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March 2022

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Editorial

“Education is the kindling of a flame, not the filling of a vessel.” – Plutarch

A quote which is more than 2000 years old and is still relevant even in our Volatile, Uncertain, Complex and Ambiguous business environment. The quote reflects on the beauty of two elements; one that education triggers an adventure of learning and insight for the inquisitive mind, and the other that the openness to learning subsumes everything in its way.

A new array of technologies such as Metaverse, Blockchain, Artificial Intelligence and many more have positioned themselves to become the key drivers of change. It is both a challenge and an opportunity for us to live in such times. It is a challenge because Business Schools need to create resilience and mettle in their students to face such a dynamic environment. It is an opportunity because those students who can adapt themselves are prepared to become the leaders in this new turn.

With technology driving the forces of progress in our ever-pacing world, adaptability and agility have become the two wings to help us cope with rapid change. Industries are being transmuted like never before, creating newer avenues for both the existing and emerging businesses. It is in situations like these we need to keep the fire burning. In a world where filter bubbles, circular reporting and false news are prevalent, only research and the desire towards excellence can make one take the right decisions.

The next generation of leaders will be ones who befriend change and be a part of the evolution towards progress. Progress in the right direction involves inclusivity and sustainability. At WeSchool we promote both these values to build a brighter future.

It is my hope that all of you will keep the fire of inquisitiveness burning!

Prof. (Dr.) Uday Salunkhe
Editor in Chief

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A Study On Relationship Between Select Global Indices And NIFTY**Mrs. Budampati V. S. Sowmya* Ms. Enugu Akhila Reddy***

ABSTRACT

Indian stock markets though small when compared to world markets, are attracting a large number of investors with a considerable growth in the performance. All the world markets are interlinked and any rise/fall in the world indices will have an effect on Indian indices as well. An analysis of world indices will help the investor to predict the market movements of Indian indices and thus take better investment decision. 2020 marked a remarkable year as the world suffered heavily due to the outbreak of Covid-19 pandemic. Literature review has clearly shown that investors have expanded their boundaries of investment to world markets and a study of correlation among these markets is essential to reap greater returns. The purpose of the study is to analyze the returns of select market indices on a quarterly basis during 2018-2020. The study also focused on understanding the correlation between various global indices and NIFTY during the study period. Standard Deviation of returns and correlation among the various indices is used to attain the set objectives. The research found that there is a tremendous fall in the returns of all the global indices in the first quarter of 2020 when Covid-19 was on wide spread across the globe. It is found that there exists a strong positive correlation between global indices and NIFTY during the study period.

Key Words: Covid-19, Global Indices, National Stock Exchange, NIFTY

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1. INTRODUCTION

Stock markets allow businesses to be publicly traded and to raise capital. Capital rising enables companies to develop their businesses, increase operations and generate employment in the economy. The investment plays a crucial role in terms of economic trade, development and prosperity in an economy. An Index can be defined as a tool that measures and track the equity performance of company or a sector. These Indices are considered as a scale in observing market segments movement and performance of stocks. Investors use indices as a basis for investing their portfolios in particular stocks. **Ali A^[1] (2020)** classified the spread of Covid-19 in three distinct phases viz. Phase I when fatality was localized in China, which runs from Jan 1, 2020, to Feb 14, 2020; Phase II when fatalities started happening in Europe, which runs from Feb 15, 2020, to Feb 28, 2020 and Phase III, when fatalities happened in the US. This study helps us to understand that covid 19 has its impact felt worldwide in various phases and the present study period is much more effective as it has crossed all three phases and thus all the major global indices have seen an impact of the same.

The National Stock Exchange (NSE) is India's largest stock exchange, with headquarters in Mumbai, Maharashtra. The NIFTY 50 represents a weighted average of 50 of the country's major firms listed on the National Stock Exchange. The Standard and Poor's 500, or simply the S&P 500, is a free-float weighted

stock market index that includes 500 of the top businesses listed on US stock exchanges. The Financial Times Stock Exchange 100 Index is a stock market index that measures the market capitalization of the top 100 businesses listed on the London Stock Exchange (UK). The CAC 40 is a major French stock market index. The index is a capitalization-weighted measure of the 40 most valuable stocks among the Euronext Paris' 100 largest market caps. The Nikkei 225, or Nikkei Stock Average (Nikkei hiking kabuka), is a stock market index for the Tokyo Stock Exchange. The Shanghai Stock Exchange Composite Index, often known as the SSE Index, is a stock market index that includes all equities (A and B shares) trading on the Shanghai Stock Exchange.

2. LITERATURE REVIEW

J. B. Zhang et al.^[2] (2020) in their article analyzed data of 12 price indices and 9 sectoral indices from 300 stocks (e.g., blue chips) traded in Shanghai and Shenzhen stock exchanges from 2006-2011. It is concluded that stability and dynamics of stock markets are influenced by hierarchical structure of global indices. **Mishra et al.^[3] (2020)** studied the impact of COVID-19 on the Indian financial market and compared it with the outcomes of two structural changes of the Indian economy: demonetization and implementation of the Goods and Services Tax (GST). Markov switching vector auto regression is conducted and found that the growth of FII outflows from the Indian

financial markets is still lower during COVID-19 phase compared to the postdemonetization and GST phases. **Liu, M. (2020)**^[4] studied the stock indices from 31 developed countries, 33 developing countries, and 13 undeveloped countries are considered. The results showed that the stock market in higher- income country tends to be overreacted at the beginning and bounds back more rapidly than lower-income country. The markets have negative impact on the stock return across all income group countries which results higher volatility, increased fears and lower stock return. **Alam, N. (2017)**^[5] used Heteroscedastic co-integration approach, Johansen test of co-integration, OLS and GARCH model and the research found that macroeconomic variables cause short term volatility in markets, and thus an investor who is interested in investing in the Indian stock market should be prepared for the long-term investment to yield better returns. **Mehta. S. (2020)**^[6] analyzed volatility in stock markets, investor behavior and changes in their portfolio during COVID 19 Pandemic. The study found that COVID19 had a psychological impact on investors and changed their investment patterns. **Biswas et al., (2020)**^[7] analyzed the investor behavior with change in economic and financial news in the pandemic period using sentimental analysis on indices like NIFTY, DOWJONES, SHANGAI indices. It is found that the polarity and subjectivity of investor is declining as the number of deaths is increasing whereby trend of market is declining. **Samadder & Bhunia,**

(2018)^[8] examined the possibility of portfolio diversification and relation between the Indian stock market and the developed stock markets. The researcher used Johansen Co-integration Test, Granger Causality Test. Low correlation is observed between Indian stock market and France stock market that indicates the possible gains from international diversifications. Johansen co-integration test confirms a precise long-term equilibrium connection amongst all the stock markets as a widespread strength. It is opined that the investors can earn reasonable benefits from international portfolio diversification in the short- run but benefits from international portfolio diversification in the long-run are restricted.

3. NEED FOR THE STUDY

With the increasing inflation in the country, many investors are now shifting from traditional investment options to promising yet risky investment options and stock market offers a good return to the investors. Prior analysis of the market and the factors influencing the share price will help the investors make better choice. The purpose of present study is to suggest the investor a better investment option by understanding the impact of global Indices on Nifty during global crisis. Through this study the investor will be aware of profitable stocks at global level and make better investment decisions in future.

4. STATEMENT OF THE PROBLEM

Although, few similar studies have been done on comparative analysis of global market indices and Indian stock market indices most of them were analyzed for the period before pandemic. But, present study has been done for the period before and after the announcement of global pandemic i.e., 2018 to 2020 on a quarterly basis. In the past studies, they have analyzed integration between developed market and developing market indices in terms of returns and volatility. In the present study top 5 global market indices are considered and one major stock market index of India i.e., NSE are analyzed to know their interrelationship and also to analyze the changes in returns during pandemic.

5. OBJECTIVES OF THE STUDY

- To analyze the returns of Nifty and select Global indices during the study period i.e., 2018-2020.
- To study the impact of select global market indices on the performance of NIFTY.

6. HYPOTHESIS

H₁: There exists a positive correlation between NIFTY and select global market indices.

7. RESEARCH METHODOLOGY

From January 1, 2018, to December 31, 2020, the sample includes quarterly average index prices from the (NIFTY) NSE INDIA, S&P (US), FTSE (UK), CAC (FRANCE), NIKKIE (JAPAN), and SSE COMPOSITE (CHINA). These six indices quarterly price data was gathered from a variety of sources, including the National Stock Exchanges, investing.com and Yahoo Finance. The rate of return is one of the important outcomes of an investment. It is considered as a key measure available to investors in comparing alternative investments. In this study we use following formula to estimate returns of indices.

$$R = (P(T+1) - P(T)) / P(T)$$

R = Return on the scrip

P(T) = Price of the share at time T

P(T+1) = Price of the scrip's at the end of the holding period.

Standard deviation is used to know the variation of variable from its estimated value or mean. In the present study the variation in returns in different time periods are compared with average returns. Correlation explains relationship between the variables. In the present study NIFTY (NSE) index relationship with other indices to understand the influence of other indices on NSE nifty index.

8. DATA ANALYSIS

8.1 return analysis of select Indices

From **Table 1** it is evident that the nifty index is less volatile during the period 2018-19 whereas S&P observed a sudden fall at end of 2018 due to Trade war between USA and China. With the impact of fall in developed markets like US; NIFTY, FTSE, NIKKIE, CAC and SSE Indices also had a downward trend. With the announcement of global pandemic on March 11th 2020, all the businesses had a down-fall and forced to shut down. After April, the markets observed positive market conditions which caused improvement in stock movement. Even though India and Japan has recorded less number of COVID cases in early 2020's, due to downward trend observed in developed country markets with huge positive cases and increased number of deaths there is a drastic fall of all the Indices irrespective of being developed or developing country like India.

8.2 correlation between select global indices and nifty

Table 2 shows the correlation between Nifty and select global indices. As the events occurring around the world, particularly in the United States have a direct or indirect impact on the companies that are part of Indian indices, the volatility of Indian markets imitates the trend followed in US markets. The correlation coefficients between NIFTY and S&P, NIFTY and FTSE, NIFTY and CAC are 0.8613, 0.8710, 0.8661, and

0.8591 respectively which proves the above statement and indicates a strong positive correlation. Though the correlation coefficient signifies a moderate positive correlation between NIFTY and SSE (0.5788), it can be associated to the fast recovery rate of China from Covid-19 pandemic as compared to world countries.

Hence alternative hypothesis (H_1) is accepted i.e. There exists a positive correlation between NIFTY and select global market indices.

9. FINDINGS OF THE STUDY

- This study has indicated the relation between NIFTY (IND) Index and selected International Indices such as FTSE (UK), S&P (US), CAC (FRANC), NIKKIE (JPN) and SSE (China) as **positive**.
- Hypothesis testing showed that there is a highest positive correlation between NIFTY(IND) Index and FTSE(UK), S&P(US), CAC(FRANC) and NIKKIE(JPN), whereas there is a moderate correlation between NIFTY(IND) and SSE (CHINA) Index due to less COVID impact on china in the year 2020 when compared to other countries.
- The impact of global financial crisis due to COVID pandemic is like a ripple effect on all the global markets around the world and every market is equally affected because of the outbreak of this global pandemic.

10. SUGGESTIONS

The present study can help the investor to certain extent, by providing the investor insights to invest in those stocks domestically that are profitable at global level. This study has been conducted by considering market conditions during the period of 2018-2020. However, due to changing market conditions the present study estimates may vary in future. Hence investor is suggested to make a wise decision while investing in any of the stocks.

11. CONCLUSION

The stock markets in India are highly connected with other countries. However, the relationship between Indian financial markets and the rest of the globe is decreasing. According to Bloomberg statistics, the weighted average correlation of India's currency, stocks, and bonds with global economies declined to 0.32 in April 2018.

With the impact of COVID-19 the slowdown in demand and supply will almost certainly result in a financial crisis and a financial market slowdown. On March 12th, 2020, the US stock market, European stock market, and Asian stock market together dropped more than 10%. In December 2019, the stock market in Japan plunged by more than 20%.

The International diversification made the economy globalized. However, the Indian market is small when compared to global standards. The present study helps the

investor to understand the impact of macro-level factors on Indian stock markets, by which he/she can predict the trend of market and make investments to improve their return. With the introduction of LRS (Liberalized Remittance Scheme) by SEBI the investors can invest their funds on US-based stocks to get more returns. Through this scheme, investor can invest in different stocks that can generate good return by observing the changes in global factors or global news.

12. POLICY IMPLICATIONS AND RECOMMENDATION

The global spread of covid-19 pandemic has had severe impact economically across the globe. World-wide stock markets have declined drastically. Understanding current market fragilities, paths of market contagion, and policy implications calls for a sober assessment of the changing structure of global markets and financial intermediation in the post-crisis era. It is recommended to expand the liquidity support provided by the central banks all over and also enhance the fiscal support to ensure stability of investments.

13. SCOPE FOR FURTHER RESEARCH

This study totally focused on indices of major markets with whom India is actively involved in trade. The study can be extended by comparing the indices of other significant markets like that of OPEC countries. A Regression analysis will also help the investor to clearly study and understand the global

factors that directly influence the Indian indices. Research on Stock markets is highly time bound and continuous and timely study will help the investors to get genuine information. It also will help to fill the gaps created by new external situations that influence the global markets to a greater extent.

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Table 1: Quarterly returns of select global indices during 2018-2020

QUARTERLY RETURNS OF SELECT GLOBAL INDICES DURING 2018-2020							
YEAR	PERIOD	NIFTY (IND)	S & P (US)	FTSE (UK)	CAC (FRC)	NIKKIE (JPN)	SSE (CHINA)
2018	1/JAN -31/MARCH	-3.74%	-0.96%	-8.43%	-2.63%	-5.78%	-3.89%
	1/APRIL-30/JUNE	5.96%	2.91%	8.13%	3.24%	4.00%	-10.31%
	1/JULY-30/SEP	2.42%	7.06%	-1.57%	3.23%	7.99%	-0.70%
	1/OCT-31/DEC	-0.39%	-14.33%	-10.77%	-14.50%	-17.61%	-11.95%
2019	1/JAN -31/MARCH	7.05%	12.63%	7.99%	12.60%	5.89%	22.52%
	1/APRIL-30/JUNE	1.44%	4.24%	2.14%	3.99%	0.80%	-3.47%
	1/JULY-30/SEP	-2.45%	1.22%	-0.04%	2.54%	2.43%	-2.48%
	1/OCT-31/DEC	5.94%	8.30%	1.86%	5.21%	8.54%	5.07%
2020	1/JAN -31/MARCH	-31.31%	21.08%	-26.89%	-28.63%	-21.33%	-10.15%
	1/APRIL-30/JUNE	19.37%	19.05%	8.54%	11.82%	16.97%	8.36%
	1/JULY-30/SEP	11.55%	8.60%	-4.92%	-2.58%	4.20%	8.26%
	1/OCT-31/DEC	22.71%	11.69%	10.53%	16.36%	17.96%	7.79%

Source: Primary data computed and compiled using Excel

Table 2: Correlation between nifty and other global indices during 2018-2020

Indices	Correlation	Level Of Correlation	Hypothesis
NIFTY(INDIA) & S &P(US)	0.8613	Strong positive correlation	H ₁ Accepted
NIFTY(INDIA) & FTSE(UK)	0.8710	Strong positive correlation	H ₁ Accepted
NIFTY(INDIA) & CAC(FRC)	0.8661	Strong positive correlation	H ₁ Accepted
NIFTY(INDIA) & NIKKIE (JPN)	0.8591	Strong positive correlation	H ₁ Accepted
NIFTY(INDIA) & SSE(CHINA)	0.5788	Moderate positive correlation	H ₁ Accepted

Source: Primary data computed and compiled using SPSS

ANNEXURES:

Table 3: Mean, variance, standard deviation and correlation between NIFTY returns and returns of other global indices during 2018-2020

YEAR	RETURNS (%)					
	NIFTY (IND)	S & P (US)	FTSE (UK)	CAC (FRC)	NIKKIE (JPN)	SSE (CHINA)
2018	3.15	-4.38	-12.48	-10.95	-12.08	-24.59
2019	12.02	31.49	12.1	26.37	18.2	22.3
2020	14.17	18.4	-14.34	-7.14	16.01	13.87
Mean	9.78	15.17	-4.91	2.76	7.38	3.86
VARIANCE	34.12	329.49	217.78	421.70	285.12	624.82
STANDARD DEVIATION	5.842	18.152	14.758	20.535	16.886	24.996
CORRELATION		0.5704	0.13	0.3026	0.7782	0.5776

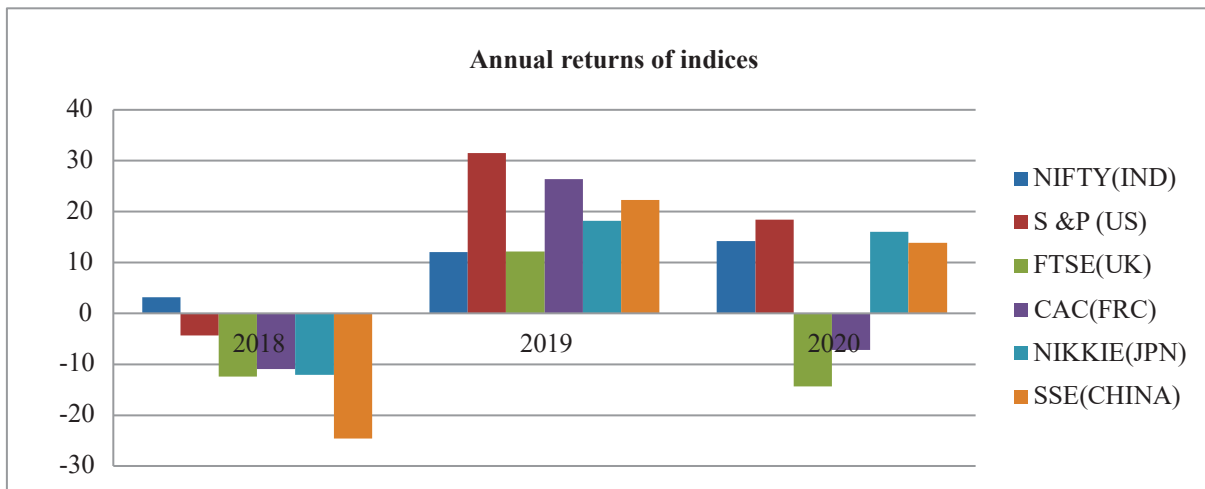


Chart 1: Annual Returns of select indices during 2018-2020

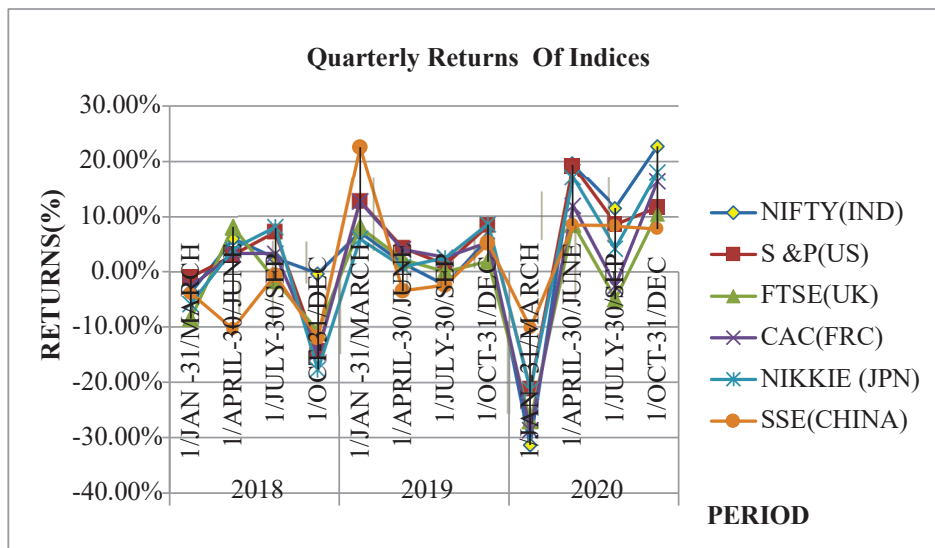


Chart 2: Quarterly Returns of select indices during 2018-2020

RESEARCH

A Study On Six-Sigma Practice And Implementation In Small And Medium Enterprises (SME)

Dr. S. Lakshmi*

ABSTRACT

A more stringent quality initiative is necessary for businesses to survive in today's competitive world. To survive in world market, we need to produce highly qualitative products and services and quickly respond to customer needs. This is possible through various process improvement projects of Six-sigma initiative. A few small and medium enterprises are studied to understand implementation process of six-sigma initiatives in their work culture. We try to infer practical implementation, benefits and difficulties in six-sigma implementation in SMEs in general. There is a lot of research gap found between the theory and practice of six sigma implementation. A thorough review of literature on definitions, critical success factors, implementation part and benefits of Six -sigma methodology are understood from different research papers. Six sigma implementations will result in high level output, improved process, better organizational culture and overall skill development of the workers.

