questionnaires. The survey was done online by means of Google forms. In the questionnaire 5-point, the Likert scale was used to collect the data. There was a total of 110 respondents. The survey was done in Kolkata.

**Analysis & Findings**

Our questionnaire was distributed in September 2021. During this time, 110 questionnaires from in and around Kolkata were collected and used for analysis. An illustration representing the respondent demographic percentages is shown in the Table below.

**Table 2: Demographic Details of Respondents**

<b>Demographic Profile</b>	<b>Description</b>	<b>No. of Respondents</b>	<b>Percentage</b>
<b>Gender</b>	Male	59	54
	Female	51	46
<b>Age</b>	18-25	99	90
	25-40	5	5
	40-60	6	5
<b>Education</b>	Under-Graduate	85	77
	Graduate	17	15
	Post-Graduation and Above	8	7
<b>Marital Status</b>	Married	8	7
	Unmarried	102	93
<b>Occupation</b>	Service	12	11
	Self Employed	2	2
	Student	94	85
	Homemaker	2	2
<b>Personal Income</b>	Below 40,000	30	27
	40,001-60,000	20	18
	60,001-80,000	12	11
	Above 80,000	30	27

These figures illustrate the Gender, the range of age, the level of education, occupations and the range of personal income in Kolkata and adjoining areas. The majority of respondents were students or (85%). Most of the respondents were male (54%). The age group of the majority of respondents was 18- 25 years old (90%). The educational qualification of the majority of respondents is Under Graduate (77%).

The foremost step in the analysis of the behavioral model is the Reliability and Validity analysis. Cronbach's alpha is the most widely used index for testing internal consistency reliability for a set of test items. Meanwhile, Factor loading help to analyze the validity of the data. Factor loading are a way to understand the role of each item in defining a factor. For Factor loading and Cronbach's alpha, a value above 0.7 is acceptable.

**Table 3: Respondents' Validity and Reliability Statistics**

Factor	Item	FL	Alpha
F1 - BI	BI 1	0.686	0.831
	BI 2	0.736	
	BI 3	0.576	
	BI 4	0.551	
	BI 5	0.63	
F2 - CS	CS 6	0.795	0.796
	CS 7	0.763	
	CS 8	0.721	
	CS 9	0.58	
F3 - PQ	PQ 10	0.708	0.778

	PQ 11	0.681	
	PQ 12	0.793	
<b>F4 - CL</b>	CL 13	0.85	<b>0.897</b>
	CL 14	0.728	
	CL 15	0.756	
	CL 16	0.697	

Based on the figure below, shows the beta values for the path correlation as analyzed. The key determinant factor is found to be Customer Satisfaction on Customer Loyalty. Though Brand Image on Customer Satisfaction has the highest beta value, since we are focusing on analyzing factors for customer loyalty, so, we will consider customer satisfaction as the key determinant factor.





The table below shows that 5 hypotheses have been proven to have a positive and significant correlation. In our study, BI has a 79% value for the PQ component, which means that the predictors of Brand Image explain 79% of its variance for Perceived Quality. Similarly, PQ has a 73.4% value for the CL (Customer Loyalty) component, which means that the predictors of Perceived quality explain 73.4% of its variance for Customer Loyalty. The predictors of Brand Image explain 71.3% of its variance for Customer Loyalty and 82.5% of its variance for Customer Satisfaction and lastly, the predictors of Customer satisfaction indicate 80% of its variance for Customer Loyalty.

**Table 4: SPSS Analysis – Result of Hypothesis**

HYPOTHESES	STRUCTURAL PATH	R <sup>2</sup>	t VALUE	p VALUE	BETA VALUE	DECISION
H1	BI ---> PQ	0.624	13.392	0.000	0.790	SUPPORTED
H2	PQ ---> CL	0.539	11.239	0.000	0.734	SUPPORTED
H3	BI ---> CL	0.508	10.558	0.000	0.713	SUPPORTED
H4	BI ---> CS	0.68	15.159	0.000	0.825	SUPPORTED
H5	CS ---> CL	0.639	13.836	0.000	0.800	SUPPORTED

$p < 0.05$ , significant at a 95% confidence level

In our study model in **Figure 1**, all the paths are significant and positive, supporting the corresponding hypotheses that have been framed for this study. The hypotheses test results which provide the beta coefficients and t-values for the hypotheses tested through the linear regression are presented in Table 4. The t values for the beta coefficients in all the paths have been found to be significant at 95% confidence levels.