Key Words: SME, Six-sigma initiative, Total Quality management (TQM), Business Process Re-engineering (BPR), ISO firms, DMAIC, DMADV.

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INTRODUCTION

Quality is the buzz word which became very stringent in today's manufacturing and service sectors. Six-sigma means 3.4 defects PPM (parts per million opportunities) used in every field of the business. Introduced by Motorola during early 1980's, spread across the world like rapid fire and can be achieved through process improvement projects. Six Sigma offers great business excellence through appropriately configured and deployed Six Sigma projects. Six Sigma also illustrates that the management system is dynamic. Forever changing management system, Six sigma is a remedy to move towards the quality revolution. Six Sigma practice is not an alternative to Total Quality Management (TQM) but is same as BPR (Business Process Reengineering) introduced by Hammer and Champy in 1993. McClusky (2000) has studied that high return on the investment can be seen in six sigma implementation. Six sigma practice is everyday continuous and dramatic improvement of the work process which result in customer satisfaction.

There were more than hundreds of TQM tools and techniques but Six Sigma has less proven methods and builds expertise on few technical leaders, like Six Sigma Black Belts, to a high level of proficiency in the application of these tools. Some of the methods used by Black Belts are highly advanced, modern computer technology. Six-sigma is applied with a simple performance improvement model known as Define-Measure-Analyze-

Improve-Control, or DMAIC for already existing process and DFSS (Design for Six sigma) for new design or process or DMADV (Define-Measure-analyze-Design-Verify).

SIGNIFICANCE OF THE STUDY

Quality improvement through process improvement methodologies is the need of the hour for both production and service sectors to remain competitive in the market place. Most of review studies are related to implementation and benefits of six sigma methodology. To attain the core benefits of profit generation, high revenues, cost reduction of all work process and customer satisfaction.

OBJECTIVES

Various definitions, Critical success factors, implementation part and benefits of Six - sigma methodology are analyzed from different research papers

RESEARCH GAP

Bridging the gap between theory and practice of Six sigma research as emphasized by various researchers. These challenges and limitations as illustrated by Antony (2004b, 2007b) are as follows:

1. The 1.5 sigma shift resulting in a 3.4 DPMO does not make sense in service processes.
2. The impact of leadership styles on Six Sigma success needs more research.

3. No unified standards have been accepted regarding the contents of belt training.
4. The relationship between the cost of poor quality (COPQ) and the sigma quality level (SQL) is based on experience not empirical research.
5. The relationship between COPQ and its financial impact in SMEs needs further research since SMEs are hardly considering quality costs.
6. Availability of quality data is still a great challenge in Six Sigma projects.
7. In some cases, the solutions driven by Six Sigma are expensive and only a small part of the solution is implemented at the end.
8. Six Sigma project selection in many organizations is based on subjective judgment.
9. The calculation of defect rates is based on the assumption of normality, while the calculation of defect rates for non-normal situations is not yet properly addressed.
10. Owing to dynamic market demands, critical-to-quality characteristics (CTQs) should be critically examined at all times and refined as necessary.
11. Training programs usually do not address forecasting and time series methods.
12. Six Sigma research needs to investigate the validity of 5 sigma approach assumption in design for Six Sigma (DFSS).

13. There is no standard curriculum for Six Sigma implementation process.

BRIEF LITERATURE REVIEW

The various definition of six sigma practices are

Andersson et al. (2006) -Improvement program for reducing variation, which focuses on continuous and breakthrough improvements.

Antony (2002) -A business performance improvement strategy that aims to reduce the number of mistakes/defects – to as low as 3.4 occasions per million opportunities.

Banuelas and Antony (2002)- A philosophy that employs a well-structured continuous improvement methodology to reduce process variability and drive out waste within the business processes using statistical tools and techniques.

Behara et al. (1995) The rating that signifies “best in class”, with only 3.4 defects per million units or operations.

Bendell (2006) A strategic, company-wide, approach ... focusing on variation reduction, projects have the potential of simultaneously reducing cost and increasing customer satisfaction.

Black and Revere (2006) A quality movement, a methodology, and a measurement. As a quality movement, Six Sigma is a major player in both manufacturing and service industries throughout the world. As a methodology, it is used to evaluate the capability of a process to perform defect-free,

where a defect is defined as anything that results in customer dissatisfaction.

Chakrabarty and Tan (2007) A quality improvement program with a goal of reducing the number of defects to as low as 3.4 parts per million opportunities or 0.0003 per cent.

Kwak and Anbari (2006) A business strategy used to improve business profitability, to improve the effectiveness and efficiency of all operations to meet or exceed customer needs and expectations.

The features listed below are considered for the successful adoption of Six Sigma in SMEs.

- Henderson and Evans (2000) & Antony (2004) emphasized on visible management buy-in, commitment and support for Six Sigma practice.
- Henderson and Evans (2000), Antony (2004) & Antony and Fergusson (2004) linking Six Sigma to business strategy and customers as the main factor
- Antony (2004) & Antony and Fergusson (2004) found training, rewarding and recognizing the team members for successful adoption.
- Goldstein (2001) communicated the success and failure stories of Six-sigma adopted companies.
- Antony (2004), Antony and Fergusson (2004) & Goldstein (2001) found selecting the right people and the right projects is the key issue.

- Huxtable(1995) identified monitoring cost of quality for identifying non-value added activities within the small business, reducing overheads to minimum and decimating the indirect costs .
- Goldstein (2001) found important issue of Six-sigma implementation is conducting monthly performance reviews and keeping everyone aware of Six Sigma through company meetings, postings and everyday activities.

The above factors are identified as critical success factors for Small Medium Enterprises (SME) of Six-Sigma implementation.

Kumar Maneesh et.al., presented the findings of the survey in UK manufacturing small and medium enterprises (SME) to know the quality practices and its impact on the organizational performance . The findings implied that factors critical to success of quality initiatives are Management Commitment and Strong Leadership is required for successful implementation in the organization. The soft aspect of management like employees in terms of training, making resources available and establishing good Communication with in the employees is found important Six-sigma project. However, the operational and strategic performance measures of SMEs implementing Six Sigma differs significantly in ISO certified companies.

Research had shown that Six Sigma projects have failed in many organizations do to inability to understand the kick-off or due to failure to link the initiative to strategic goals and measurable and attainable objectives. Management in such organizations are involved in paying lesser attention to softer issues such as leadership, culture change, employees training and education. It also found that there is a significant difference in the performance of the Six Sigma/Lean firms against ISO certified companies

Antony et.,al studied that important factors in six sigma implementation are management involvement and commitment, training organization infra structure, cultural change, management skills, project importance , importance of six sigma procedure, tools and techniques, reviews controlling , attaching six-sigma to the business strategy, supplier customers and the various entities of the supply chain.

KlefsjoÈ et.,al argued that Six Sigma is a scientific procedure that helps in cutting costs in the organisation; the Six Sigma methodology also aids the values ,culture of the organization and to select the best techniques and the application of Total Quality Management.

Chang-tseh et.al., demonstrated the significant impact of Information system /Information Technology (IS/IT) on the application of the Six Sigma project. The networking facilities and internet

communication in PC technologies coupled with highly developed software tools have contributed to the success of application of Six Sigma quality control system, particularly in small and medium businesses. Six Sigma methodology becomes a reality when assisted by latest computer hardware and software tools. The visionary use of Information system within the Six Sigma method helps in making the things simpler for professionals to indulge all the Six-sigma principles as part of their daily work .

Schroeder Roger G et.al., argued that Six Sigma provides and defines a new organizational structure . This emergent structure for quality management aids the firms to keenly involve in process improvement projects, while at the same time creating a idea that result in problem definition ,analysis and alternative solutions between disparate project members.

Dinesh Kumar. U et.al., emphasized that two optimization models will help management to choose any one of the process improvement projects. These models consider a multi-stage, asynchronous manufacturing process with the capability to improve quality (scrap and rework rates) at each of the stages. The first model is maximizing the sigma quality level of a process under cost constraint while the selection of second model is Six Sigma alternatives to maximize process returns. The costs associated in buying the new technology, modification of infrastructure, training employees, hiring skilled employees

and proper investment in information system through Process quality improvement projects. The models discussed recognize that an enterprise competing for funds and the benefits can result in either revenue generation or reduction in costs.

Linderman Kevin et.al., proved that Six Sigma improvement projects outwardly measurable goals to improve performance. Goal theory highlights the importance of behavioral influences on goal setting, and recommends the importance of soft aspects such as social and psychological issues in following the Six Sigma methodology. The visionary leaders must understand that successful application of Six Sigma requires not only technical capabilities but also in understanding behavioral issues.

Jiju Antony & Darshak A. Desai researched participating companies to admitted that they are performing extraordinary well from the six sigma deployment. The employees admitted that they are able to integrate all the major functionalities of the organization with the six sigma must be integrated into all business functions within the company in the future. The integration of agile production and six sigma practice is helping to achieve differential advantage and achieving operational success in future.

Jiju Antony., Kumar Maneesh & Madu Christian .N studied that that many of the SMEs are not aware of six sigma methodology and many of them do not have

the resources to implement six sigma projects. It is found that Six- sigma was not known among SMEs. Top –management commitment and support, connecting six sigma to customers, six sigma to business strategy are the most important factors for the successful implementation of six sigma in SMEs.

Behara et al., 1995 When Six Sigma is implemented successfully, it will result in effectiveness and efficiency in a broad range of businesses. The most cited benefit of Six Sigma in the literature is customer satisfaction.

POLICY IMPLICATIONS AND RECOMMENDATIONS

George (2002) has also proposed three institutionalization steps to lead an organization through the phases above: (1) Start on the right foot: dedicate resources and select the right people and projects. (2) Build confidence that LSS (Lean Six Sigma) is a way of life: publicize results and celebrate, educate and involve employees, train on leadership, leverage existing strengths, focus on all processes (manufacturing and transactional), reinforce corporate values, integrate LSS into strategic planning, create accountability through visibility, communicate effectively and share best practices. (3) Extend LSS: use a common language, integrate LSS with business plans, extend it into the supply chain and into the design processes. To succeed in integrating

lean with Six Sigma, organizations need to adopt a holistic improvement method, where lean and Six Sigma mutually reinforce each other. Although DMAIC originated in Six Sigma, it can be generalized as an overall framework for process improvement.

SIX-SIGMA VS LEAN APPROACH

Six Sigma and lean share common grounds in terms of: the origin or development, principles or concepts, objectives or applications, leadership roles, staff roles and features or project management approach. On the other hand, the differences between the two methodologies lie in: the focus, technique, how they are viewed, what they are criticized for, approach (to people/ operation, teams, mapping, processes and systems, certification, design and data), scope, identification of gaps, view of inventory and production, practices (DMAIC vs VSM), COPQ (Cost of Poor Quality) vs waste types, COPQ vs waste percentages, definition, execution, analysis vs action, tools, software, rewards, training (cost and material), change leadership and obstacles, project duration, project selection, financial savings, time to see results, link to suppliers, culture, measures, nature of problem level, complexity, shortcomings or desirable characteristics and results. However, even in the dimensions where they are different, there are still lots of similarities, such as in the focus on customer satisfaction.

THEORETICAL RESULTS

The brief review of literature shows that Six Sigma firms are performing much better on the quantifiable measures like reduction in scrap rate, reduced cycle time and delivery time and increase in productivity. Even in the strategic measures of firm's performance of cost reduction, increased profitability and increase sales, Six Sigma and Lean firms done extremely well compared to ISO certified SMEs.

Lean production is concerned with removing waste and reducing cycle time in processes, but cannot reduce variation alone. Six Sigma can reduce variation and improve process by applying a problem-solving approach using statistical tools, but alone does not reduce waste or cycle time. Lean production encompasses the entire organization value chain, Six Sigma concentrates more narrowly on specific project or process within an organization. Despite these differences, both approaches share common features that may combined together to develop the "Lean Six Sigma" concept as an improvement methodology that maximizes shareholder value and improves customer satisfaction, cost, quality, speed and financial resource by reducing variation and eliminating waste in an organization (Byrne et al., 2007)

CONCLUSIONS

For global competitiveness, Indian industries need overall strategic, operational and service excellence performance and those in Quality

Circles, total quality management (TQM) and ISO Certification needs a movement towards the Lean Six sigma project. These methods have failed to do required operational excellence in Indian industries over the last decade or so. This shows six sigma is not fully explored by Indian industries. Indian industries have experienced periodic impacts of change both, before and after industrial reforms. In the beginning, the focus has been on large-scale public and private sectors, mainly in core infrastructural production firms. After globalization and liberalization, quality emerged as one of the important areas of concern along with productivity. For operational and service excellence it is necessity for the Indian industries to survive and emerge as global competitor because of globalization and world class competition. Many Indian firms have initiated the Six-sigma practice but its adoption not went deep to achieve the actual radical operational improvements. The major obstacles of Six-sigma implementation and its benefits needs to be realized, to reach strategic long term and financial advantages by both manufacturing and industrial firms.

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Empowering the SMEs through Open Banking: Prospects and Challenges**Miss. Anitha Mary Alex***

ABSTRACT

Small and medium-sized businesses (SMEs) are the lifeblood of our country. During the epidemic last year, we saw and experienced exponential expansion. In fact, SMEs have surpassed the agriculture industry as the top employment. The traditional banking system has failed to meet the needs of SMEs. In this situation, it is critical for banks and NBFCs to provide the best possible service to the sector. Open Banking is one of the ways that SMEs can be empowered because it introduces a completely new method of doing business for small and medium-sized firms. Open banking has just lately acquired popularity in our country. This paper provides a conceptual examination of the benefits and limitations of Open Banking based on secondary sources. It also sheds light on some of the areas that should be considered for SMEs to be strengthened through Open Banking.

Key Words-*SMEs, Open Banking, API, Fintech, Digital data*

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1. INTRODUCTION

In recent years, the COVID-19 crisis has had a significant impact on the growth of the digital economy. It has become essential for businesses of all sizes, large and small, to adapt their business models to digital delivery channels in order to survive and thrive in the digital age.

Businesses of all sizes, particularly small and medium-sized enterprises (SMEs), are the backbones of the world's economies. The banking sector continues to underserve small and medium-sized enterprises (SMEs) despite numerous efforts. Small and medium-sized enterprises (SMEs) also face numerous banking obstacles. The products and services that banks provide to SMEs, as well as the processes and tools that are used to deliver those products and services, should be rethought in order to stimulate growth and profits.

The benefits of open banking for small and medium-sized enterprises (SMEs) include access to solutions for their financial requirements and the reduction of transaction costs.

2. STATEMENT OF PROBLEM

In today's world, customers are becoming increasingly tech-savvy, which is posing a challenge to traditional financial institutions. Open Banking has swept across the platform like a wildfire.

Though all banks have significantly increased their ability to serve customers through Open Banking, are they also empowered to serve Small and Medium-Sized Enterprises (SMEs) in the same way that they serve large corporations?

3. OBJECTIVES OF THE STUDY

- To understand the concept of Open Banking
- To identify the benefits of Open Banking
- To analyse the challenges of Open Banking
- To explore the possibilities to serve SMEs through Open Banking.

4. LITERATURE REVIEW AND GAP

Open Banking in India has moved quickly in the last few years, and 2021 can indeed be considered The Year of Open Banking. This movement was visible across government initiatives, the launch of scalable Open Banking initiatives by banks, decent traction by multiple neobanks, funding & scaleup of multiple Banking-as-a Service platforms. Open Banking was meant to give customers more choice and options but it is perhaps one of the most misunderstood recent developments in financial services. (Kania, 2021)

Financial institutions may be missing out on an opportunity to build loyalty among their customers by showing them how useful Open Banking can be. For banks, Open Banking has

the potential to build loyalty and profits, but customers are confused as to what Open Banking really is. To truly be customer-centric, it's time to show customers that it's simply 'smart banking' (Artimena, 2021)

The complete vision for Open Banking is that personal data is securely exchanged with customer consent across organisations the customer chooses (financial services organisation or otherwise), in return for better financial and non-financial services, products, and offerings. In this new, pandemic-influenced world of ecommerce, consumers want speedy, secure, and convenient payment experiences that are curated and personalised. Consumers increasingly use banks for new services because of the convenience and flexibility they offer. This includes account-to-account payments.

A recent research found that nearly half (48%) of respondents are 'scared' of Open Banking. That is because of the principles that enable third-party providers to access customer data to deliver a range of digital and online financial services. Open Banking API (application program interface) allows third-party financial service providers access to financial data. They are used by banks and financial institutions to improve consumer banking. (Kania, 2021)

Financial regulators and national authorities are acknowledging the need for the digital exchange of financial data. The data can be obtained through customer permission and

used to remove system inefficiencies. In fact, this data is being used to design and build digital applications for faster and easier payments. (Sivathanu, 2019).

Much of the studies only show the Open Banking system being adopted by the customers and large business organizations across the world. There were very limited areas of study based on the application of Open Banking in SMEs. As we know that the SMEs are the lifeblood of our economy and it needs to be given much priority towards growth.

5. RESEARCH METHODOLOGY

The study is based on descriptive and explorative design. It has made an understanding about the concept of Open banking and has also made a detailed study about its use towards empowering the Small and Medium Enterprises. The secondary data have been collected from several websites related to RBI, reports published in 2021 about Open Banking, Journals, Blogs and online news editions.

6. OPEN BANKING

API allows two software to communicate with each other. It is a programming code that allows data transmission between two software. There are 3 types of APIs in Banking:

Private (Internal) APIs - information exchange within the enterprise. these are

closed APIs used for a bank's own personal use. Banks use this kind of APIs to optimize their operations.

Partner APIs - Partners APIs are used for better integration among business partners. Here, a bank may have bilateral agreements with a strategic partner. It is important to understand that the financial information is only disclosed to one strategic partner. Hence, the ecosystems are still closed.

Open (Public) APIs - In Open APIs, banks share the customer data and open the ecosystem. It is used for collaborating with third-party solution providers. These offer innovation opportunities and improve market research. (Dubey, n.d.)

7. BENEFITS OF OPEN BANKING

Evolve with Customer Base - The new customer base is more tech-savvy and expects to have access to these financial products with their devices. 2.6% of the younger and tech-savvy audience use service of non-traditional bank and expect to continue using them. Open banking APIs make it possible for this customer base to access financial offerings by fintech players. Digital natives' customers who are regular customers of companies like Amazon, Apple and Facebook have come to expect instant gratification. As older generations also become comfortable with technology, banks come under pressure to deliver experiences.

Positive Customer Experience - Fintech firms have identified and created easy to use, relevant, and attractive, financial offerings. Moreover, features like high security and the ability to scale lead to a positive customer experience.

Increased Innovation facial recognition, chatbots and artificial intelligence have led to higher customer engagement. It has led to the rise of conversational banking.

New Streams of Revenue Both banks and fintech players have their strong points. Banks have enormous funding capabilities and experience with operating large processing networks. Moreover, they have huge customer bases and customer trust. On the other hand, fintech players have a culture that gives importance to innovation, speed and customer satisfaction. Together, both entities have a higher chance of generating shared revenue by teaming up and using data effectively. (Dubey, n.d.)

Increased Scalability -Banks can decouple architectural components into blocks and then rejoin them through APIs. This allows for greater resiliency and a highly independent yet scalable platform.

Personalization Fintech access customer financial data through open banking APIs to study trends and patterns that can then be used to generate personalized financial products. They process the information through artificial intelligence to improve customer engagement.

8. CHALLENGES OF OPEN BANKING

Data Security and Financial Privacy Large scale adoption of open banking has to be preceded by strong privacy laws and data protection bills. These laws establish rules for third party use. Because there are a lot of risks ranging from money laundering and data theft to terrorist financing. Some laws are already in place for the same. For instance, the Personal Data Protection Bill, 2019, aims to protect individuals' data.

Customer Rights The absence of grievance redressal systems severely hampers customer's rights. Moreover, they erase the bank or third party's liability in case of fraudulent activity.

Compliance Risk Open banking mandates high compliance to privacy laws and prudential regulations. Compliance risk can arise due to penalties or damages due to supervisory actions. Moreover, they can also be caused due to an action/inaction of a third-party service provider. (Dubey, n.d.)

Cybersecurity Risks Any loss to a customer due to a data breach would require the bank or financial institution to compensate for the same. Moreover, issues like misuse, falsification and malware are equally threatening to the institutions.

9. REASONS FOR THE GROWTH OF OPEN BANKING

Regulation Driven Growth of Open Banking API - the finance and banking sector is one of the most heavily regulated industries. most financial institutions believe that opening up banking data will fuel innovation in the finance sector. This will lead to a better customer experience and wider accessibility of financial services and products.

Market Forces Driven Growth of Open Banking API - banks fail to provide the kind of customer experience that fintech players can. banks have no choice but to collaborate with other finance players to reach a wider set of audience. Moreover, it is important if they want to provide satisfaction to existing customers.

Rising Customer Expectations - Customers are looking for convenience and 24×7 customer support. It is about making the transactional experience seamless. Customers are ready to trade personal data in exchange for a customized experience. (Makori, 2021)

Competitions from Fintech - Fintech providers cannot exist without banks. In fact, fintech players work as facilitators. They apply technology to improve financial services. However, customer expectations are bound to increase as technology progresses. This competition between fintech players and banks have also led to the growth of open banking and API. Now, banks want to

modernise their solutions as it might help them reach a wider customer base.

Rising Regulatory Environment - government regulation defers greatly from one geography to another.

Total digital payments		
Month & Year	Volume (lakh)	Volume (₹crore)
	FY 2020-21	FY 2020-21
Total Digital Payments (December 2021)	4,37,445.36	141459089
Total Digital Payments (November 2021)	4,37,445.36	141459089
Total Digital Payments (October 2021)	4,37,445.36	141459089
Total Digital Payments (September 2021)	4,37,413.29	141483892
Total Digital Payments (August 2021)	4,37,063.03	141483892
Total Digital Payments (July 2021)	4,37,063.03	141483892
Total Digital Payments (June 2021)	437117.702	141485173.4

(Source: RBI Database on payment system indicators)

From the table, it can be clearly understood that the Digital payments have shown an increase in its volume and value from October 2021 after June 2021. (Database on Indian Economy, n.d.)

10. OPEN BANKING API IN INDIA

In India, the growth of open banking API is largely due to market forces. Intermediaries licensed as NBFCs are responsible for customer's consent management. An Account Aggregator (AA) - connects a Financial Information Provider (FIP) (Eg. Banks) to

Financial Information User (FIU) through APIs. (Dubey, n.d.)

In India, the transfer of any personal customer data is regulated strictly. Appropriate agreements - customer, the AA and the financial information providers. Data cannot be stored or used by aggregators for any other purpose. All AA have to keep explicit data security policies and customer grievance redressal systems in place.

11. EMPOWERING SMEs THROUGH OPEN BANKING

Improving Credit Infrastructure - Access to credit is one of the significant challenges facing the SME sector. Risk-averse financial institutions have been hesitant to lend SMEs money since the 2008 recession. Worse still, a similar situation is now imminent with the looming recession driven by the COVID-19 pandemic. Besides, banks have little information to make sound decisions about the creditworthiness of their SME customers; hence, request statements and credit scores from them to evaluate their financial performance. Open Banking addresses this issue by giving banks access to advanced aggregated information of SME accounts and credit scores from various banks and other trusted financial sources, enabling them to make sound and less risky decisions effectively and quickly.

Real-time Cash Flow Management - SME business managers have busy schedules, and their plates are always full. Maintaining a

close record of revenue and spending patterns can be time-consuming and a non-priority, exposing SMEs to the risk of experiencing cash flow issues.

Account aggregation and real-time prediction tools give SME business owners an aggregate assessment of their finances from various accounts, empowering them to handle their cash flows well and avoid future cash flow problems.

Improved Product Offerings -Enjoying access to SME's full account details, spending patterns, and activities can allow banks to provide better deals and customized product offerings, which boost the overall customer experience. The SME sector is a significant growth opportunity for traditional and emerging banking participants. The conventional banking system must create new ways to support SME businesses to remain competitive. By leveraging the potential of Open Banking, these players can offer innovative and customized products and services that are less risky and more profitable to the SME industry.

12. POLICY IMPLICATIONS AND RECOMMENDATIONS

The Open Banking system is extremely reliable because of the following

Business Account Partnership- The open banking system offers SMEs in India a prosperous facility to mingle the business with automated accounting systems. This

feature lessens the accounting burden on the business's shoulders.

Automated SME Functions- All financial processes go digital whenever a business partners with the open banking system. The automated financial system, especially in a small business can surprisingly increase the time frame for businesses to focus on their marketing and product development strategies.

Digital Accounts- The best part about digital accounts is that they can be accessed within a few clicks. It just takes a few seconds to keep all your financial systems in front of your eyes for your knowledge.

There is a long list of potential use cases and business models for banks to explore to serve SMEs in an open banking market. To build a successful offering, banks will need to find new ways of working, rapidly prototyping offerings and testing them with their clients. Moving toward an agile test-and-learn approach to product and service innovation is the only way to shorten the time to market with solutions that customers actually want. Because customers may act differently than they say they will, it will be essential to test their actual behaviours.

Last but not least, banks will need to have a clear path to monetization from the beginning of the journey. Too often, new offerings are launched with two to three years of lead time and without testing the demand for new services with actual or prospective clients.

The industry is being transformed, and banks will need to keep up or find fintechs or other third parties to partner with to better serve their SME customers.

13. CONCLUSION

The Indian Open Banking ecosystem continues to thrive with active support from the government as well as the market. With the launch of Account Aggregators, API readiness of banks & NBFCs, entry of multiple neobanks, intense funding, India has become a role model for Open Banking Deployments globally. Indians are already using the power of Open Banking (UPI / AEPS) daily and are likely to adapt to newer innovations without much friction.

By 2027, nearly 40% of the business of digitally savvy banks would be through embedded finance model (and neobanks) powered by Open Banking with ecommerce giants, social media players, mobility leaders, food delivery platforms, fintechs, and other customer engagement platforms. During this period, nearly 30% of businesses would be through their digital platforms (competing with neobanks) like mobile banking, Internet banking, Whatsapp banking.

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A Study On Innovation In Fintech On Banking Sector Special Reference To CANDI**Miss. Kusumitha B. R.* Miss. Tanuja K.***

ABSTRACT

Technology innovation brought fundamental shift in the functioning of banks in India both internally and externally as it enables of banks to provide better customer services. The banking services are activated by mobiles & internet. Fintech or Financial Technology pioneering work in banking sectors as it is a new phenomenon of modern movement. A digital transformation partner leading financial institution has powered CANDI application. Fintech informatics has embraced the challenges to provide services to canara bank & for future development. Fintech growing around to provide customized financial information & services to individual which is completely based to individual finance. as it is a digital platform it has been specialized with recording micro & macro levels of accounts in the matter of software. Banks and credit Union are innovating faster by targeting, expanding their service, delivering proactive advice, re-configuring delivery channels, integrating payments & the technological innovation is largely used by the banking sector to create competitive advantage hence it helps banks to improve their services as Canara bank is the third largest nationalized bank in India. Fintech breaks the rock of formal finance sector as it outcome with new dynamic use of technology in the lending process. Banking sector have focused on adopting more digitization than ever before.

Key Words: *technology innovation, CANDI, customer services, digitalization.*

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INTRODUCTION

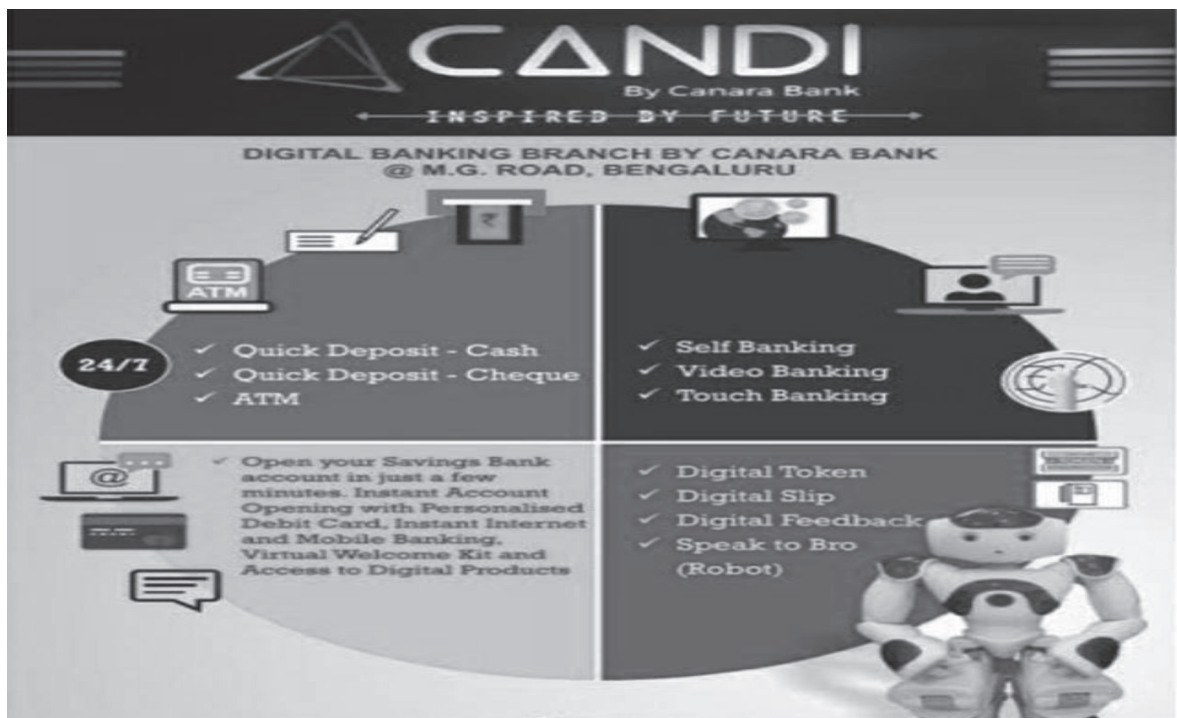
Now-a-days, banking is the process of re-inventing branch strategy and moving towards more digitization and self-service channel as the bank, to push its digital agenda has equipped itself with a suite of next generation banking tools which use advance technology to extreme level of service. Canara bank explore with an application as CANDI to make more digitalized with the complete security using UPI code for financial services.

Financial technology is a innovation method of digital money to double-entry book keeping, which is completely rapid with internet. Bank financial activities are moved

with technology advancement as the CANDI provides sufficient improvement facilitates with payments, opening of new account, clearance of cheque, generation of passbook as it ensures with virtual welcome kit.

FACTOR INFLUENCING CANDI BY CANARA BANK

The major factor for financial services to the end users more efficiently. Here, we would heightening few factors on CANDI as, opening of new account in few minutes, quick deposit with cash /cheque, ATM, self banking, digital slip/token, digital feedback speak to robot, touch/self banking, video banking. These are the contribution to result for digital transaction.



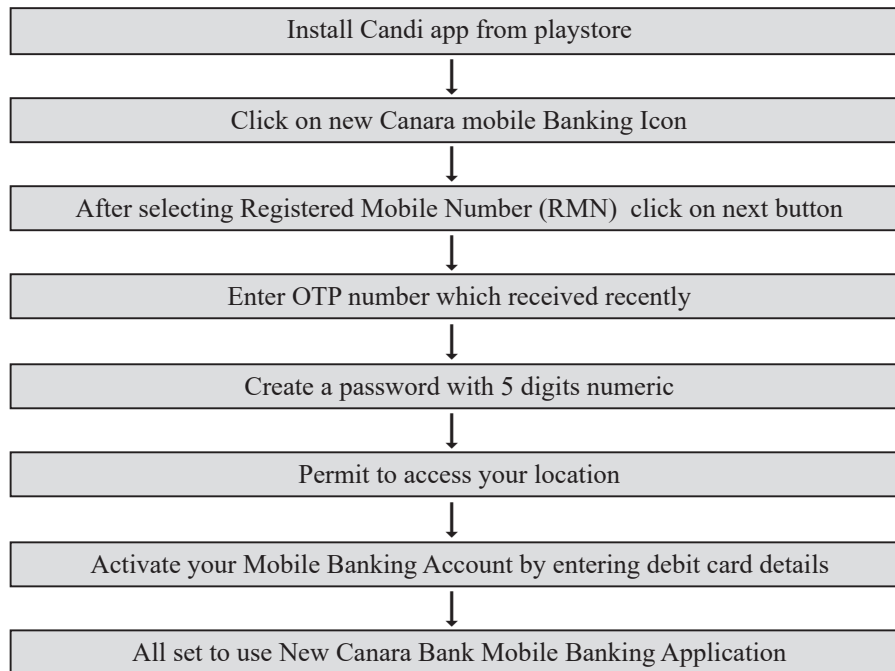
Fintech set out with varies financial activities aid with internet, smart phone in order to

improve their use & delivery to consumers.

PROCESS TO INSTALL & USE NEW CANARA BANK MOBILE BANKING APPLICATION

Here, is a simple process to operate CANDI applications. For the development of financia

Activities canara bank has painless action of CANDI app here below:



REVIEW OF LITERATURE

Navartnaseelan J (2014): this study stated that there is a positive relationship between service quality and customer satisfaction through the SERVQUAL model in the commercial bank of Ceylon PLC trincomalee district. The researchers examined the quality dimension such as tangibility, reliability, assurance, responsiveness and empathy and found that there is a strong positive relationship between service quality and customer satisfaction.

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Parasuraman, Zeithaml and Berry: These study representatives of north America clarified the conception of service quality and adopted qualitative research method to generalize ten service quality and adopted qualitative research method to generalize ten service quality dimensions and they further

simplified the service quality into five dimensions

Hadad, S., & Koch, J. A., & Siering, M, (2017). Digital Finance & Fintech: current research & future research directions. Journal of business economic, 87(5), 537-580. Doi: 10.1007/s11573-017-0852-x

Alhaliq H A (2016): This study examined the extend of customer satisfaction with electronic banking service in the Saudi banking sector and found that Saudi banks have succeeded in attaining significant customer satisfaction customer satisfaction due to the better quality of the service offered and better performance and facilitating electronic transaction.

OBJECTIVE OF STUDY

- To increase the quality of online banking services at Canara Bank
- To co-ordinate with government/ voluntary organizations engaged in promoting entrepreneurship among women.
- To deliver satisfied service to customer.
- To analyse expected quality of E-service at Canara Bank.
- To guide existing Entrepreneurs in improvisation moderation of an existing unit.

THE FINTECH GENDER GAP

Fair and equitable access to financial service is a prerequisite for economic security and prosperity. It can improve individuals employment outcomes, wealth acculation & propensity to start a business. Fintech is not making good on its promise – there is a sizable “fintech gender gap” while 76% of men in the survey use fintech, only 24% of women do – a gap of 52% point. When we compare individuals with their income & age women use fintech less than men by around 52% to check whether traditional gender roles cause men to make financial decision & increase the fintech implementation

RESEARCH METHODOLOGY

This study is used with primary source for analyzing the reliability. The primary source is where collected for the first time for research through survey, (questionnaires from Google forms) censuses, and observations. Primary data collection is quite time consuming as well as expensive compared to secondary data.

This paper is combination of both primary and secondary data. As secondary data is already collected data from magazines, journals, newspapers, referral books, and websites. As this research is collected and analyzed by both primary & secondary data.

SCOPE & LIMITATION OF THE STUDY

As fintech refers to the scope of financial service that can be available on digital platforms. This new disruption in the banking & financial services were widely ranged. As per the survey the scope of fintech with CANDI. The scope financial service encompassed a broad range from traditional banking activities to mortgage and traditional services. Customer utilizes fintech for the better management of financial operations.

- **Sample size:** 50 participated in survey (google form participation)
- **Sample profile:** participants of google form are only working people as they maintain canara bank account with CANDI application.
- **Data collection process:** We need some additional equipments or software to

connect people in short time.

- **Time:** Due to time limits couldn't cross ore than 50 participants.

STATEMENT OF THE PROBLEM

This study evaluates customers of Canara bank whereas, Canara bank was incorporated on July 1 1906 with name Canara Hindu Permanent Fund LTD, In 1910 with the name of bank is changed from Canara Hindu Permanent Fund LTD to Canara Bank . Bank is a Government if India undertaking & carries on all banking business. Eventually Canara as come up with E-transaction as it strained to uneducated/aged people as CANDI is advanced technology used through smart phones / internet. Customers face errors with technical connections. Customers fright with the transactions as it is paperless.