Hypothesis H4, and H5, exhibit the strongest relationship between BI-CS and CS-CL, with the largest  $\beta$  value of 0.825 and 0.800 respectively. The relationships between BI and PQ (H1) and

PQ and CL (H2) are relatively stronger with larger  $\beta$  values of 0.790 and 0.734 respectively. The SPSS regression analysis finds all the relationships significant and all the hypothesized relationships are supported.

### Conclusion

The present research followed the proposed model to investigate the citizens of Kolkata's behavior regarding the impact of brand image and customer satisfaction toward customer loyalty for luxury apparel brands. The proposed model consists of five components – Brand Image (BI), Perceived Quality (PQ), Customer Satisfaction (CS), and Customer Loyalty (CL). The result indicates that Customer Satisfaction is the strongest factor for customer loyalty and Brand Image is the weakest factor for Customer Loyalty. The study suggests that if good customer satisfaction can be maintained, then it will help the brand to retain more loyal customers, which will ultimately help the brand to sustain itself in the market.

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## Work Life Balance of Women Leaders

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### Abstract

As the corporates are trying to create a proactive organizational culture, it has accepted and understood that the abilities and potential of female leaders are undeniable. The objective of the given research study is to assess the relationship between the work-life balance and personal life of women's leadership performance. The study also lays emphasis on understanding whether work-life balance is highly dependent on the relationship status of the female leaders. A primary research study has been conducted to attain valid data. Through the Likert scale questionnaire, the researcher has been able to collect various insights concerning the work-life balance of Women leaders. The study was conducted in Kolkata, West Bengal. The researcher through its data evaluation has highlighted a positive relationship between leadership and work-life balance. The idea of work balance tends to imply a well-balanced lifestyle that further helps in optimum allocation of equal energy and time between home and professional arena, thus attaining work/ professional objectives in a seamless and proactive manner.

**Keywords:** Women leaders; Work life balance; women leaders and work life balance; women leadership and organizational performance

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## **Introduction**

The most typical challenge for women is the balance of career and family. Women are convinced to accept the message that assuming leadership positions means they must sacrifice family, relationships and personal life. As for the ones women who attain managerial positions, they may be similarly subjected to comparisons with their male opposite numbers concerning their management skills (Hejase et al, 2005). But women are now resolved to break the traditional glass ceiling that barred them from entering leadership positions. They do find a way to maintain a balance between personal and professional domains when they take up leadership positions.

Therefore, the aim of our study is to explore the role of women in handling leadership positions in any organization as well as in maintaining a balance between her personal and professional life successfully, overcoming several hardships and obstacles.

The objectives of our study were firstly to study whether there's a relationship between the work life and personal life of women leaders to maintain a balance and secondly to study whether work-life balance is dependent on the relationship status of women leaders.

## **Literature Review**

### **Leadership in Organization**

Leadership is a process where a person or more than one person influences a group of people to move in a definite direction. Leadership traits not only depend on personal abilities and features but also on the type of situations they find themselves in. Therefore, an individual will support the organization if he believes that through it his personal objective and goals could be met (Ibrahim & Daniel, 2019). Leadership in an organization is basically motivating people and directing them in their task to achieve the maximum output in a smooth manner.

### **Women Leadership in Organization**

Women leadership is the need of this generation. The presence of women leaders in an organization leads to a positive environment within. Some of the innate traits of women leaders which proves them more suitable for leadership positions in a company, are generally empathy, open-mindedness, mindfulness, pressure handling, multitasking, open communication, more

logical, sensitiveness, better decision maker and so on (Khalid, Muqadas & Rehman, 2017). So, many organizations today, are realizing that the potential and capabilities of women in leadership positions are undeniable.

### **Work Life Balance**

In today's fast paced society, human aid experts are seeking alternatives to undoubtedly have an effect on the bottom line in their companies, enhance worker morale, hold personnel with precious organization knowledge, and preserve up with place of job trends (Adler, 1997). Work-life balance involves achieving a balance between professional work and other activities, in order to reduce friction between official and domestic life. Work-life balance improves efficiency and thus increases the productivity of an employee. Increase satisfaction, both in professional and personal lives (Gautam & Jain, 2018).

### **Work Life Balance of Women Leaders**

Women leaders are diverse in role integration strategies, with respondents largely divided between blurring and segregating their work and non-work roles (Brue, 2018). Time-based work-family conflict was slightly more apparent than strain-based conflict (Lämsä & Sintonen, 2001). Women leaders also indicated that their work interfered with their family over their family interfered with their work. Findings provide valuable insights on how women view work-life balance within their roles as leaders (Lockwood, 2003).