ANALYSIS & INTERPRETATION

Category	Frequency	Percentage
Male	38	76%
Female	12	24%
Others	00	00%
Total	50	100%

Age	Frequency	Percentage
18-30	23	46%
31-45	15	30%
46-60	12	24%
Total	50	100%

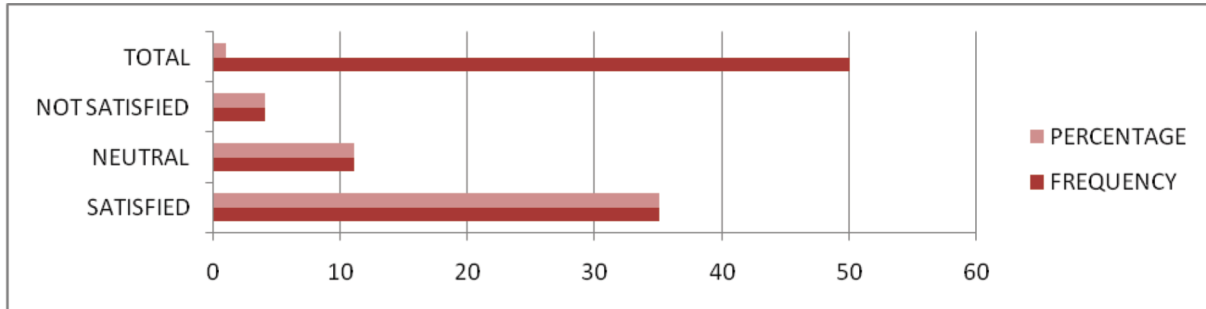
Category	Frequency	Percentage
Yes	47	94%
No	03	06%
Total	50	50%

Category	Frequency	Percentage
Yes	41	82%
No	09	18%
Total	50	100%

Category	Frequency	Percentage
Good	24	48%
Better	06	12%
Best	20	40%
Total	50	100%

Category	Frequency	Percentage
Satisfied	35	70%
Neutral	11	22%
Not Satisfied	04	08%
Total	50	100%

Chart 01 of Table 06 : How is the service of candi application



FINDING

- CANDI application has to promote as it is easy, secure and comfortable to use, hence we can find more females using CANDI application.
- As per survey 46% are age 30 below users at the mean time above age 45 users less comparatively.
- As this application (E-transaction) was much useful at the time of covid as the tough rules was been followed by public.
- People felt secured enough with this application as it provides easy quick transaction.

SUGGESTIONS

- According to survey, people have to educate self about advance technology of banking activities.

- Majority of respondents are afraid of transaction security as the promotion of CANDI application must increase.
- Above age 45 are finding difficult to CANDI application therefore, banks must support age-old people to go with E-transaction which can be utilized at anytime.
- Even now we can find respondents who prefer for traditional transaction as there is a lack of confidence with the people. Hence, Canara banks must encourage people for electronic transaction activities.
- Lack of internet knowledge with people leads to back-step for E-transaction of financial activities.

CONCLUSION

Electronic Banking is a major innovation in banking sector as earlier banks were conducted only with traditional method of transaction whereas, in this evolution of internet canara bank introduced application called CANDI which leads to quick, secured & comfortable transactions as it is completely based on internet facility. This modern banking/virtual banking allows us to conduct bank transaction online instead of finding a bank & interacting with the teller.

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A Study on Impact of GST on Small Traders with Special Reference to Bangalore**Miss. Tejaswini R.* Miss. Sowmya K.***

ABSTRACT

The Goods and Service Tax is an eminent topic of discussion since the very first day that it has been implemented in India. It was rolled out on 1st July 2017 with the motto of “One Nation, One Tax, One Market”. It addressed the cascading effect under the erstwhile system by giving setoff for tax paid on inputs as well as tax paid on previous purchases and resulted in a major simplification of the rate structure and broadening on the tax base. GST has matured over these years and has economically unified the country by integrating numerous taxes into one. This research paper seeks to investigate the impact and awareness among the small traders and shopkeepers with the acquittance of goods and service tax. A primary survey was conducted taking a sample size of 50 small traders to collect data and analyze the results. With the implementation of GST, small business owners are engrossed in understanding the potential effects of GST on their business. It is a well-known fact that small traders are the primary growth drivers of the economy.

Key Words: Goods and Service Tax, Ease of filing, Compliance, Logistic Regression

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1.0 HISTORY OF TAX IN INDIA

In India, the system of direct taxation as it is known today, has been in force in one form or another even from ancient times. There are references both in Manu Smriti and Arthashastra to a variety of tax measures. Manu, the ancient sage and lawgiver stated that the king could levy taxes, according to Sastras. The wise sage advised that taxes should be related to the income and expenditure of the subject. He, however, cautioned the king against excessive taxation and stated that both extremes should be avoided namely either complete absence of taxes or exorbitant taxation. According to him, the king should arrange the collection of taxes in such a manner that the subjects did not feel the pinch of paying taxes. The detailed analysis given by Manu on the subject clearly shows the existence of a well-planned taxation system, even in ancient times. Not only this, but taxes were also levied on various classes of people like actors, dancers, singers and even dancing girls. Taxes were paid in the shape of gold-coins, cattle, grains, raw-materials and by rendering personal service.

Some of the most common types of **direct tax** implemented in India are as follow

1. Income tax

The most common type of direct tax in India is income tax. It is imposed on the income you earn in a financial year based on the income tax slabs of the IT department. The tax is paid

by individuals as well as businesses directly to the IT department. For individual taxpayers, there are also several tax deductions available under various sections of the IT Act.

2. Securities transaction tax

In stock trading, each of our trade also has a small constituent known as the securities transaction tax. Irrespective of whether made money on the trade or not, will have to pay this tax.

3. Capital gains tax

Every time capital gains are made, will be required to pay capital gains tax. This capital gain could come from the sale of a property or from investments. Based on the capital gains and the duration for which you held the investment, you will be required to pay either LTCG (Long-Term Capital Gains) tax or STCG (Short-Term Capital Gains) tax.

Common types of indirect Taxes in india

Some of the most important types of **indirect tax** in India are as follows-

1. Goods and services tax (GST)

GST subsumed as many as 17 different indirect taxes in India like Service Tax, Central Excise, State VAT, and more. It is a single, comprehensive, indirect tax which is imposed on all the goods and services as per the tax slabs laid by the GST council. One of the biggest benefits of GST is that it mostly

eliminated the cascading or tax-on-tax effect of the previous tax regime

2. Customs duty

When goods need to be imported from a foreign country, required to pay customs duty on it. Irrespective of whether the product has come to India by air, land, or sea.

3. Value added tax (VAT)

A VAT is a type of consumption tax imposed on products whenever its value increases throughout the supply chain. It is imposed by the state government, which also decides the VAT percentage on different goods. While GST has mostly eliminated VAT, it is still imposed on some products such as items that contain alcohol.

Introduction to GST

The idea of moving towards GST was first mooted by the then Union Finance Minister in his Budget speech for 2006-07. Initially, it was proposed that GST would be introduced from 1st April 2010. The Empowered Committee of State Finance Ministers (EC) which had formulated the design of State VAT was requested to come up with a roadmap and structure for GST. Joint Working Groups of officials having representatives of the States as well as the Centre were set up to examine various aspects of GST and draw up reports specifically on exemptions and thresholds, taxation of services and taxation of inter-State supplies. Based on discussions within and

between it and the Central Government, the EC released its First Discussion Paper (FDP) on the GST in November 2009. This spelt out features of the proposed GST and has formed the basis for discussion between the Centre and the States so far.

The introduction of the Goods and Services Tax (GST) is a very significant step in the field of indirect tax reforms in India. By amalgamating many Central and State taxes into a single tax, GST will mitigate ill effects of cascading or double taxation in a major way and pave the way for a common national market. From the consumers point of view, the biggest advantage would be in terms of reduction in the overall tax burden on goods, which is currently estimated to be around 25%-30%. It would also imply that the actual burden of indirect taxes on goods and services would be much more transparent to the consumer. Introduction of GST would also make Indian products competitive in the domestic and international markets owing to the full neutralization of input taxes across the value chain of production and distribution. Studies show that this would have a boosting impact on economic growth. Last but not the least, this tax, because of its transparent and self-policing character, would be easier to administer. It would also encourage a shift from the informal to formal economy. The government proposes to introduce GST with effect from 1st July 2017.

Taxes subsumed under GST

Central Taxes	State Taxes
Central Excise duty	State VAT / Sales Tax
Additional duties of excise	Central Sales Tax
Excise duty levied under Medicinal & Toilet Preparation Act	Purchase Tax
Additional duties of customs (CVD & SAD)	Entertainment Tax (other than those levied by local bodies)
Service Tax	Luxury Tax
Surcharges & Cesses	Entry Tax (All forms)
	Taxes on lottery, betting & gambling
	Surcharges & Cesses

GST council – constitution

Chairperson – Union FM
Vice Chairperson - to be chosen amongst the Ministers of State Government
Members - MOS (Finance) and all Ministers of Finance / Taxation of each State
Quorum is 50% of total members
States - 2/3 weightage and Centre - 1/3 weightage
Decision by 75% majority

2.0 REVIEW OF LITERATURE

1. Mr. Shakdwipee, P (2017) in the research paper titled 'Measuring Awareness about Implementation of GST: A survey of small business owners in Rajasthan' analyzed the perception of small business owner in Rajasthan about GST and found out that their main area of focus was computer software availability and handling of the same.
2. Ms. Rhea Sharma Co-Author- Dr. Kavita Indapurkar (2018). The author depicts GST was introduced with the motto of “One Nation, One Tax, One

Market”, GST has matured over these years and has economically unified the country by integrating numerous taxes into one. It seeks to investigate the awareness and perception among small retailers, traders and shopkeepers regarding the goods and service tax. All the dimensions associated with the levels of perception, awareness and government competency are related to one another in some or the other way and therefore there exists some correlation between the factors.

3. Dr. K. Sathya Prasad, Dr. I. Siddiq (2017) in their published paper speaks a developing country like India and

with its demographic diversity, impact of GST on Small & Medium Enterprises was noted to be successful. The true extent of the 'One Market' benefit of GST will be realized most by SMEs and small traders. Under the current tax regime, the ability of SMEs to reach potential consumers across India is limited.

3.0 STATEMENT OF THE PROBLEM

Indirect tax is an important source of revenue to the government. To make it simple and reliable amendments in the tax regime is done as and when required. On 1st July 2017 central government brought in a dynamic resolution in Indirect tax system by introducing GST. The response of introduction of GST was taken positively as well as adversely by the traders. This study tries to focus on perception, assumption, and implication of GST implementation on small traders.

4.0 OBJECTIVES

1. To understand the complexity of filing GST among small traders
2. To compare ease of filing between GST and VAT
3. To assess awareness of filing GST returns among small traders

5.0 HYPOTHESIS

Ho --- There is no significant relationship between type of trader and simplicity of procedure

H1 ---- There is a significance relationship between type of trader and simplicity of procedure

6.0 RESEARCH METHODOLOGY

6.1 Research design

The research design used to conduct this study is Exploratory Research Design. It helps in exploring the varying levels of depth of the research area or topic, it is flexible and effective for laying the foundation for future research work. Exploratory research involves focused interviews or through issuing questionnaires. The main objective which is satisfied through this research design is the identification of the key variables as per the topic of research.

6.2 Data source and data collection

The research is conducted through a primary survey. A questionnaire has been designed to collect information from the respondents which includes small traders, retailers, and shopkeepers. The questionnaire includes the question which assesses the awareness about GST among the small traders and their acquittance towards the usage and compliance of GST even after its roll out 4.5 years.

6.3 Sampling method and sample size

A sample size of 50 respondents was selected on the basis of Convenient Sampling to carry out the research through a structured questionnaire. The research was carried out among the small traders within the vicinity of Bangalore city.

6.4 Tools used for analysis

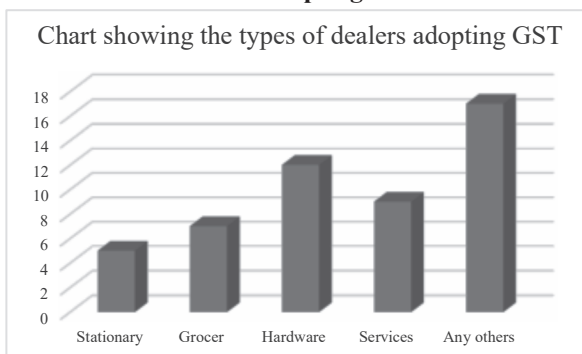
Simple percentage and graphical representation were used to study the impact of GST on small trader. Further Hypothesis testing has been done to check the significance of the variables using Logistic regression.

7.0 DATA ANALYSIS

Table 7.1 Table showing types of dealers adopting gst

Type of Goods	No of responses	Percentage of response
Stationary	5	10%
Grocer	7	14%
Hardware	12	24%
Services	9	18%
Any others	17	34%
Total	50	100%

Graph 7.1 Graph showing types of dealers adopting GST



Interpretation

This graph depicts the different kinds of dealers/ small traders such as stationary , groceries, hardware shops, services and other traders who are accepting and following the norms of GST in their business.

Table 7.2. Table showing the way of filing of the GST returns by the small traders

Filing returns	No of responses	Percentage of response
Self-assessment	20	40%
Professional help	30	60%
Total	50	100%

Graph 7.2 Graph showing the way to filing of GST returns by small traders



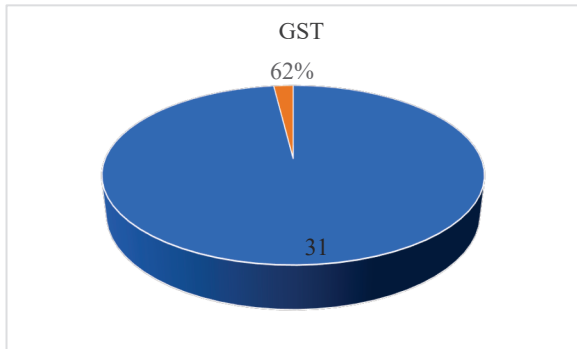
Interpretation

This graph depicts 60% of the small traders take professional help in filing GST returns and only 40% of the traders make self-assessment and helping GST to be universally adopted .

Table 7.3. Table showing indirect tax preferred by small traders

Filing returns	No of responses	Percentage of response
GST	31	62%
VAT	19	38%
Total	50	100%

Graph 7.3 Graph showing indirect tax preferred by small traders



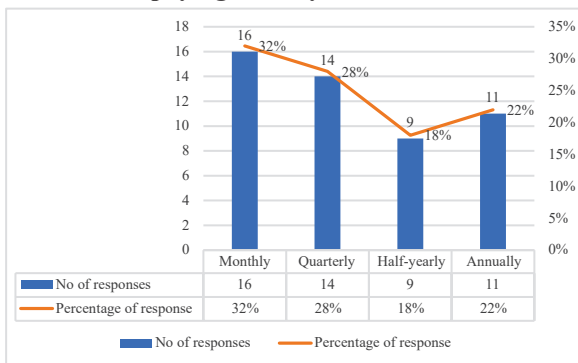
Interpretation

The above graph reveals 62% of the respondents preferred paying Goods and Service Tax compared with the Value Added Tax because of its easy understandability and ease of performance in the GSTN portal.

Table 7.4. Table showing time period preferred for paying GST by small traders

Time period	No of responses	Percentage of response
Monthly	16	32%
Quarterly	14	28%
Half-yearly	9	18%
Annually	11	22%
Total	50	100%

Graph 7.4. Graph showing time period preferred for paying GST by small traders



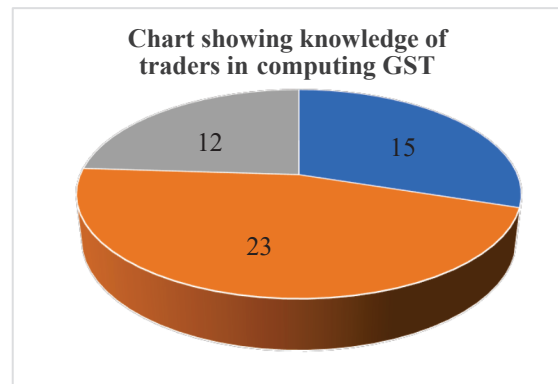
Interpretation

The small traders have a perception of paying GST on a monthly basis whereas 28% prefer to pay quarterly, 18% traders prefer to make payments half yearly and 22% of the small traders are of the conception to pay GST annually but they need to be informed to adopt themselves for monthly payment of Goods and Service Tax.

Table 7.5 Table showing the knowledge of the small traders on computing gst.

Knowledge on GST	No of responses	Percentage of response
Complete	15	30%
Partial	23	46%
No idea	12	24%
Total	50	100%

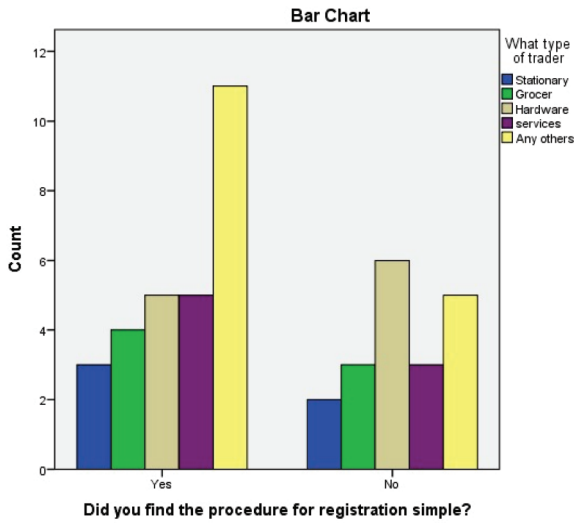
Graph 7.5 Graph showing the knowledge of the small traders on computing GST.



Interpretation

The above graph depicts 46% of the small traders have partial knowledge on computing GST and it is surprisingly known 24% of the small traders are unaware of the concept of GST and 30% of the traders have a complete knowledge on computation of GST which aids them in self assessment of GST returns.

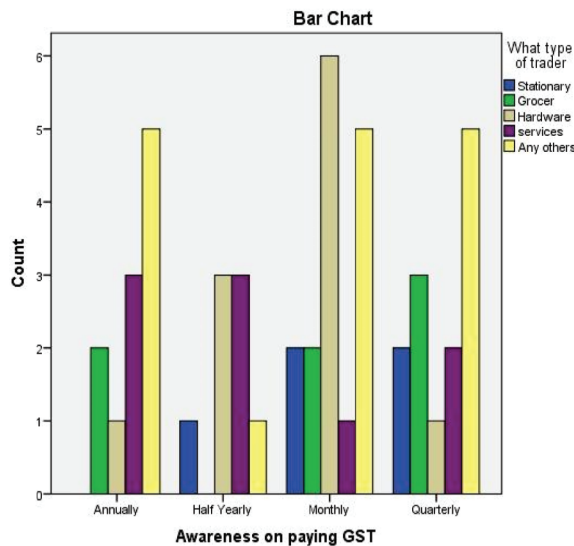
Chart 7.1 Chart showing the types of traders paying GST and the ease of completing GST registration proces



Interpretation

This chart shows that highest number of traders feel that filing procedure of the GST was simple and understanding.

Chart 7.2 Chart showing the types of traders and their awareness towards paying of goods and services tax



Interpretation

This graph shows the highest number of traders have understood that GST filing is once in a month. Others are less likely to have awareness on timing of filing GST. Government can focus on bringing awareness on this aspect.

8.0 HYPOTHESIS TESTING

H₀ --- There is no significant relationship between type of trader and simplicity of procedure

H₁ ---- There is a significance relationship between type of trader and simplicity of procedure **Goodness-of-Fit Tests**

	Value	df	Sig.
Likelihood Ratio	.000	0	.
Pearson Chi-Square	.000	0	.

Goodness of fit of the data is an important tool to check the reliability of the data and significance value helps the study to understand whether the data is normally distributed or not.

By the above table study, we can observe that the P-value is less than 0.05 i.e., data is normally distributed and can be analyzed further.

Logistic regression

Convergence Information	
Maximum Number of Iterations	20
Converge Tolerance	.00100
Final Maximum Absolute Difference	.00017
Final Maximum Relative Difference	.00058
Number of Iterations	3

Above table shows the logistic regression analysis. The formula shows the logistic regression model:

$$\log\left(\frac{p}{1-p}\right) = \beta_0 + \beta(\text{Age})$$

Above table shows logistic regression analysis. Qualitative data is well analyzed using logistic regression whereas quantitative data can be analyzed using linear regression.

Logistic regression analyses significant relationship between the two variables. By the above table it can be understood that p-value at all the three levels (convergence, max absolute difference, and maximum relative difference) is less than 0.05 i.e., Null hypothesis can be rejected at 95% level of confidence.

That means there is a significant relationship between type of trader and simplicity of procedure.

That clearly helps the study to understand that each type of trader who has responded to the questions have their own opinion on simplicity of the procedure of filing GST.

9.0 FINDINGS

1. 34% of the other business, 24% of hardware traders, 18% of service traders have adopted the Good and service tax regime
2. 60% of the small traders take professional help for filing GST returns and 40% consider selfassessment is convenient as GST has a user-friendly application.
3. 62% of the small traders prefer GST at its best Indirect tax compliance as compared with the VAT regime provisions.
4. 32% of the small traders are convenient with filing GST returns on monthly basis but few other traders prefer it can be quarterly, half yearly and annually.
5. 46% of the traders have partial ideas on computing the Goods and service tax where as 30% have complete knowledge of computing GST payable and the concept of Input tax credit.
6. Highest number of traders feel that filing procedure of the GST was simple and understanding
7. Highest number of traders have understood that GST filing is once in a month.
8. It is understood that p-value at all the three levels (convergence, max

absolute difference and maximum relative difference) is less than 0.05 i.e Null hypothesis can be rejected at 95% level of confidence.

9. There is a significant relationship between type of trader and simplicity of procedure.
10. It is considered that each type of trader who has responded to the questions have their own opinion on simplicity of the procedure of filing GST.

10.0 CONCLUSION

GST has a mixed impact on the small traders. Some traders are positively impacted and others are less affected. The core components explaining the impact and awareness were identified as primary information about GST, modalities of GST, and knowledge of GST among the small traders and assistance required for better implementation of the tax system they do not have expertise for operating the GST for filing returns online and find the process tedious. Instead, the small trader should find it convenient to outsource the task of filing GST Returns. There is a need for proper technological infrastructure for smooth functioning of GST. So, to get the long-term benefits from GST system, the government should focus on smooth functioning of various rules and regulations of this system towards traders.

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Customer's Purchase Intentions And Satisfaction Regarding Fintech Products In The Retail Sector

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ABSTRACT

This study aims to test a model incorporating constructs such as awareness, perceived risk, perceived ease of use, and Purchase intentions with mobile wallets and examine the customers' satisfaction with Fintech products. The study is descriptive and exploratory. The sample frame includes the customer using Paytm, Google pay, Phonepay, Dhani, and Bhim axis pay. The data is collected primarily based on primary sources collected from 291 respondents in the Aligarh district. The sample was selected using convenience sampling through an online survey. The analysis reveals that awareness and perceived ease of use positively influence purchases intentions while perceived risk negatively affects purchase intentions. Further, the model results reveal that purchase intentions positively impact customer satisfaction. This study will help the service providers work upon their promotional strategies to increase the awareness of mobile wallets. Simultaneously, the customer wants assurance regarding the risk of using these mobile wallets. It will also be beneficial to improve on the part of service providers to improve the customer's interface for making mobile wallet applications convenient.

Key Words: *Purchase intention, Fintech, Mobile wallet, Retail sector.*

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1.0 INTRODUCTION

Financial technology, popularly known as Fintech, is a term used in the financial industry. The usage of term Fintech is contemporary technology in the financial field. The concept was popularised in the late 2010s (Haddad, 2018). There are numerous reasons for the emergence of Fintech. First, the security aspects of customers give more security to their customers. Second, affordability and mobility are faster (Anikina et al., 2016). But the primary reason for its emergence can be traced back to 2008's global financial crisis (Haddad, 2018). The crisis has resulted in a loss of trust and confidence in the financial system, and they are looking forward to the new system that provides more assurance of their investments.

The term Fintech was first coined in 1972 by Abraham Leo Bettinger. He defined it as a contraction that combines the experience of bank and expertise with information technology" (Bettinger, 1972). According to Sanicola (2019), "FinTech is a twofold term; one is the promotion of technology to increase the usage of financial consulting and expansion of digital consulting.

The acceptance of Fintech products and their adoption surmise the firm's success in delivering a high-quality product. Despite the worldwide prevalence of Fintech, the adoption rate is not the same across countries, and there is an ambiguity in the adoption pattern of Fintech. (Frost, 2020). Therefore,

clarifying the underlying factors that magnify its adoption is imperious.

Fintech has reduced the distance between financial inclusion and their customer, whereas mounting financial inclusion by diminishing the cost of attaining financial services (Demirguc-Kunt et al., 2018). With the help of sophisticated innovation, several financial activities are improved (Schueffel, 2016), which may include Application Programming Interfaces and technologies like blockchain, artificial intelligence to provide financial services. In Fintech, Innovative products and services are not liable to any specific business model in the financial industry. Fintech covers almost all traditional financial institutional services covered by Fintech (Gimpel et al., 2018; Arner et al., 2015), which includes the financing and transaction of payment, investment, and insurance.

There are six areas of Fintech products which include digitization of finance, investment, money, insurance, money, and payments (m-payments) (Gomber et al., 2017). Though implacable innovations are required for Fintech, its adoption is still questionable (Ryu, 2018). To adopt Fintech products, consumers can face inherent risk and encounter several competitors in the financial services industry. (Ryu, 2018; de Luna et al., 2018). The persistent risk may include financial loss and privacy concerns (Ozturk et al., 2017; Liébana-Cabanillas et al., 2014). The online environment is also not free from

security and risk issues in Fintech products, like online shopping (Lin & Chuan, 2013).

Digital payments can be made with the help of mobile banking. Mobile banking refers to an arrangement where a customer interacts with a bank using a mobile device (Barnes & Corbit 2003). It helps lower transaction costs for subscribers to access their account-related information. (Polasik & Wisniewski, 2009). It also provides temporary and spatial liberty to its users, which continually acts as a limitation in the standard banking model. It also facilitates banks in lowering their operational cost and expanding customer reach (Durkin & O'Donnell 2007), which enhances banks' productiveness, proficiency, and capability, resulting in giving pretentious services to their customers (Martins et al. 2014). Mobile banking is also helpful in addressing excellent services to their customer virtually with no additional cost. The bright future of mobile banking in India is due to its large population, incitement in financial inclusion by the government, ample internet users, and realization of the public for mobile banking in ease of use and convenience.

2. LITERATURE REVIEW

As mentioned earlier, the areas of Fintech are very vast. The present study only focuses on digital payments (i.e., Mobile banking) as an integral part of Fintech. The adoption of mobile banking is influenced by the factors such as awareness, perceived risks, perceived

ease of use, purchase intention, customer satisfaction, financial inclusion, behavioral intention, etc.

2.1 Awareness

Awareness plays a preeminent role in the decision to use mobile technology. Ceaseless use of intention to use requires measuring the success of new technology. Most of the studies argued that awareness has a significant impact on usage and intention to install mobile applications (Wei et al., 2020; Saprikis et al., 2021; Alqahtani & Kavakli-Thorne, 2020; Wang & Chou, 2016; Al-Gasawneh & Al-Adamat, 2020); (Alshboul & Streff, 2017). A Nigerian study reveals that mobile banking and allied services like ATM and internet banking significantly impact customers' attitudes regarding electronic banking in Nigeria (Inegbedion et al. 2020). The customer's perception regarding the commodity results in acceptance or rejection. The proactive action plans on the part of mobile banking attract mobile banking. (Mutahar et al., 2018).

2.2 Perceived risk

Along with convenience, innovation also brings risk, and it is challenging to pursue users to adopt the same. Several studies were conducted on risk issues such as security, finance, privacy, device, psychology, and performance risk (Hawamleh et al., 2020; Abu Shanab & Ghaleb, 2012). Perceived risk is the conviction that personal information will not be misused, lost, or exploited

(Al-Gasawneh et al., 2020; Dowling & Staelin, Mobile application involves the risk of losing and exposing the private data of the user (Abayomi et al., 2020). Many studies conclude that the mobile user's risk of installing a mobile operating application is high; uninstalling the application also increases, but continuous usage is low (Mutahar et al., 2018; Thusi & Maduku, 2020; Huan & Hong, 2021). Additionally, perceived risk will negatively impact the continual usage of mobile applications (Yip & Mo, 2020; Akdur et al., 2020; Al-Natour et al., 2020).

2.3 Perceived ease of use (PEOU)

Davis et al., 1989 defined Perceived ease of use as the extremity in which potential users envisage the system without any difficulty. PEOU refers to the belief of an individual that using technology will be easy. Using technology may overrule the benefits in explaining the impact of perceived ease of use. This is due to using an easy system that results in more value and vice versa (Park et al., 2009). Additionally, PEOU was explained that adopting e-learning is effortless to users' beliefs (K. M. Lin et al., 2011). The previous studies argue that PEOU affects attitude both directly and indirectly (Barkhi & Wallace, 2007) and also PEOU impact positively influences the intention to use mobile banking (Cheah et al., 2011; Ramayah et al., 2003)

2.4 Purchase intention

An individual's attitude determines the intention to use a mobile application (Carter and Yeo, 2016). This will give birth to two more aspects of purchase intention: users generally avoid interrupted apps while functioning. The second is the users' expectations regarding highly tangible performance at a reasonable cost (Alnawas and Aburub, 2016). Attitude regarding purchase intention and usage can be attained by an effective persuasion of application and its distinct features that enhance customer relationship management practices. While logging into an application, the customer involves several touchpoints with products like information sharing and making purchases (Lee, 2018). To increase the number of users visiting the application, the span of each visit will increase by a positive attitude will result in 'stickiness' and escalate the prospect's purchase intention (Hsu and Lin, 2016). The substantial component in developing the relationship between application usage and purchase intention is 'stickiness' and displaying that customers' well-designed attitude and high chances of purchase intention towards additional products and services ameliorate the application (Kim et al., 2015). Similarly, the success of any application will enhance the positive attitude and purchase intention (Bellman et al. 2011)

2.5 Satisfaction

Feeling a person's pleasure or displeasure compares a product's actual and expected performance. Hence, satisfaction refers to the overall attitude regarding service providers' difference between what they provide and what the customer is getting (Kotler et al., 2012). The aggregate appraisal of the usage of mobile payment services in retail stores is also considered satisfaction (Hossain et al., 2018). Whenever service meets the customer's expectation, it results in sentiment, which may be positive or negative (Cao et al., 2018). Several studies concluded that satisfaction significantly impacts mobile payment adoption (Ramadan & Aita, 2018; Humbani & Wiese, 2019).

3. RESEARCH GAP

After an extensive literature review, it can be said that there are many studies conducted on behavioural intention, perceived usefulness, adoption of mobile banking services, perception of the customer regarding mobile banking, ease of use, financial inclusion, several risks in new adopting new technology. But no study tests how awareness, perceived risk, and perceived ease of use lead to purchase intention and satisfaction.

4. OBJECTIVES OF THE STUDY

- To determine the constructs, namely, awareness, perceived risk, and perceived ease of use, that impact the customer's purchase intention regarding

Fintech products in the retail sector.

- To examine the customer's level of satisfaction with Fintech products.

5. RESEARCH METHODOLOGY

The questionnaire was developed by taking variables such as awareness, perceived risk, perceived ease of use, purchase intention, and satisfaction from the literature survey. The variables are converted into 5 points Likert scale. The study area is the Aligarh district. The respondents in the study are the users of Paytm, Google pay, Phonepay, Dhani, and Bhim axis pay. These mobile payments application were selected based on their rating on the play store. The sample is selected through the convenience sampling technique. A total of 300 respondents were surveyed online. In the final editing, nine responses were deleted due to incorrect/ missing/ ineligible entries. The final sample size is 291. The data is collected mainly from primary sources with the help of a questionnaire sent through Google form. The questionnaire was designed to comply with the study's objectives and was divided into two parts. The first part consists of the questions related to the socio-demographic conditions of the customers. The second part includes the responses related to awareness, perceived risk, and perceived ease of use leads to purchase intention and satisfaction. The analysis and interpretation have been made by SPSS. The descriptive part is represented by the mean. Regression analysis was performed

to test the linear relationship between awareness, perceived risk, and perceived ease of use on purchase intention for the inferential part. With the help of the following equation-

$$Y = a + bx_1 + x_2 + x_3$$

Where, Y= Purchase intention,

a= Constant

b= Slope

x_1 = awareness

x_2 = perceived risk

x_3 = perceived ease of use

5.1 Research hypothesis

Ho₁: There is a significant impact of awareness on purchase intention.

Ho₂: There is a significant impact of Perceived risk on purchase intention.

Ho₃: There is a significant impact of Perceived ease of use on purchase intention.

6. RESULTS AND DISCUSSIONS

6.1 Sample characteristics

This section covers the socio-demographic profile of the respondents such as gender, age, education, income, and marital status.

Table 1 Customer's socio-demographic profile

Characteristics	n	%
Gender		
Male	183	62.89
Female	108	37.11
Age group		
<20	27	9.28
20-30	108	37.11

30-40	88	30.24
40-50	51	17.52
>50	17	5.85
Educational Qualifications		
High school	18	6.18
Intermediate	34	11.68
Graduate	109	37.46
Post Graduate	76	26.13
Doctorate	54	18.55
Monthly Income		
<5,000	9	3.09
5,000-7,000	37	12.71
7,000-12,000	65	22.34
12,000-17,000	86	29.56
>17,000	94	32.30
Marital Status		
Married	107	33.77
Unmarried	184	62.23
Mobile application Used for payment		
Paytm	81	27.84
Google Pay	68	23.37
Phone pay	59	20.27
Dhani	37	12.71
Bhim axis pay	46	15.81
Usage of Mobile application		
Every day	52	17.86
Every week	81	27.84
Every month	62	21.30
Every 3 months	63	21.66
Every 6 months	27	9.28
Annually	6	2.06

Source: Online Survey

Table 1 shows the socio-demographic profile of the (n=291) respondents. Of the total sample size, 62.89% were male, and 37.11% were female. The majority of the participants in this survey were in the age group of 20

years and 30 years (37.11%), followed by 30 and 40 years (30.24%); 40 and 50 years (17.52%); less than 20 years 9.28% and More than 50 years has a percentage of 5.85%. The educational qualification of the respondents reveals that a maximum number of users are graduates (37.46%), followed by Post Graduate (26.13%) and Doctorate (18.55%). The number of users having Intermediate education is 11.68%, and High school education is 6.18%. The Economic dimensions were measured reveals that most of the respondent's monthly income was more than Rs. 17,000 (32.30%) followed by 29.56% in between Rs. 12,000 and Rs. 17,000 succeeded by 22.34% among Rs.7000 and

Rs.12,000. The percentage of respondents' monthly income ranging from Rs.5 000 and Rs.7000 was 12.71%, and 3.09% for less than Rs.5 000. Most of the users are unmarried (62.23%), and the percentage of married respondents was 33.77%. Paytm shows the highest percentage of the respondents (27.84%), followed by Google pay (23.37%) and Phone pay (20.27 %). The Bhim axis pay has 15.81% of respondents, whereas Dhani is 12.71%. About 27.84% of the respondents used payment applications every week, 21.66% every three months, and 21.30% used monthly. 17.86% of respondents use the application daily, while 9.2% every six months and 2.06% use it annually.

6.2 Summary of regression analysis performed to test the impact of awareness, perceived risk and perceived ease of use on purchase intention

Table 2 Regression analysis

Constructs	Purchase Intention			Decision	Impact?
	Beta value	t-value	P-value		
Awareness	0.501	31.172	0.000	Ho ₁ is rejected	Yes
Perceived Risk	-0.419	9.114	0.000	Ho ₂ is rejected	Yes
Perceived Ease of use	0.664	32.173	0.000	Ho ₃ is rejected	Yes
R : 0.764 R²: 0.583 Constant: 1.019 F-value: 27.441(0.000*)					

Source: Online Survey

Table 2 shows the regression analysis. The value of R square is 0.583, which means that the independent variables explain 58% of the variability in the dependent variable. R-value is 0.764, and the P-value is 0.000, which means the model is statistically significant.

The standard beta value between Awareness and Purchase Intention is 0.501, and P-value

is less than 0.05; therefore, it can be implicated that there is a significantly positive relationship between awareness and purchase intention. An increase in awareness by 1 unit will increase Purchase Intention by 0.502 units. Since the P-value is less than 0.05, Ho₁ is rejected at a 5% level of significance. Similarly, the standard beta value for the

relationship between perceived risk and purchase intention is -0.419 . P-value is less than 0.05 , so it can be assumed that perceived risk significantly impacts purchase intention. There is also a negative relationship between perceived risk and purchase intention. An increase in perceived risk by unit 1 will result in a decrease in purchase intention by -0.418 . As the P-value is less than 0.05 , Ho2 is rejected at a 5% level of significance. The

standardized beta value for the relationship between perceived ease of use and purchase intention is 0.664 , and P-value is more than 0.05 , which means that perceived ease of use does not significantly impact purchase intention. An increase in perceived ease of use by 1 unit will increase Purchase Intention by 0.665 units. Since the P-value is less than 0.05 , Ho3 is rejected at a 5% level of significance.

6.3 Summary of different variables and their level of satisfaction

Table 3 Level of satisfaction

S.No	Variables	Mean Values
1.	I am satisfied with the services provided by mobile wallet.	3.11
2.	I am comfortable with the services of the mobile wallet.	3.45
3.	It is fun to use a mobile wallet.	3.01
4.	It is cheaper to use a mobile wallet than to use cash payments.	2.47
5.	I am satisfied with service providers and feel safe using the mobile wallet.	2.98
6.	I am satisfied that mobile wallet met my needs.	3.92

Source: Online Survey

The table 3 shows the mean values of level of satisfaction regarding Fintech products. The mean value of satisfaction regarding services provided by mobile wallets is 3.11 , which shows users are moderately satisfied and users are moderately comfortable with a mobile wallet represented by the mean values of 3.45 , while users are finding moderate fun to use mobile wallet showing mean values of 3.01 . Similarly, mobile wallets are satisfying the need of users with mean values of 3.92 . But users find cash payment cheaper than using a mobile wallet with a mean score of 2.47 and are also dissatisfied with the service providers and safety while using a mobile wallet has a mean value of 2.98 .