### **Methodology**

The study is based on the Work Life Balance of Women leaders. The data had been collected from the people of West Bengal. A self-developed structured questionnaire has been used to collect primary data of sample size (n) of 50 using convenience sampling method. The sample collection duration was of 1.5 months. Five-point Likert scale has been used to measure the data, ranging from 'Strongly agree' to 'Strongly Disagree'. The questionnaire has two parts, out of which 2 questions are based on Leadership, 6 questions are based on Work Life Balance and 2 questions are open-ended. Correlation and Independent Sample T-test are used to measure our respective objective. SPSS 23 was used to analyse all the collected data.

## Analysis and Results

### Demographics

Our questionnaire was distributed between September to November of 2021. During this time, around 50 responses were received from in and around Kolkata and adjoining areas were collected and used for analysis. An illustration representing the respondent demographic percentages is shown in Table below.

Demographic Profiles	Description	No. of respondents	Percentage
AGE	Below 30 years	18	36%
	30 – 40 years	12	24%
	40 – 50 years	17	34%
	Above 50 years	3	6%
RELATIONSHIP STATUS	Single	18	36%
	Married	32	64%
EDUCATION LEVEL	Graduate	15	30%
	Post graduate	33	66%
	Others	2	4%
COMPANY/ ORGANIZATION TYPE	Government	3	6%
	Private	44	88%
	Semi government	3	6%
	Others	-	-

### Reliability Statistics

Reliability refers to the extent to which a scale produces consistent results, if the measurements are repeated a number of times. Cronbach's alpha is the most widely used index for testing internal consistency reliability for a set of test items. For Cronbach's alpha, a value of or above 0.6 is acceptable.

Reliability for Leadership and Work Life Balance

Cronbach's Alpha	N of Items
.692	2
.630	6

As it is shown here for reliability statistics for Leadership, Cronbach's Alpha is 0.692 and number of items are 2. For Reliability Statistics of Work Life Balance, Cronbach's Alpha is 0.630 and number of items are 6. The values below 0.6 are considered to be invalid. Hence, the resultant values are valid and acceptable since the values are above 0.6.

### Correlation Analysis

Aim- Objective-1: To study whether there's a relationship between the work life and personal life of women leaders to maintain a balance.

- H0:  $r = 0$  [there is no association between Work Life Balance Total (WLQ\_Total) and Leadership Total (LQ\_Total)]
- H1:  $r \neq 0$  [there is association between WLQ\_Total and LQ\_Total]

### Correlation of the Total questions of Leadership and Work Life balance.

Correlations			
		WLQ_Total	LQ_Total
WLQ_Total	Pearson Correlation	1	.642**
	Sig. (2-tailed)		.000
	N	50	50
LQ_Total	Pearson Correlation	.642**	1
	Sig. (2-tailed)	.000	
	N	50	50

\*\* . Correlation is significant at the 0.01 level (2-tailed).

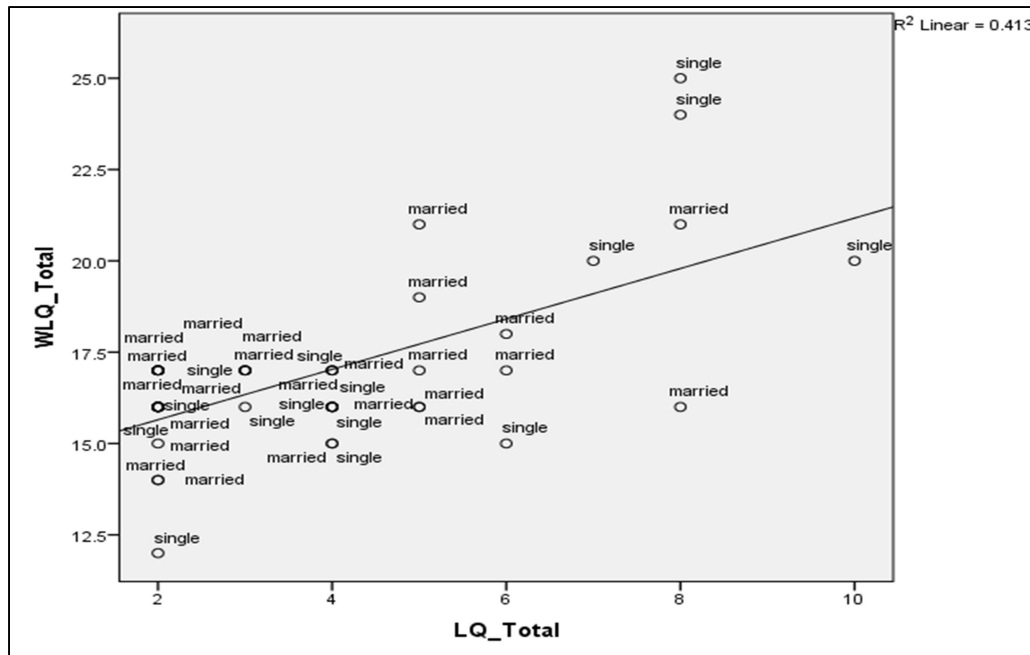
- Pearson's correlation coefficient is 0.642 for Work Life Balance Total and Leadership Total, which is significant based on n=50 observations.
- The direction of the relationship is positive i.e., LQ Total and WLQ Total are positively correlated.
- The magnitude or strength of the association is strong ( $0.5 < |r| < 1$ ).