7. CONCLUSION

The present study tests a model to know the customer's purchase intention and satisfaction regarding Fintech products in the retail sector. For this purpose, three constructs, namely, awareness, perceived risk, and perceived ease of use with the help of linear regression analysis, were taken to know their impact on purchase intention. Additionally, the level of satisfaction was also examined in this study. The results reveal that awareness and perceived ease of use impact positively; on the other hand, perceived risk negatively impacts customers' purchase intention regarding Fintech products. Moreover,

customers were moderately satisfied with Fintech products in the retail sector, and it is the critical determinant in using mobile payment applications.

8. MANAGERIAL IMPLICATIONS AND DIRECTION FOR FUTURE RESEARCH

Besides these findings, this study will help the service providers' work on their promotional strategies to increase the awareness of mobile wallets and encourage the public to use mobile wallets. Simultaneously, the customer wants assurance regarding the risk of using these mobile wallets. It will also be beneficial to improve on the part of service providers to improve the customer's interface for making mobile wallet applications convenient. It should be necessary for mobile payment application developers to reach the users timely and accurately. Moreover, the developers need to look after mobile payment applications' reliability, ease of use, and responsiveness.

This study potentially lays a foundation for future research even though the same methodology could be applied to a state or national level, and through structural modelling, the existing model may be expanded to determine the influence of purchase intent on customers' satisfaction. Furthermore, this investigation may be related to numerous technical services in emerging markets like India, such as m-education, m-health, e-wallets, social media

usage, and self-servicing technology (SST). Future research can include factors like service quality, social impact, and other enabling situations to obtain a comprehensive perspective.

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RESEARCH

The Use Of Indian Herbal Products By The Consumer's - A Study With Reference To Bengaluru Urban

Dr. Jennifer Fernandes,* Ms. Saraswathi Satish*

ABSTRACT

COVID-19 which spread across the nations of the world adversely impacted the life of the people and many lost their income and employment. The present study focuses on consumers' preference for the Indian herbal health products during COVID-19 with reference to Bengaluru urban. The primary study aims to analyse the change in the usage of herbal products before and during pandemic in India. Primary data was collected from 30 respondents randomly by using telephone interview and secondary data was collected from articles and journals. T-test is used to analyze the hypothesis and Pie charts and bar graphs are used to represent the data. The analysis proved that there is a significance change in the usage of herbal products by the consumers in the study area before and during the pandemic.

Key Words: Covid-19, Consumer's Preference, Herbal Products, Income & Employment.

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1. INTRODUCTION

Covid 19 which spread across the nations of the world adversely impacted the life of the people. Many lost their lives, some are bedridden, others are facing severe health issues, and not only that the trade among the countries were very badly hit. The government of various countries came up with temporary lockdowns to reduce the transmission of the virus. India was not an exception, the Government of India announced lockdown from 24th March to 3rd May, 2020 and due to this the economic activities in the country almost came to standstill. The impact of COVID-19 brought discontinuity in supply chain and the small business needed support as they were the primary shock bearers. The financial package of Rs. 20 lakh crore gave direct benefits to MSMEs; Innovate, skill development and infrastructure investment opportunities¹. The new launch of vocal for local² has encouraged local people for self-sufficiency and encouraged home grown start-up³. Five wellness and beauty ayurveda brands Himalaya Herbals, Khadi Natural, Kapiva, Dr.Vaidya's, and Forest Essentials created competition in the market, carried the ancient Indian legacy of natural treatment, Provided wonderful solutions for health and skincare⁴. Twenty six vegan protein powders are the immunity boosters, acts like supplements and helps in muscle repair as well⁵.

2. BRIEF REVIEW OF THE LITERATURE

Alkhateeb M., et al. (2006) focuses on consumers' spending on herbal products. The study is based on primary data by using stratified random sample of 1300 consumers in United States. Regression is used to analyze the data. The findings of the study suggest that 181(39.7 percent) respondents reported using herbal products. The regression model was significant ($P < .05$, Nagelkerke $R^2 = 0.499$). The study also finds that the older people spend more on herbal products than younger people. The consumers who got information about herbals from the herb professional tend to spend more on the herbal products.

Sharma et al. (2008) the article studies about the measures required for the promotion of Indian herbal products in international market. The present study is based on secondary data. The study finds that the annual turnover of Indian herbal medicinal industry is Rs.2,300 crores when compared to pharmaceutical industry's turnover of Rs. 14,500 crore with 15 percent growth rate. The exports of medical plants and herbs in India are wide-ranging in the last few years due to preference of the consumer on natural treatment and no side effect. India's annual turnover was around US \$ 48.9 million (1999-2000) and an export has reached to \$80 million.

Peltzer.K., et al. (2017) the study examines the usage of herbal products to cure chronic

disease in Vietnam. Cross sectional study was conducted in a health care setting using random sample of 1601 adult patients. Logistic regression analyses were used to analyse the data. Mean age is 50.5 years, SD=22.7) and the study found that from total sample 43.6 percent said that they had been using herbal home remedies. The study also found that many varieties of herbal products are used among chronic disease patients. The herbal supplements were used by many people to improve their health condition. The main source of awareness regarding the herbal is through family members and mass media.

Trivedi (2018) the study aims to find the effect of consumer ethnocentrism and consumers beliefs for herbal fast-moving consumer goods (FMCG) on brand loyalty, trust, affect. Primary data was collected from 458 respondents. The statistical tools used were Cronbach's Alpha, Exploratory factor analysis, Structural equation modeling. The empirical study found that neither consumer ethnocentrism nor consumers' beliefs for herbal products have a direct significant influence on brand loyalty and both brand trust and brand affect significantly influence brand loyalty.

Thakur and Noel (2021) the article focuses on the growth performance of Ayurveda industries in Solan district of Himachal Pradesh. Multi stage random sampling technique was used and the total sample size was 225 selected from 45 units. The data was

analyzed using compound annual growth rate and Garrett's ranking technique. The study finds that due to COVID-19 crisis the use of ayurvedic products have increased. There was 2.62 percent of increase in annual turnover in ayurveda pharmaceutical industries from 2010-11 to 2019-20 and this was due to increase in the demand for medicine. Shree Dhanvantri had the highest positive compound annual growth rate of 13.53 percent. The study also finds that the Government is playing a vital role in ayurveda system of medicine which in turn led to increase in popularity of ayurveda drugs.

3. OBJECTIVE

To analyze the use of Indian herbal products by the consumers' in Bengaluru Urban before and during Covid 19.

4. HYPOTHESIS

H₀: There is no significant change in the usage of herbal products before and during corona virus in Bengaluru Urban.

H₁: There is a significant change in the usage of herbal products before and during corona virus in Bengaluru Urban.

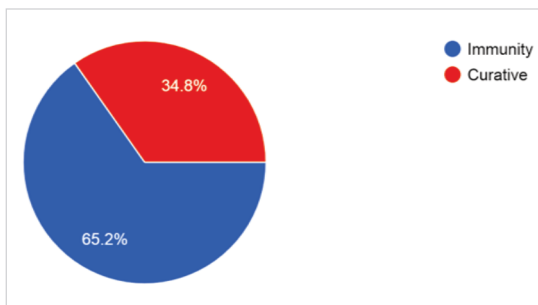
5. RESEARCH METHODOLOGY

The study is based on descriptive and exploratory research. Secondary data is collected from various reports, journals and articles. Primary data collected through the schedule telephonic interview. The survey is based on random sampling. The sample size is

30 and the data is collected from Bengaluru Urban. SPSS and Microsoft excel are used for the compilation and analysis of primary data. T-test is used to test the hypothesis. Simple graphs and diagrams are used to present the findings.

6. DATAANALYSIS

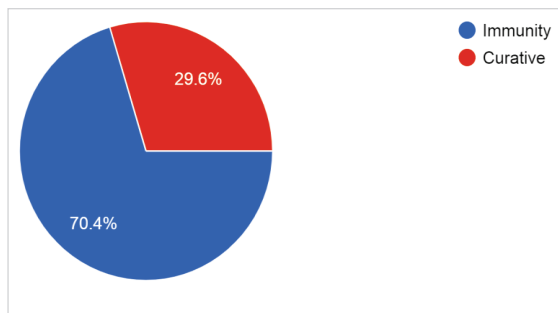
Fig.1. Purpose for the use of Herbal Products before COVID-19



Source: Collated from the field work.

The figure portrays that before pandemic only 34.8 percent were using herbal products for curative purpose and 65.2 percent were using to boost the immunity. This shows that the use of herbal products was more for immunity purpose than for curative. The Indian Herbal products made up of plants, roots, flowers, seeds and so on act as a good immunity boosters for many health issues.

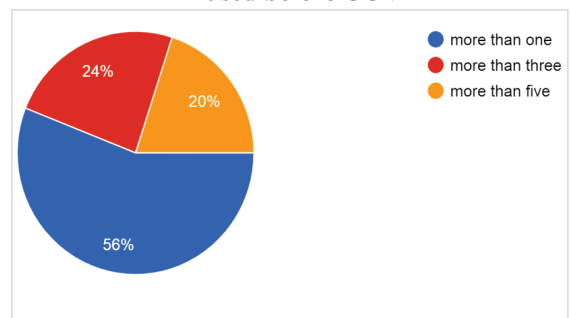
Fig.2. Purpose for the use of Herbal Products during COVID-19



Source: Collated from the field work.

The figure portrays that the purpose of using herbal products during the pandemic has rapidly increased in India. More than 70 percent respondents used the herbal products as during the initial days of outbreak of the virus, vaccinations were not introduced and this created panic among the public. In order to improve the immunity, majority started to use herbal products. According to survey, before the pandemic people were aware of few products like Chyawanprash, Patanjali but now-a-days majorities of the people use products like Kapiva, Oziva, Nutrilite, Flex protein and Breath Easy.

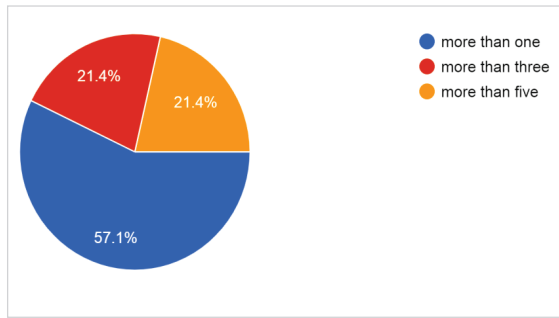
Fig.3. Number of Herbal Products used before COVID



Source: Collated from the field work.

Figure 3 explains that before the outbreak of pandemic, (56 percent) people used more than one herbal product and 24 percent used more than 3 products and only 20 percent respondent's used more than 5 products for the immunity and curative purpose

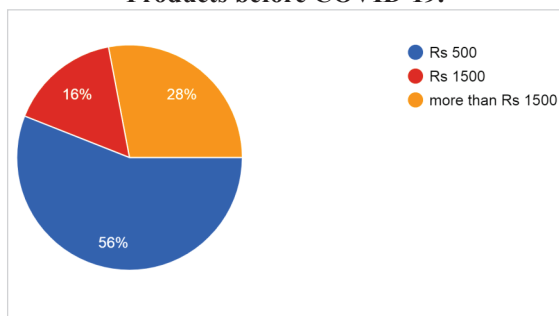
Fig.4. Products used during COVID-19.



Source: Collated from the field work.

Figure 4 shows that after the spread of virus the usage of herbal products has increased. 57.1 percent of the population are using more than one product, 21.4 percent using more than 3 products and 21.4 percent using more than 5 products. People understood that Indian herbal products are free from side effects and are reasonable compare to other products. The herbal products are easy to use and do not have side effects. The increase in the usage of herbal products created employment opportunities and income directly as well as indirectly. Many wholesalers and retailers are enjoying good profits and salesmen are enjoying job facilities.

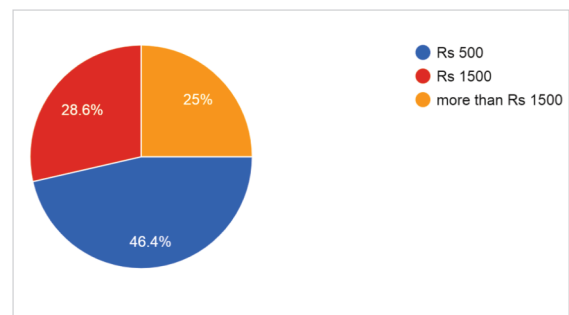
Fig.5. Money spent on Herbal Products before COVID-19.



Source: Collated from the field work.

Figure 5 portrays that before Covid, every month 56 percent of respondents spent Rs.500, and Rs.1500 was spent by 16 percent respondents while 28 percent respondents spent more than Rs.1500. Majority of the respondents agreed that kitchen ingredients were used for simple problems like cold and cough and did not spend much on herbal products

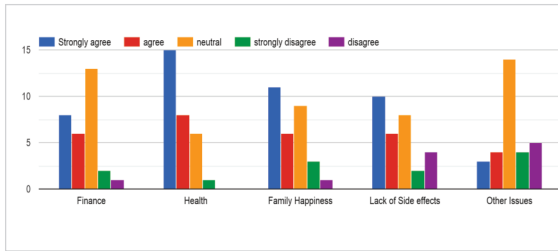
Fig.6. Money spent on Herbal products during COVID impact



Source: Collated from the field work

Figure 6 demonstrates that there is an increase in the spending on herbal products during the pandemic. 46.4 percent people spent Rs 500 monthly, 28.6 percent respondents spent Rs 1500 and 25 percent respondents spent more than Rs 1500. During COVID-19 many lost their loved ones, health deteriorated and this condition made people more health conscious. According to survey, almost every family is using at least one product for immunity purpose. The Atmanirbhar Bharat scheme is a motivating factor for Indians to be vocal for local and majority is using Indian based products.

Fig.7.Factors responsible for use of Herbal Products.



Source: Collated from the field work.

Figure 7 describes the factors responsible for the use of herbal products. Health followed by family happiness, lack of side effects as well affordable are the major reasons for using the herbal products by the respondents. Out of 30

respondents, 23 respondents use for health issues, 17 respondents for family happiness, 16 respondents said since no side effects and 14 respondents agreed it is affordable.

7. HYPOTHESIS TESTING

Paired samples statistics

	Mean	N	Std Deviation	Std Error Mean
Pair 1 Use_of_Herbal_Products_Before Covid	1.5333	30	.50742	.09264
Use_of_Herbal_Products_During_covid	1.2667	30	.44978	.08212

Paired samples test

Paired Differences

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig (2tailed)
				Lower	Upper			
Pair 1 Use of Herble Products Before Covid-Use_of_Herbal_Products During Covid	.26667	.44978	.08212	.09872	.43462	3.247	29	.003

Source:SPSS

Paired Sample t test is used to test the hypothesis. Paired sample t test is used to compare the means of two measurements. The average between the two values is .2667 and the standard deviation is .44978. The t table value is 1.699 while the calculated t value is 3.247. The calculated value is higher than the table value. The p value is .003 which is lesser than 0.05. Thus, we reject the null hypothesis and accept the alternative hypothesis that there is a significant change in the use of herbal products before and during

Covid in the study area. People have started preferring more of herbal products to increase the immunity to fight against the disease.

8. FINDINGS OF THE STUDY

- During lockdown many lost their job and income and to overcome this pandemic Atmanirbhar scheme provided packages of 20 lakh crore which benefitted many daily wage earners, self-employers and MSMEs.

- Many wellness and herbal brands in India are playing an important role in creating job opportunities, gained consumer confidence by proving solutions for health and skin care problems.
- The paired sample t test suggests that before covid the usage of herbal products were less compared to during the pandemic situation.
- Some of the herbal products used by respondents before and during covid for immunity and curative are B.V.Pundit's Bhavna Shunti, Breathe Easy, Patanjali, Samathva, Pankajakasthuri, Chyanprash, Agasthya haritakailehya, Srikara Amodini, Oziva and Kapiva.
- The study reveals that herbal products are effective for immunity and are curative with fewer side effects and affordable.

9. SUGGESTIONS

- The awareness regarding importance and usage of herbal products to general public has to be increased by the Government by increasing advertisements and discounts.
- The herbal product producers have to increase their production with new products which can attract the common consumers.

10. SCOPE FOR FURTHER RESEARCH

Extensive research should be conducted to check the significance and usage of herbal products compared to pharmaceutical products not only in India but also in the world.

11. CONCLUSION

The study aims to know the impact of pandemic and consumer preference for Indian herbal health products. The study focuses on the usage of herbal products before and during Covid impact and Atmanirbhar Bharat Abhiyan helped in promoting Indian products. The study reveals that the usage of herbal products has increased during pandemic and people realised the importance of Indian herbal products. The study also reveals that the job opportunities has increased due to increase in the use of herbal products.

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A Study On Value Creation In Reverse Flow Logistics Management Practices In E-Commerce With Special Reference To Flipkart

Dr. Halaswamy D.* Dr. Abhinandan N.*

ABSTRACT

Reverse logistics is an issue that has received growing attention, above all other issues, in the last decade, given the confluence of several situations. The E-commerce industry has been directly impacting micro, small & medium enterprises (MSME) in India by providing means of financing, technology and training and has a favourable cascading effect on other industries as well. The objectives of the study were to analyse the current practices of Reverse logistics of Flipkart, to evaluate the main return reason for products to Flipkart and to study how Flipkart, gain competitive advantage by implementing reverse logistics in Bengaluru where the data was being collected both from primary as well as secondary sources with a sample of 211 Employees who are working in Flipkart. The study is based on non-probability sampling technique where the respondents are chosen on the basis of convenience of the researcher. Thus the study concludes that the value creation in reverse flow logistics management practices in e-commerce with special reference to Flipkart could get affordable benefit with the unification of reverse logistics in the firm.

Key Words: *Reverse Logistics, E-Commerce, Flipkart, India*

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1.1 INTRODUCTION

Rogers and Tibben-Lembke, define Reverse Logistics as: “The process of planning, implementing, and controlling the efficient, cost effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal”

Owing to the increasing internet user base and favourable market conditions, India has a lot of potential in the e-commerce industry. Growing at an exponential rate, the market value of the e-commerce industry in India was approximately 50 billion U.S dollars in 2018. This number was estimated to reach 200 billion U.S. dollars by 2027. Increasing growth in the e-commerce industry is attributed to a number of reasons. Digitizing the economy and providing cheap internet to the people are a few of many reasons that boosted the growth of digital sales in India. In 2018, the e-commerce sales across India were estimated to increase by 25%. The growth rate, however, was predicted to observe a slight dip in 2022. Consequently, the revenue-generating potential has also increased. The average retail e-commerce revenue collected per user in India in 2018 was more than 50 U.S dollars. It was estimated to cross 75 U.S dollars by 2024.

Today Reverse Flow Logistics (RFL) has become a major thrust area especially in the

field of aftermarket spare parts as well as electronics and computer hardware markets. RFL is a new pattern of enterprise strategy management and green supply chain management. RFL is pursued for a coordinated optimization of economic and social efficiency of the product. Reverse logistics is not only the foundation of circular economy, but also had become the synergism with the construction of a healthy environment.

The competition in the e-commerce business in India is fierce. Firms focal factor is selecting out brand-new possibilities at the exact same time obtain to hold with the problems have to be determine it. Logistics plays an important part for Flipkart that is it may be Inter warehouse transactions or Vendor purchase or return due to the fact that it consists of human resource, equipment and also product which need to be make use of to complete the transaction successfully. Small component of overall logistics of Flipkart is Reverse flow logistics. This relate to the deal up of items which goes back to the supplier by the client consists of all tasks that have a result on destiny of returned products. This serves for Flipkart that are handling various kinds of returns from customer, or in house returns or business aligned returns which involves huge amount of allocated operational costs of the company. Also trigger to bring items back that in bring a well worth in supply chain of items is yet to be figured out. The research study centrepiece is examining the reverse flow

principle for Flipkart and also just how it plays an essential duty in reinforce the progression of the business.

1.2 REVIEW OF LITERATURE

Thomas, George (2015), This study will help them to access their reverse logistics capabilities, in nature natural raw material are limited and they need to focus on recycling of the defective products because future is only for this, the study will also motivate them to produce quality products and it will also reduce their reverse logistics cost. **Panigrahi et al. (2018)** in their research work intends to distinguish basic elements for building up an accomplished reverse logistics key structure that could direct the managers for enhancing consumer loyalty and overseeing retail returns. Qualitative interviews were performed in coordination with logistics managers in retail industry to create an accomplished reverse logistics coordination key structure with basic variables. Reverse flow driven by motivation is an important implication for supervisors to oversee coordination exercises. Managers must accentuate on potential corporate advantages to decrease expenses and include customer esteem. **Lin and HSU (2017)** mentions that the RL procedure includes returning of undesirable product and afterward exchanging of the returned product. Ecological concern and buyer rights have necessitate adoption to receive better systems to encourage product returns from customers. In light of resource based theory and

institutional theory, this article suggests that the accompanying components assume a basic part in impacting the RL capacity of e-tailers such as: (a) Financial resourcefulness allotment/responsibility regarding RL, (b) managerial commitment or sense of duty regarding RL, and (c) institutional strain to execute RL. In light of the part of these factors, the examination gives a structure and recommendations that serve to control future research tending to the connection among resources, institutional weight, and RL capacity. **M. Budi Djatmiko, Rahul B. Chauhan, Nalbiy Salikhovich Tuguz, Sameer Ahmed S. Shah (2020)**, the study is based on the logistic and E Commerce of Amazon and Flipkart. The objectives of the study were to compare the reverse logistics of the two e-commerce platforms i.e., Amazon and Flipkart, to find apt reasons for the high return of goods from the customers' end and to find ways to make the reverse logistics more (cost) effective for the ecommerce platforms. The study has used Convenience and Snowball sampling technique with a sample of 200 respondents. The findings of the study revealed that fashion related products and Electronic equipment with their accessories constitute of the most ordered from all of the other available categories of products and Amazon has better overall hassle free return process rated to be better than Flipkart on all the various parameters. **Jyoti, Neetu Gupta (2020)**, the study aims to study the Commercial impacts of Reverse Logistics in E- Commerce in India. The study brings out

the various challenges faced by Indian E-Commerce Retailers. The study is based on descriptive analysis where both primary as well as secondary data is being collected. From the data being analysed the results of the study were there is a sharp upsurge in returns during sale period, the maximum returns are noticed in the ladies garments and kids shoes. Thus It can be concluded that competition, increased sales and tendency of customers to shop online is the main reason for local manufacturers to enter the e-commerce sector

1.3 SCOPE OF THE STUDY

The scope of the study is limited to Flipkart & its customers who are availing the reverse logistics services offered by the company. The study area is limited to Bengaluru city.

1.4 STATEMENT OF THE PROBLEM

Reverse logistics is a relatively brand-new idea as well as not till just recently have scientists as well as logistics firms attempted to concentrate on its impacts on the supervisory choices. In current years consumer complete satisfaction has been thought about an extremely essential element in the development of any kind of business as well as the emphasis on enhancing client fulfilment has boosted significantly. Lately scientists have located that reverse logistics could play a vital duty in enhancing consumer complete satisfaction.

1.5 OBJECTIVES

- To analyse the current practices of Reverse logistics of Flipkart
- To evaluate the main return reason for products to Flipkart.
- To study how Flipkart gain competitive advantage by implementing reverse logistics in Bengaluru.

1.6 RESEARCH HYPOTHESIS

H0: Competitor presence does not significantly impact Reverse Flow

H1: Competitor presence significantly impacts on Reverse Flow

H0: Price of the product does not significantly impact Reverse Flow

H2: Price of the product significantly impacts Reverse Flow

H0: Quality of the product does not significantly impact on number of orders of Reverse Flow

H3: Quality of the product significantly impact on number of orders of Reverse Flow

1.7 RESEARCH METHODOLOGY

The present study is based on both primary and secondary data, research examines the individual that are participating in reverse logistics procedure specifically in Flipkart. The research study made on subject Opposite Logistics on initial time which observes to be

one-of-a-kind in Nature. The data is being collected through various mechanisms such as personal interview, mailed questionnaire and social network websites. Other details like firm account as well as sector account with the assistance of web sites, journals and via individual conversation with the staff members. The study is descriptive in nature. The sampling technique adopted for the study was non-probability sampling and the respondents were chosen based on **Convenience sampling** with a sample size of 211 employees who are working in Flipkart. The reason is that this technique will certainly be utilized because of the moment restraints, absence of understanding regarding the whole cosmos and the primary factor being that it will certainly not be simple to gather the information from all the staff members that worked with this task.

1.8 DATA ANALYSIS AND INTERPRETATION

CHI-SQUARE TEST: 01

H1: Competitor presence significantly impacts on Reverse Flow

H0: Competitor presence does not significantly impact Reverse Flow

Chi-Square Tests			
Particulars	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	139.035 ^a	12	.000
Likelihood Ratio	140.986	12	.000
Linear-by-Linear Association	2.932	1	.087
N of Valid Cases	211		
a. 16 cells (80.0%) have expected count less than 5. The minimum expected count is 1.38.			

Since P-value is 0.000 which is lesser than 0.05, Null hypothesis is rejected. Hence, Competitor presence significantly impacts on Reverse Flow.

CHI-SQUARE TEST: 02

H1: Price of the product significantly impacts Reverse Flow

H0: Price of the product does not significantly impact Reverse Flow

Chi-Square Tests			
Particulars	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	84.685 ^a	9	.000
Likelihood Ratio	97.842	9	.000
Linear-by-Linear Association	41.413	1	.000
N of Valid Cases	211		
a. 10 cells (62.5%) have expected count less than 5. The minimum expected count is 1.38.			

Since, P-value is 0.000 which is lesser than 0.05, Null hypothesis is rejected. Hence, Price of the product significantly impacts Reverse Flow.

CHI-SQUARE TEST: 03

H1: Quality of the product significantly impacts on number of orders of Reverse Flow

H0: Quality of the product does not significantly impact on number of orders of Reverse Flow

Chi-Square Tests			
Particulars	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	53.403 ^a	3	.000
Likelihood Ratio	72.651	3	.000
Linear-by-Linear Association	30.748	1	.000
N of Valid Cases		211	
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.52.			

Since, P-value is 0.000 which is lesser than 0.05, Null hypothesis is rejected. Hence, Quality of the product significantly impacts on number of orders of Reverse Flo.

MULTIPLE REGRESSION

Regression- Equation: To test the most significant effect of reverse logistics on competitive advantage among Flipkart

Company in Bangalore, a regression analysis was conducted. In this analysis competitive advantage was taken as the dependent variable and other variables like ensuring customer satisfaction, recapture value, brand image, cost savings, company profitability, faster movement of products, customer loyalty, market share and reducing operating costs were predictors.

Table 4. 12: Multiple regression

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.695	.299		12.365	.000
	Recapture value	-.258	.489	.253	.528	.598
	Brand image	.099	.437	.096	.227	.820
	Customer satisfaction	.347	.499	.342	.696	.487
	Cost saving	.563	.453	.536	1.242	.216
	Company profitability	.495	.291	.479	1.702	.090
	Leads to Faster reverse movement of products	-.863	.362	.778	2.385	.018
	Enhance Customer loyalty	-.661	.350	.706	1.889	.060
	Improve market share	.100	.486	.099	.205	.838
	Reducing operating cost	.313	.407	.314	.770	.442

a. Dependent Variable: Competitive advantage

It was observed from the table that Recapture value, faster reverse movement of products, enhance customer loyalty had a negative correlation with competitive advantage. There is an extremely high positive relationship between Brand image, customer satisfaction, cost saving, company profitability and reducing operation cost and Improve market share. Hence, from the above, it makes crystal clear that Flipkart can gain competitive advantage with other

companies which not only create good image in the eyes of public but also enhance its name in the market.

ANOVA^a

Table 4. 13: Anova

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	19.863	9	2.207	1.412	.185 ^b
	Residual	312.537	200	1.563		
	Total	332.400	209			

- a. Dependent Variable: Competitive advantage
- b. Predictors: (Constant), Reducing operating cost, Company profitability, Cost saving, leads to Faster reverse movement of products, Enhance Customer loyalty, Improve market share, Brand image, Recapture value, Customer satisfaction

From ANOVA test or F test table, it is shown that the value of F count is 1.412 with 0.000 probability. Since the F count is $1.412 > F$ table ($\alpha = 5\%$) 19.48, then alternate hypothesis in this research is accepted and the regression model can be used to predict the competitive advantage as (dependent variable) or in other words, all of the independent variables, Reducing operating cost, Company profitability, Cost saving, leads to Faster reverse movement of products, Enhance Customer loyalty, Improve market share, Brand image, Recapture value, Customer satisfaction have significant effect into the dependent variable, overall competitive advantage.

Model summary

Table 4. 14: Model summary of Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.244 ^a	.060	.017	1.25007

- a. Predictors: (Constant), Reducing operating cost, Company profitability, Cost saving, leads to Faster reverse movement of products,

Enhance Customer loyalty, Improve market share, Brand image, Recapture value, Customersatisfaction

From the table, we can see that the variable Reducing operating cost, Company profitability, Cost saving, leads to Faster reverse movement of products, Enhance Customer loyalty, Improve market share, Brand image, Recapture value, Customer satisfaction R value of 0.244. According to table which describe the criteria for the correlation between independent variables and dependent variable, it can be interpreted that independent variables has a moderate correlation with decision for 12.5%, and from the coefficient of determination that is the square of the correlation coefficient (R^2) in table is equal 0.17 that showed 17% of the variation that occurs overall competitive advantage is described by all of the independent variables, Reducing operating cost, Company profitability, Cost saving, leads to Faster reverse movement of products, Enhance Customer loyalty, Improve market share, Brand image, Recapture value, Customer satisfaction.

RELIABILITY TEST: CRONBACH ALPHA FOR REVERSE LOGISTICS ACTIVITIES

Cronbach's Alpha	N of Items
.904	44

Table 4. 15: Cronbach alpha

Particulars	Value	Based On Standardized Items	Level Of Consistency
Reverse logistics activities	0.980	0.980	Equal
Reasons	0.989	0.989	Equal
Practices	0.968	0.969	Low
Role	0.965	0.968	High
Reverse logistics and handling of returned merchandise	0.987	0.987	Equal
Strategic importance	0.131	0.117	High
Barriers	0.561	0.561	Equal

From the above table, it is observed that Cronbach's Alpha Value is 0.904 which is above 0.5. Hence, the data is reliable. The constructs used in the current research are tested during the analysis phase of the research, by using the Cronbach's alpha analysis. This test/analysis gives a value (between 0 and 1) for the internal consistency of the attributes of a construct. A value higher

than 0,70 implies that the attributes are internally consistent. The value of Cronbach's alpha may not exceed 0,95, because then the items are measuring the same aspect of a construct. All the major constructs used in the research show a Cronbach's alpha that exceeds the value 0,70, as is shown in the above table. Hence these constructs can be considered reliable.

FACTOR ANALYSIS

A factor analysis was done to identify variables that would possibly have a influence on the company profitability. The factor analysis identified two variables namely (factor one) which is reverse logistics contributes in achieving organization goals and factor two will be improve profitability of the company.

KMO AND BARTLETT'S TEST

Table 4. 16: KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	365.126
	Df	1
	Sig.	.000

Table 4. 17: Total variance explained

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.910	95.494	95.494	1.910	95.494	95.494
2	.090	4.506	100.000			

Extraction Method: Principal Component Analysis.

RESULTS

Table 4. 18: Correlation

Correlation Matrix			
		Org goals	Improving profitability
Correlation	Org goals	1.000	.910
	Improving profitability	.910	1.000

**Correlation is significant at the 0.01 level (2-tailed)

A factor analysis was done to determine the reverse logistics contributes in attaining not only organization goals but also improve profits of Flipkart. Hence two factors considered. A correlation was done to explore the relationship two identified variables namely organisation goals and improve profitability. The result showed that there is a relationship between the Reverse logistics assists in attaining organisation goals is to the extent of 91%. As the significance value is .000 which is less than .05, the null hypothesis is rejected.

1.9 FINDINGS AND SUGGESTION

The study is approximated to be carried out amongst 211 Workers that are operating in Flipkart who are also the customers of the platform. It makes crystal clear from the table that greatest number of participants specifying much less compared to 100 participants are including in reverse logistics division. It is observed from the table that greatest mean worth of 58.4 stands for RL plays a substantial function in business technique while 2nd greatest mean worth of

51.6 as RL is necessary for firm future success while 3rd greatest mean worth of 46.4 as RL is especially important for operating of the business with great company photo and finally mean worth of 44 as RL adds in attaining organization objectives. Table makes it clear as P-value 0.00 which is lesser than 0.05, null hypothesis is rejected which makes it clear that all vital components that is quality, price and competitor presence impact the reverse flow.

- Excellent efficiency calls for reverse logistics to be component of the calculated reasoning within the business.
- Supervisors throughout the firm must understand the influence of the reverse tasks on their company, for several factors. Not just will turn around logistics favourably influence the picture in the direction of clients, it additionally makes the company a lot more versatile in getting sources. Input product could be got from just what would otherwise be land filled up, permitting business to reduce expenses.
- Reverse logistics likewise sustain client service tasks.
- Supervisors, familiar with the reverse logistics concerns within their business, will certainly have a keener eye for possibilities as well as hazards to the reverse tasks. They will certainly see opportunities to incorporate the

reverse chain with the forward chain, even more reducing expenses and simplifying the procedures. This will certainly bring about far better efficiency, and also ultimately, even more worth development.

- Much more calculated focus on turn around logistics will certainly likewise have a favourable result on the advancement of the required capacities along with on the source dedication, as the factors for spending sources in the reverse tasks will certainly currently have come to be apparent.

1.10 CONCLUSION

Indian E-commerce industry has been on an upward growth trajectory and is expected to surpass the US to become the second largest E-commerce market in the world by 2034. E-retail market is expected to continue its strong growth - it registered a CAGR of over 35% to reach Rs. 1.8 trillion (US\$ 25.75 billion) in FY20. The growth in E-commerce sector will also boost employment, increase revenues from export, increase tax collection by exchequers, and provide better products and services to customers in the long-term. Establishing reverse logistics tasks in a business needs brand-new capacities along with adequate quantities of monetary, supervisory and technical sources. To be efficient, a promoting understanding atmosphere would certainly appear required as well as reverse logistics must be taken on in the tactical positioning of the company.

Strategic relevance ends up having a precise favourable straight influence on the reverse logistics efficiency as well as has effect over it. Thus the study on value creation in reverse flow logistics management practices in e-commerce with special reference to Flipkart could get affordable benefit with the unification of reverse logistics in the firm and this will certainly not just hurt the atmosphere yet additionally improve business picture in the eyes of public.

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An Empirical Study On Consumer Perception Towards Organic Food Product With Special Reference To Bengaluru District

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ABSTRACT

The paper tries to examine the Consumer Perception towards Organic Food Product in the city of Bengaluru with an objective to understand the perception and attitude of consumers buying and using organic food products. Health issues are becoming consumer's priorities to purchase the products. Many supermarket chains offer a wide variety of organic products, including private and own brand organic labels. There is also significant expansion in the range of organic products available in supermarkets. The interest of consumers and public institutions in organically produced foods has increased, in developed countries, in response to consumers' concerns about food safety, human health and the environment. The purpose of this research is to determine the consumer perception regarding organic food in Bengaluru. Understanding consumer's perception and decision making towards organically grown products it has been found out that health, safe, taste and environmental concerns were the most crucial factors deciding consumer's attitude and preference towards purchasing organic products. The study also revealed the availability also can influence consumer's preferences and choices for purchasing organic food products.

Key Words: Consumer, perception, Food, products

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INTRODUCTION

The agricultural techniques suffered the technological makeover in the twentieth century. The apparatus and use of machinery had shoved traditional labour out of the farm, while the use of a substantial variety of chemical fertilizers and pesticides established. Even though this technical method of farming is still prevailing and helps to enhance the harvest, but it does so devoid of seeing its effects on human health and the environment. In the last two spans, due to an increase in food-related ailments worries about the dietary value of food, increase in environmental issues and the problems related to the safety and quality of food have fascinated the attention and curiosity of the consumers towards a healthy living. For a nutritious standard of living, going — back to environment has become a global trend. It is believed that everything that comes from natural world is good and beneficial and ensures a balance between nature and human. Purchasers are showing increased consideration and attention towards organic food products. This is because these food products get rid of buyers concerns towards regular, conventional food. Also, organic food manufacture incorporates all aspects of pesticide-free and fertilizer-free production and clings to the standards specified by the agencies.

ORIGIN AND EVOLUTION OF ORGANIC FARMING

The notion of organic food and farming is not new for India. In the archaic times, food that was easily accessible from nature like wild berries and fruits were eaten by the early Indians. With the beginning of the early civilization, individuals started farming and since then organic agriculture has evolved in countless villages and farming communities. Archaic Hindu scriptures like Ramayana, Kautilya Arthasashthra, Mahabharata, Rig Veda, etc. have cited the use of organic inputs in agriculture. In initial stages, farmers used only natural farming methods and cultivated in lush river valleys, where all resources were natural. However, agricultural procedures replaced and co-grown with human development. In early 1900s, worldwide, there was a switch in agricultural practices, that is, from conventional farm practices to technology-driven farm procedures. Sir Albert Howard, known as the father of modern organic agriculture, believed that the implementation of new technical methods of agriculture caused in the loss of soil fecundity. He served in India as an agricultural adviser from 1905 to 1924, and acknowledged traditional Indian farming practices as being superior to conventional agriculture science. His innovative work provoked the organic movement in India, accentuating on the exclusion of chemical fertilizers and the use of manure and other organic sources of plant nutrients.

During 1950s and 1960s, the ever-rising population of India and several natural calamities lead to a severe food scarcity in India. As a result, the government was compelled to import food grains from foreign countries. To enhance food security, the government had to significantly increase the production of food in India. The Green Revolution (under the leadership of M. S. Swaminathan) became the government's most valuable program in the 1960s.

Large amount of land was made under cultivation. Hybrid kernels were introduced, Natural and organic fertilizers were substituted by chemical fertilizers and locally made insecticides were replaced by chemical insecticides. Enormous chemical factories such as the Rashtriya Chemical Fertilizers were recognized. Before the Green Revolution, it was dreaded that millions of poor Indians would die of starvation in the mid-1970s. However, the Green Revolution, within a few years, showed its influence. The country, which was significantly trusted on imports for its food supply, slashed its imports every passing year. In 1990s, India had excessive food grains and once again became and exporter of food grains.