- There is an association between WLQ\_Total and LQ\_Total, hence H1(alternate hypothesis) is accepted and H0 is rejected ( $p < 0.01$ ).

**Scatterplot**

The graph shows a linear relationship. It is an upward sloping line, i.e., there is a positive relationship between Work Life Balance Total and Leadership Total. It shows a moderately strong relationship between LQ\_ Total and WLQ\_ Total. Thus, Work-Life balance of married women leaders is comparatively less with respect to single women leaders.



**Independent Sample T-Test**

Our objective here is to see whether work life balance is dependent on relationship status of women leaders (between Married and Single women leaders), through Independent Sample T-test.

	Levene's Test for Equality of Variances	t-test for Equality of Means
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		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
WLQ_ Total	Equal variances assumed	6.461	.014	.942	48	.351	.622	.660	-.705	1.948
	Equal variances not assumed			.786	21.491	.441	.622	.791	-1.022	2.265

Here, the mean difference is same i.e. 0.622. Hence it can be concluded that both Single and Married women face problems regarding work and life balance. This research shows married women leaders with kids have responsibilities in both of their work and life sectors. Single women too, have responsibilities such as taking care of elderly parents, personal problems, etc.

**Conclusion**

Around 50 responses were collected from in and around Kolkata and adjoining areas were used for analysis. The first objective of our study was to study the relationship between work-life balance of women leaders. This objective is proved through correlation method which concluded that Women Leaders do have a strong and positive relationship between their Work and Life balance. Our other objective was to study whether work-life balance is dependent on relationship status of women leaders. This objective is proved through Independent Sample T-Test method which concluded that irrespective of the relationship status of women, both single as well as married women’s lives are equally stressful with full of responsibilities, as the mean difference is same for both of them (0.622).

Findings of this research can't be generalized as a result of it had been primarily conducted at intervals specific business fields. However, considering the current research as associate degree beta study, one could use the results as possible indicators that are required to be self-addressed to enhance the standing of females at add general terms.

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## **A Qualitative Study on Gender Biasness in Educational Expenditure and its Impact on Society**

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### **Abstract**

Rising incidents of gender issues in education are an increasing concern in our society. The purpose of the study is to find out the gender issues in education and their impact on our society. Using the qualitative methodology this study analyzed the main gender issues in our education system. We took 20 samples for the research. The outcome of gender issues in education was found that the education system plays the greatest role in differentiating between boys and girls, even though their impact on our society's economic growth is higher than the other countries. The study result shows that social exploitation, employability, abortiveness, recognition, government support, and liberty are the main factors behind the biasness in educational expenditure between boys and girls in Indian society.

**Keywords:** Gender biases in educational expenditure, Impact of gender biasedness, Impact on the society concerning gender biasedness

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### **Introduction**

Gender inequality in education likely affects education indirectly, through different channels such as by lowering the fertility rate, increasing the life span of the population, and increasing social cohesion. Gender planning is not an end in itself but a means by which women, through a process of empowerment, can emancipate themselves. Ultimately, its success depends on the capacity of women's organizations to confront subordination and create successful alliances which will provide constructive support in negotiating women's needs at the level of household, civil society, the state, and the global system. It introduces an issue of primary importance and constant debate. It will be essential reading for academics, practitioners, undergraduates, and trainees in anthropology, development studies, women's studies, and social policy.

Gender inequality has serious and long-lasting consequences for women and other objectification, discrimination, and socioeconomic inequality can lead to anxiety, depression, low self-esteem, and PTSD.

Young people grow up in varied circumstances with different priorities and perspectives. Educators need to have the awareness to be open to girls' and boys' choices in learning and development. While youth does not exist as a single group we need to understand what is happening in young people's lives, challenge the conventional wisdom surrounding the position and opportunities of young people today, and provide a systematic overview of the major perspectives in youth studies. Basically, gender issues include all aspects and concerns related to women's and men's lives and situations in society, to way they interrelate, their differences in access to and use of resources, their activities, and how they react to changes, interventions and policies. However, one possible channel that has not been widely explored is educational outcomes. Objective of the study is to find out the factors behind the biasness in educational expenditure between boys and girls in Indian society

### **Literature Review**

According to Nitya Rao and Caroline Sweetman (2014), it is stated that education plays a key role in the empowerment of girls and women, and the attainment of gender equality in households, communities, and wider society. Even before the 1948 Universal Declaration of Human Rights made it official, education has long been recognized as an essential

prerequisite to enable people to realize their true potential. Education in itself is a human right, but it also serves as a gateway that allows individuals to access and enjoy other human rights. Education broadens the perspectives of a girl about the roles that she can play; provides a key space (often the only space) for meeting peers, mentors, and role models; and opens new spaces for an empowered girl to act in, reach out to and influence others. Unique to education is the fact that once you have gained it, it cannot be taken away.

According to Aaron Benavot (1989), it is stated that this article addresses two issues: Do gender differences in educational expansion have different effects on national economic growth? If so, why? In past comparative research, these issues were either ignored or explained in relation to education's impact on women's participation in the labor force and reproductive behavior. The study presented here analyzed cross-national data on 96 countries from 1960 to 1985 and found clear evidence that in less-developed countries, especially some of the poorest, educational expansion among school-age girls at the primary level has a stronger effect on long-term economic prosperity than educational expansion among school-age boys. This effect is not mediated by women's rates of participation in the wage labor force or by fertility rates. These findings provide qualified support for institutional theories of education's impact on society.

According to Stina Powell (2018), it is stated that gender inequality persists in academia. This review article examines how universities around the world act on gender inequalities through gender equality measures. The analytical hypothesis is that gender equality measures are a response to how problems of inequality are understood and, as such, they also reveal why inequalities are sustained in academia. A wide variety of approaches are in use, but this article focuses on three of the most common: gender mainstreaming, affirmative action, and mentoring programs. The review recognized a global pattern of gender discrimination in academia as well as differences between countries and disciplines. The article departs from a critical gender-equality approach provided by current feminist research. It concludes that gender equality measures focus mainly on women and men, ignoring intersecting categories of discrimination, and that weaknesses in implementing meritocratic practices play a key role in upholding inequalities. The article suggests that

critical feminist knowledge can help lead the way toward more challenging perspectives on gender equality in academia, in which relations of power, local and national contextualization, as well as intersecting categories of discrimination, can be made visible.

In the 1<sup>st</sup> case “*Introduction to Gender and Education*,” we came to know the researchers were focused on girls’ rights and women’s empowerment.

From the 2<sup>nd</sup> and 3<sup>rd</sup> cases, we can see the researchers trying to highlight the critical paths of gender equality. They talked about feminism and the perspectives on gender equality in academia.

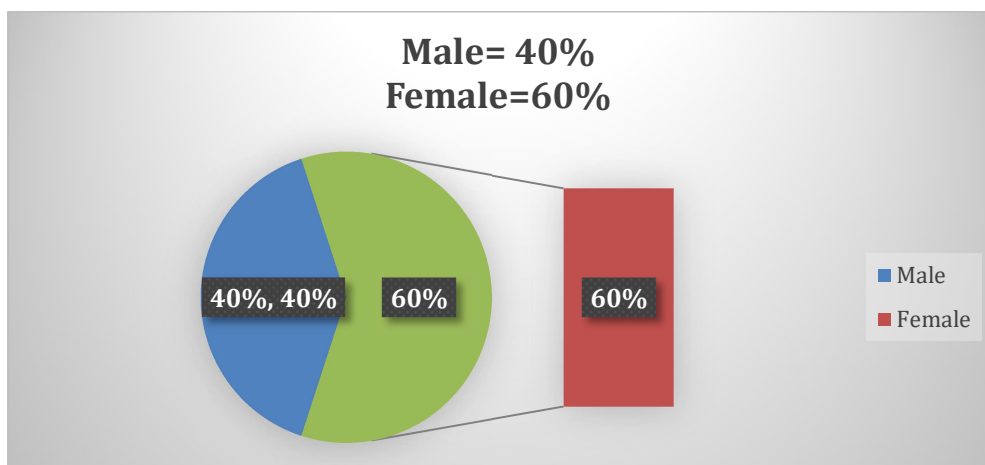
After going through the research and reading them properly, one thing is crystal clear everyone is focusing on women’s rights, talking about their weaknesses, and many more. But no one is thinking about the areas where they were born and brought up, where they are getting criticized and told by their own guardian that their main work is to cook for others and serve them.

Before telling others “*Beti Bacchao, Beti Padhao*”. It’s time to educate the parents and the people who are thinking that girls are “*Dusron ki Amanaat*”.

## Research Methodology

### 3.1 Participants for Qualitative Method

All across West Bengal randomly we selected two Districts: *Kolkata* and *Bardhaman*. For the qualitative method or data collection of our research, we selected the head of the families: mother and father as our participants. As the pandemic was high pitched we conduct the interviews over the phone calls. 2-3 minutes we took for the repo, then asked the questions to the participants. Some participants gave the interview in Bengali, and some of them in Hindi. We translated those into English for our betterment.



**Fig 1: Male-Female ratio**

**Table 1: Distribution of Samples**

Source: Learner’s Creation

Districts	Gender-wise Participants	
	Male	Female
Kolkata		
Bardhaman	5	15

*3.2 Survey Instrument:*

The initial instrument was created based on information found during the research. This instrument has 7 questions. We conducted a focus individual interview with 20 respondents who are the head of the families.

**Table 2: Description of Questions/Variables**

Source: Learner’s Creation

Scale: Items		Code of Items
1.	What are the gender issues in education?	GI
2.	What is the impact of gender inequality in education in our society?	IGIE
3.	How does gender inequality affect economic growth?	AEG
4.	Why gender equality in education is important for development?	ID
5.	What are the challenges of gender equality in education?	CGEE
6.	Do you think our education system made differences in between the genders?	DBG
7.	If a girl child wants to go abroad for studies and a boy child wants	AS



	the same. Whom do you allow?	
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### 3.3 Coding Manual: Kappa

To measure reliability is to measure the percent of agreement between raters. It involves simply adding up the number of cases that were coded the same way by the two raters and dividing the total number of cases. But raters are expected to agree with each other a certain percentage of the time simply based on chance (Cohen, 1960). Reliability can be calculated using Cohen's Kappa, which approaches "1" as the coding is perfectly reliable and "0" if no agreement is expected by chance.

Kappa is calculated as:

$$K = (PA - PC) / (1 - PC)$$

Where the PA= proportion of units in which raters agree

PC= proportion of units for which agreement is expected by chance

The per cent agreement calculation is derived by summing the values found in the diagonals (i.e., the proportion of the time the two raters agreed). This is the proportion of agreement over and above chance agreement.

**Table 3: Kappa Statistics**

Source: Learner's Creation

Kappa Statistics	Strength of Agreement
<0.00	Poor
0.00-0.20	Slight
0.21-0.40	Fair
0.41-0.60	Moderate
0.61-0.80	Substantial
0.81-1.00	Almost Perfect

Based on the guidelines from Altman (1999) and adapted from Landis & Koch (1977), Cohen's Kappa (k) of 0.616 ( $p < 0.005$ ) represents a moderate strength of the agreement which is shown in Table 5.

### Data Analysis

**Table 4: Demographic profile of the total sample**

Source: Learner's Creation

Demographic Profile	Description	Frequency
Gender	Male	5
	Female	15
Age (in year)	30-40	7
	41-50	13
Education Qualification	10+2	4
	Graduated	7
	Post Graduated	8
	PHD	1
Monthly Income	<15,000	5
	<25,000	9
	>25,000-50,000	4
	>50,000	2

Source: Authors own study

### Results and Discussions

We took the Demographic Information from the respondents during the interview and with that information Table, 4 is created. The information includes respondents' Age, Gender, Education Quality, and Monthly income. From Table 4 we came to know that there are different age groups of different gender (approximately 40% male and 60% female), we took their interviews and come to the result that there are five systems or types of social inequality: wealth inequality, treatment, and responsibility inequality, political inequality, life inequality, and membership inequality. Educational inequality is the difference brought about by the ability to access governmental resources which therefore have no civic equality.

**Table 5: Cohen Kappa**

Source: Learners Creation

Symmetric Measures					
		Value	Asymptotic Standard Error <sup>a</sup>	Approximate T <sup>b</sup>	Approximate Significance
Measure of Kappa Agreement		.616	.052	9.478	<.001
N of Valid Cases		237			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

After data analysis, themes and subthemes are categorized in Table 6.

**Table 6: Categorization of themes and subthemes**

Source: Learners Creation

Serial No.	Themes	Subthemes	Codes
1.	Gender Issues	Gender Issues in Education	Differentiate between boys and girls
2.	Social exploitation	Gender inequality in the society	Girls are betrayed by the society
3.	Employability	Inequality in education effects on the economic growth	1. Girls can't live an independent life 2. Many companies want to hire female workers but they couldn't. 3. Economic condition of our country is going down.
4.	Abortiveness	Gender equality is important for the development	For that we need to give value to all the genders
5.	Recognition	Challenges of gender inequality in our society	1. People know women by their cooking skills not by their qualification 2. Girls will not get any chance to work in the same position of the boys
6.	Government	Education system made	1. There are schools and collages for

	support	differences in between the genders	girls and boys separately 2. There are some govt. sectors who only hired male employees 3. Few exams only boys can apply
7.	Liberty	Girl child wants to go abroad, Boy child wants the same	1. In maximum family’s parents don’t allow their girls to abroad just for thinking about their security 2. Boys can go because they need to earn money 3. Girls, parents more prefer to collect the money for their daughter’s marriage ceremony

From Table 6 the study results delineate that economic growth is directly related to the average level of human capital. In addition, growth is indirectly affected by the impact of gender inequality on investment and economic growth. Discrimination against women from or even before birth guarantees them a marginal role in Indian society and ensures that they are poorer, less educated, and face more unemployment and health risks than men. Post-analysis data reveal that social exploitation, employability, abortiveness, recognition, government support, and liberty are the main factors behind the biasness in educational expenditure between boys and girls in Indian society.

**Conclusion**

Gender inequality has serious and long-lasting consequences for women. Other objectification, discrimination, and socioeconomic inequality can lead to anxiety, depression, low self-esteem, and PTSD also. The present research is to find out the gender issues in educational expenditure in our society and to eradicate the inequality amongst women by giving rural women a chance to prove their quality. This research study involves simply adding up the number of cases that were coded the same way by the two raters and dividing the total number of cases. But raters are expected to agree with each other a certain percentage of the time simply based on chance (Cohen, 1960). Reliability can be calculated using Cohen’s Kappa, which approaches “1” as the coding is perfectly reliable and “0” if no agreement is expected by chance. Kappa is calculated as  $K = \frac{PA - PC}{1 - PC}$ . Where the PA= proportion of units in which raters agree. PC=

proportion of units for which agreement is expected by chance. The percent agreement calculation is derived by summing the values found in the diagonals (i.e., the proportion of the time the two raters agreed). By this proportion of agreement over and above chance agreement and based on the guidelines from Altman (1999) and adapted from Landis & Koch (1977), a Cohen's Kappa (k) of 0.616 ( $p < 0005$ ) represents a moderate strength of the agreement. The study result shows that social exploitation, employability, abortiveness, recognition, government support, and liberty are the main factors behind the biasness in educational expenditure between boys and girls in Indian society.

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## Socio-Economic Impact Assessment at Sagar Island in Respect of Grid Availability

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### Abstract

The focus of the paper is based on the state of West Bengal's Sundarban region. The Sundarban forests lie in the southern part of the state. It comprises 104 island groups out of which 54 are inhabited. Sagar Island, the focus of my study, is the largest island in this area having an area of 286 km<sup>2</sup> and a population of more than 1.6 lakhs. This island is situated 5 km adrift on the mainland of India. Due to the presence of River Muriganga (Hooghly), this island could not be connected to the national grid. So, the power requirement was fulfilled by the Diesel Generator sets run by WBSEDCL, 9 Solar Photovoltaic Plants located in the strategic areas, and one Wind-Diesel Hybrid Plant run by WBREDA so that the minimum power requirement could be met. In this paper, the focus of the study will be on the people of Sagar Island on how they will be benefited from the conventional grid in order to improve their lifestyle and economy and also study the future of renewable projects and the existing off-grid system prevalent in this island.

**Keywords:** Grid availability, Socio-economic impact assessment, Decentralized Distributed Generation (DDG), Mini-grid system, Solar Energy, Wind Energy, Sundarban Islands.

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## Literature Survey

India is a developing country, where per capita energy consumption is below the average energy consumption in other parts of the world. Power availability has a direct impact on the economy of the nation, and it also affects our day-to-day life. Business, health, education, entertainment, and any social activities are directly or indirectly impacted. In a study undertaken in 2008, household electrification can impact in increasing literacy rate in rural areas of Assam <sup>[1]</sup>.

According to the 2011, census the total population of Sagar Island is 2, 12, 037 and the population of the island was 1, 85, 644 in 2001 <sup>[2]</sup> but the majority of the people are living below the poverty line (BPL), which is defined as an income group with a family income of not more than Rs 32 per day. This increased rural population struggling to sustain on the finite ecological resources of the region poses multi-level challenges to all three aspects of sustainable living i.e. environmental, social and economic. Energy is one of the common drivers of these three parameters of development, its supply becomes a crucial aspect to achieve overall island sustainability <sup>[3]</sup>.

Sundarban is a sensitive area, both ecologically and economically, where inhabitants lack proper basic amenities, purchasing power, technological awareness, and capacity generation for sustainable development of the community. The demand for electricity for the sustainability of the business is increasing day by day. Dependency on solar energy has been always there as Sagar Island has a local mini-grid system that is being run on a community level. <sup>[4,5]</sup> The availability of the national grid has helped to some extent, but lots of development needs to be done for proper rural electrification <sup>[6,7]</sup>. The reported literature <sup>[8]</sup> shows sustainable electrical energy to the isolated Sagar Island for the sustainable development of the local people and biomass and a fuel cell-based electricity generation system.

## Research Objective:

- To study the impact of grid connectivity and local mini-grid system on the lifestyle of the people of *Sagar* Island through the survey.
- To do an impact assessment study on the business of local distributors/ shopkeepers due to grid connectivity.
- To determine whether the source of household electricity is dependent on the level of income.

### Research Methodology Used

The researcher administered the primary data analysis, i.e. primary data from the respondents is collected through structured questionnaires for local people and local shopkeepers/ distributors. Simple percentage analysis is carried out throughout the project for drawing inferences. Various statistical tools like Pie-charts, Bar Charts, and Radar Chartshas also been used for drawing inferences. Further analysis is carried out through Chi-Square ( $\chi^2$ ) Testing to determine the impact of income on household electricity sources at a 5% Level of Significance. The sample size is considered 90 and the time period allocated for conducting the research is 2 months.

### Findings and Conclusions:

- The first local mini-grid system in *Sagar* Island was installed in 1972 by WBSEDCL with a customer base of 4. During the course of time, the customer base increased up to 613 till October 2011. All the WBSEDCL consumers have metered connections and the energy consumed is reflected on the meter. The billing was done on the basis of the rate fixed for the rural consumers of West Bengal which is being covered by WBSEDCL. The generators used to run for 4 hours in the evening (6 PM to 10 PM on average).
- Line loss has been negligible as the power being generated locally, doesn't need to be transmitted to a long distance (read 34 Km of HT lines and 54 km of LT lines. AT&C losses were around 7% whereas T&D losses were around 8%. Power theft never took place before grid connectivity on the island. Revenue collection was around 2-2.5 lakhs per month and during *Ganga Sagar Mela*, a Hindu festival celebrated in the month of January, it increases up to 3.25 lakhs during that month.



- WBREDA came into existence in 1993 and since then they have been working on installing solar PV plants on the island. Since 1998, 9 Solar PV plants have been installed on the island and each plant has been providing electricity to the local people in their command area for 6 hours a day. Billing is done on the basis of the number of points/connections provided in the household. However, new solar plants are not coming up and maintenance of the existing plants is in shambles. People are now mostly dependent on the solar home light system.
- From the concordance data analysis, we conclude that the local people have benefitted from both the local mini-grid and grid connectivity. Emergency services have greatly improved after the grid connectivity in the island due to 24 hours supply of electricity. The impact on business has been positive according to the local shopkeepers/distributors. On the contrary, sales figures of the solar appliance distributors have dipped by 70%. People are willing to buy electrical appliances after grid connectivity, but they prefer to buy it from either Kolkata or Kakdwip, the nearest town on the mainland.
- From Chi-square Testing, we found out that there is an impact of income on the source of household electricity connection.

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