SCOPE AND IMPORTANCE OF THE STUDY

Organic food promotes a balance of human, other living organisms, and the nature. With rising concern of health issues and food safety, many consumers have turned their site

to organic products. The increased consumers' interest in organic food has attributed to the growing demand for food free from pesticides and chemical residues promotes no artificial preservatives and best maintain the originality of food. This prevents excess use of harmful ingredients and thereby ensures health. This study attempted to gain knowledge about consumer perception, attitude towards organic food product consumption and to see whether there is any potential this might have for changing their behavior. The basis for carrying-out this study is that consideration for the environment could come only from well-informed citizens who are aware of, and fully committed to their rights to a quality health and environment. Nevertheless, before any behavior can changed, it is necessary to evaluate the current state of consumers' awareness and knowledge. Therefore, consumer's attitude, perception towards organic food products, willingness to pay for organic food product and intention to purchase organic food will be the main agenda of this study.

REVIEW OF LITERATURE

Pandey & Khare (2017), conducted a study on “The Role of Retailer Trust and Word of Mouth in Buying Organic Foods in an Emerging Market” This study had twin objectives. Firstly, to explore the antecedents of retailer's trust and its effect on organic food purchase intention. Secondly, to explores the relationship between word of mouth and retailers trust and the effect of word of mouth

(WOM) in organic food purchase intention in the context of a developing economy. Cluster sampling method combined with judgment used for survey in India. The researcher concluded that Trust and word of mouth (WOM), both leads to intention to buy organic food products. But trust in the retailer is more important than word of mouth. Perceived food quality, perceived fairness of price and perceived service quality helps in building trust in a retailer, wherein perceived fairness of price is more important than perceived service quality. **Dasari. Pandurangarao, Dr. K. Chiranjeevi & Prof. D. Suryachandra Rao (2017)**, conducted a study on “factors affecting consumers to buy organic food products in Hyderabad and Secuderabad”. This study presented the factors affecting consumers to buy organic food products in Hyderabad and Secunderabad, India. A sample of five hundred consumers interviewed using structured questionnaires to examine key factors influencing them to use organic food. The data obtained from the survey analyzed with percentage method, reliability test, and factor analysis. The results revealed that ten factors such as labels, health, concern, environment concern, brand advertising, safety, accessibility, affordability, freshness, and store location that are influencing customers to buy organic food. Out of these, health, environment, and safety are key factors that found as primary influencers. Significant relation found between buying behavior and environment concern. Hence, study made conclusion that

health, safety and environment are key reasons why people buy organic food products. **Rock B., Puhalenth K., Vishnupriya S., Pavithra R., Supriya A, & Gayathri K. (2017)** conducted a study titled A study on awareness of organic food products in Tiruchirappalli district. The main aim of the study was to assess the awareness of organic food products among the consumers in Tiruchirappalli district, Tamil Nadu. A cross sectional questionnaire-based study was conducted among rural, semi-urban, urban residents (one hundred each, total of three hundred) in august 2016.the study revealed that the main reasons for consuming organic food being credibility & availability. The researchers also concluded that increasing the awareness level of organic products, encouraging people to create their own organic garden can increase consumption of organic foods. **Diganta, Kr. Mudoi and Dr. Subit Dutta (2018)**, conducted a study on the topic of organic tea products: a study on perceptions of consumers in Golaghat district of Assam the study focused on analyzing the factors of consumer perception towards organic tea products. This study was based on primary survey of two hundred respondents living in the Golaghat districts headquarter of Assam. The questionnaire designed to record the responses on food safety concerns, frequency of buying behavior, from where they buy the products, awareness, attitude, factors effecting buying behavior, price effect on purchasing, behaviors towards organic food

and effectiveness of sources for organic information. The researcher concluded that health benefit was one of the most important determinants of the factors affecting consumer preference towards purchase of organic tea products. **B. Lavanya, Dr. S. Saraswathi (2018)**, conducted a study on “Consumer Buying behavior – A Study with reference to Organic Products in Hyderabad City”. The study revealed that Consumers have a positive perception towards the usage of the Organic products. The main reasons for choosing the organic products are concern for health and environment. Price and quality are the two factors that commonly evaluated while buying the products. Retailers expressed that once the consumers become loyal after releasing the importance of organic products there will very few challenges to face in the market, i.e., creating the brand image apart from providing value for the money will majorly influence the consumer to make repeat purchases. **Ramakrishnan & Parameswaran (2020)**, revealed in their study “An Empirical analysis of Consumer Purchase behaviour towards Organic Food Products in Coimbatore”. The study focused on examining the factors influencing purchase behaviour of organic products among consumers and their willingness to pay premium price for organic foods considered for the study. The additional aspect that is Willingness To Pay (WTP) for organic foods among consumers. Garrett ranking technique, chi square, Whitney U test, Kruska- Wallis H test, T test, ANOVA, Correlation analysis,

Regression analysis, SEM Model, Confirmatory factor analysis was used to know the purchase of organic food based on the order of preference by the sample respondents. The preference and purchase attitude has positive influence on organic food products. Also, the buying intention of the consumers motivated through their purchase attitude had significantly influenced to buy organic food products. **Uma. R & Dr. V. Selvam (2021)**, Conducted a study on topic of “Transition of Consumer Behaviour from Conventional to organic Food products with Reference to select District in Tamil Nadu”.. The study was attempted to find some major factor which facilitate the purchase, perception, and factors which motivates the purchase of organic food product. The results concluded that consumers possess adequate knowledge on organic food products and the gender differences which will influence the consumers to decide on organic food product consumption. Particularly it's the female respondents who has the greater influence on purchase of organic food products.

STATEMENT OF PROBLEM

The organic food has grown without the use of genetically modified organisms, toxic chemicals, pesticides, or fertilizers. Increase in number of food scandals in India has diverted many people to change their preference for organic food. Increased people are becoming conscious of health and environmental protection, and India rapid

economic growth increases the purchase power of consumers, all of which has increased the preference of organic products and so has led even the distributors to sell more organic products. The organic foods are natural, safer for the environment and better for consumption. In the context of this situation, the concept of organic farming started gaining importance. Consumer health awareness and increasing food scandals are the main factors to change in buying behaviors. The Word organic refers to all the products which made or produced without using Chemical fertilizer and pesticides, which blends with our old Indigenous system (Ayurveda). As such ayurveda is natural science development for human survival. Today market trend has been diverting towards the same system requirement for customers. People all over the world are getting very conscious about their health and environment. This shows that in the next few years there is a wonderful opportunity for organic and natural products.

Health issues are becoming consumer's priorities to purchase the products. Many supermarket chains offer a wide variety of organic products, including private and own brand organic labels. There is also significant expansion in the range of organic products available in supermarkets. Today there are different formats of organic business market such as, organizations that use cooperative business structures, independent outlets, farm shops, farmers, markets, community-

supported agriculture schemes and productive direct market. The health motivation can see as one of the initiative-taking reasons for the change in customers but still it has not covered the market range. The product quality is another factor that consumers will relate towards the organic food, fresh fruits, and vegetables.

The interest of consumers and public institutions in organically produced foods has increased, in developed countries, in response to consumers' concerns about food safety, human health and the environment. These are the main driving force while purchasing the organic products. However, consumer perception of organic farming may be related to the availability of organic products in a specific area. Growth in the popularity of organic products may be correlated with more positive perception of organics and greater intentions to buy them. Hence the study established to examine perception of consumer towards organic food products with the study entitled **“AN EMPIRICAL STUDY ON CONSUMER PERCEPTION TOWARDS ORGANIC FOOD PRODUCT WITH SPECIAL REFERENCE TO BANGALURU DISTRICT”**

OBJECTIVES OF THE STUDY

- To analyze the demographic profile of organic food consumer.
- To study consumer awareness about organic food products.

- To study the perception and attitude of consumers buying and using organic food products.
- To study the factors influencing the consumer to buy organic food product.
- To identify the level of satisfaction among organic food consumers.

HYPOTHESIS

- H_0 – There is no significant association between health consciousness and buying behavior of Organic Products.
- H_1 – There is significant association between health consciousness and buying behavior of Organic Products.

RESEARCH METHODOLOGY

1. Source of data

The Methodology involves the collection of data for the study from primary and secondary source. Primary data collected through structured questionnaire distributed to organic food consumer. Secondary data obtained through publication, websites, books, journals, articles, internal records.

2. Sampling design

- **Sample size**

The below gives the Sample Frame for Sample size measures the number of individual samples measured or observation used in survey or

experiment. The sample size comprises of several types of users who are consuming organic food products. A sample of one hundred respondents considered in the selected locality in Bengaluru Rural District from both organized and unorganized sector.

The sample size is being determined by considering different factors which were very crucial for the study. It involved a complex process of identifying the total number of organic food products and selection of number of respondents in the Bangalore Rural District.

This can be further classified into organized and unorganized in our study both sector is taken into consideration without any differentiation.

As per the district statistics office Report published by Zilla Panchayat office Bangalore Rural as on 21/07/2018 the total number of population in Bengaluru rural were 9,90,923 and further it was classified into the Male and Female, as the study is confined only to the Bangalore Rural total number of food manufacturing enterprises as on 31st March, 2017 was 389 and total number of respondent across the region is 196 were taken into consideration out of which 3 respondents had given incomplete and insufficient information 2 responded

were not consumed any of the organic food products, hence the total sample size was determined as 191 which is as per the Krejcie and Morgan table for determining sample size of known population.

- **District Wise Breakup of the Sample Size**

With the sample size calculator at 95 percent confidence levels the sample was determined as 191 respondents and later for the convenience of the study it was further divided into the taluk level covering all the taluks at the equal proportionate with the number of respondents it has got.

Sl. No	Taluk	Sample Size
1.	Devanahalli	43
2.	Doddaballapura	44
3.	Hosakote	49
4.	Nelamangala	55

Sources: Primary Data

ANALYSIS AND INTERPRETATION

DISTRIBUTION OF RESPONDENTS BASED ON SOURCE OF INFORMATION

Source of information	No. Of Respondents	Percentage
Exclusive stalls/counters	27	14.13
Exhibitions organized by state government	09	4.712
Pamphlets distributed through newspapers	28	14.65
Articles in Magazines & Newspapers	24	12.56
Advertisement in Newspapers & TV	21	10.99
Word of Mouth -' Friends & Relatives'	35	18.32
Banners at retail outlets	19	9.947
Recommendation by Doctor/Dietician	11	5.75
Internet	17	8.90
Total	191	100

Data source: Primary data

From the above analysis it can be inferred that majority (8.9%) of the respondents gained information about organic food product through internet. This implies that majority of the respondents are tech savvy, and they use internet more as compared to other source. Social media plays a significant role in creating an impact in the minds of respondents and provides information about organic food products also there are specific customers who will buy exclusive from stalls nearby outlets this also show there is greater awareness about the organic food products to specific respondents.

DISTRIBUTION OF RESPONDENTS BASED ON AWARENESS LEVEL

Statement	Not at all aware (1)	Slightly aware (2)	Somewhat aware (3)	Moderately aware (4)	Extremely aware (5)	Mean
Organic Food is grown using natural methods	6 (3%)	18 (9.42%)	37 (19.3%)	77 (40%)	53 (28%)	3.80
Organic Food is free from chemical fertilizers and pesticides	00 (0%)	06 (3%)	43 (23%)	101 (53%)	41 (21%)	3.92
Organic farming is done in environment friendly manner	25 (13%)	17 (9%)	20 (10%)	102 (53%)	27 (14%)	3.46
Organic Food is nutritious and helps to resist diseases	28 (15%)	13 (7%)	44 (23%)	85 (44%)	21 (11%)	3.30
Organic Food is sourced from fields which are certified as Organic by authorized bodies/agencies	53 (53%)	16 (16%)	25 (05%)	60 (20%)	37 (06%)	2.69




Data source: Primary data

From the above table it can be analyzed that 53% of the respondents considered for the purpose of the study are not at all aware that organic food is sourced from fields which are certified as organic by authorized bodies/agencies, 20% of respondents are moderately aware that organic food is sourced from fields which are certified as organic by authorized bodies/agencies, 16% of the respondents are slightly aware that organic food is sourced from fields which are certified as organic by authorized bodies/agencies, 6% of respondents are extremely aware that organic food is sourced from fields which are certified as organic by authorized bodies/agencies and 5% of the respondents are

somewhat aware that organic food is sourced from fields which are certified as organic by authorized bodies/agencies. The mean score of the statement is 2.69.

From the above analysis, it can be inferred that most respondents are moderately aware of the characteristics of the organic food, that is, organic food is grown using natural methods and are nutritious, organic food is free from chemical fertilizers & pesticides, organic farming being done in environment-friendly manner, organic food is nutritious and helps resist disease. Although most of the respondents are aware except some who had a varied view regarding organic food sourced from fields certified as organic.

DISTRIBUTION OF RESPONDENTS BASED ON AWARENESS LEVEL OF ORGANIC FOOD CERTIFYING BODIES






Organic certifying bodies	Not at all aware (1)	Slightly aware (2)	Somewhat aware (3)	Moderately aware (4)	Extremely aware (5)	Mean
	48 (25%)	59 (31%)	63 (33%)	21 (11%)	00 (0%)	2.29
	69 (36%)	39 (20%)	38 (20%)	43 (23%)	02 (1%)	2.31
	112 (59%)	05 (3%)	51 (27%)	23 (12%)	00 (0%)	1.92

Data source: Primary data

The above analysis, it can be inferred that consumers are slightly familiar with all the selected certifying agencies. Out of the three selected agencies, most familiar certifying agency is INDIA Organic (mean score 2.31) followed by USDA Organic (mean score

2.29) and least familiar is Non-EU Agriculture (mean score 1.98). This indicates that most of the respondents do not have proper knowledge regarding certifying bodies and certification system of organic food products.

DISTRIBUTION OF RESPONDENTS BASED ON AWARENESS LEVEL OF ORGANIC FOOD BRANDS

Organic food brands	Not at all aware (1)	Slightly aware (2)	Somewhat aware (3)	Moderately aware (4)	Extremely aware (5)	Mean
	39 (20%)	56 (29%)	69 (36%)	15 (8%)	12 (6%)	2.50
	16 (8%)	41 (21%)	45 (24%)	59 (31%)	30 (16%)	3.24
	0 (0%)	25 (13%)	19 (10%)	81 (42%)	66 (35%)	3.98
	28 (15%)	51 (27%)	55 (29%)	42 (22%)	14 (7%)	2.81
	37 (19%)	37 (19%)	28 (15%)	63 (33%)	26 (14%)	3.01

Data source: Primary data

DATA ANALYSIS

- From the above table it can be analyzed that 20% of the respondents considered for the purpose of the study are not at all aware about Sanjeevni Organics, 29% of respondents are slightly aware about Sanjeevni Organics, 36% of respondents are somewhat aware about Sanjeevni Organics, 8% of respondent is moderately aware about Sanjeevni Organics and 6% of respondents are extremely aware about Sanjeevni Organics. It has a mean score of 2.50
- From the above table it can be analyzed that 31% of respondent considered for the purpose of the study is moderately aware about Navdanya, 24% of respondents are somewhat aware about Navdanya, 16% of respondents are extremely aware about Navdanya, 8% of the respondents are not at all aware about Navdanya and 21% of respondents are slightly aware about Navdanya It has a mean score of 3.24
- From the above table it can be analyzed 42% of respondents considered for the purpose of the study are moderately aware about 24 mantra organic, 35% of respondents are extremely aware about 24 mantra organic, 10% of respondents are somewhat aware about 24 mantra organic and 13% of respondents considered for the purpose of the study are slightly aware about 24 mantra organic. It has a mean score of 3.98
- From the above table it can be analyzed that 29% of respondents are considered for the purpose of the study are somewhat aware about down to earth, 27% of respondents are slightly aware about down to earth, 22% of respondent is moderately aware about down to earth and 7% of respondents are extremely aware about down to earth and 15% of the respondents considered for the purpose of the study are not at all aware about down to earth. It has a mean score of 2.81
- From the above table it can be analyzed that 33% of respondent considered for the purpose of the study are moderately aware about organic India, 19% of respondents are slightly aware about organic India, 19% of the respondents are not at all aware about organic India, 15% of respondents are somewhat aware about organic India, and 14% of respondents are extremely aware about organic India. It has a mean score of 3.01.
- Based on the above analysis, it can be inferred that majority of respondents are slightly aware with the organic food brands. 24 mantra organic is the most familiar brand (3.98), followed by Navadanya (3.24), Down to Earth (2.81) and Organic India (3.01). The least being Sanjeevni organics with a mean score of (2.50).

DISTRIBUTION OF RESPONDENTS BASED ON FACTORS INFLUENCING PURCHASE OF ORGANIC FOOD PRODUCT

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
Health Consciousness	0(0%)	0(0%)	47(25%)	81(42%)	63(33%)	4.08
Safe to consume	0(0%)	0(0%)	28(15%)	117(61%)	50(26%)	4.12
Taste	0(0%)	0(0%)	41(21%)	112(59%)	38(20%)	3.98
Environment friendly	0(0%)	0(0%)	29(15%)	110(58%)	52(27%)	4.12
Saving resource for next generation	0(0%)	0(0%)	61(32%)	91(47%)	39(20%)	3.88
Cost	0(0%)	56(29%)	85(45%)	23(12%)	27(14%)	3.10
Availability	0(0%)	19(10%)	87(46%)	81(42%)	4(2%)	3.36
High quality	0(0%)	0(0%)	14(7%)	158(82%)	19(10%)	4.02

Data source: Primary data

DATA ANALYSIS

- From the above table it can be analyzed that 42% of respondents considered for the purpose of study agree that health consciousness is one of the factors which influence them to buy organic food product, 33% of the respondents strongly agree that health consciousness is a factor which influence them to buy organic food product and 25% of respondents considered for the purpose of study neither agree nor disagree that health consciousness is one of the factors which influence them to buy organic food product. It has a mean score of 4.08
- From the above table it can be analyzed that 61% of respondents considered for the purpose of study agree that that safe to consume is one of the factors which influence them to buy organic food

product, 26% of the respondents strongly agree that that safe to consume is one of the factors which influence them to buy organic food product and 15% of respondents neither agree nor disagree that safe to consume is one of the factors which influence them to buy organic food product. It has a mean score of 4.12

- From the above table it can be analyzed that 59% of respondents considered for the purpose of study agree that taste is one of the factors which influence them to buy organic food product and 20% of the respondents strongly agree that taste is one of the factors which influence them to buy organic food product, 41% of respondent being neutral that taste is one of the factors which influence them to buy organic food product. It has a mean score of 3.98

- From the above table it can be analyzed that 58% of respondents considered for the purpose of the study agree that food products grown using organic technique are environmentally friendly is one of the factors which influence them to buy organic food product, 27% of the respondents strongly agree that food products grown using organic technique are environmental friendly is one of the factor which influence them to buy organic food product. 15% of respondents neither agree nor disagree that food products grown using organic technique are environmentally friendly is one of the factors which influence them to buy organic food product. It has a mean score of 4.12
- From the above table it can be analyzed that 47% of respondents considered for the purpose of the study agree that saving resource for next generation is one of the factors which influence them to buy organic food product, 32% of respondent neither agree nor disagree that saving resource for next generation is one of the factors which influence them to buy organic food product, and 20% of the respondents strongly agree that saving resource for next generation is one of the factor which influence them to buy organic food product. It has a mean score of 3.88
- From the above table it can be analyzed that 45% of respondent considered for the purpose of study neither agree nor disagree that that cost is one of the factors which influence them to buy organic food product, 12% of respondents agree that that cost is one of the factors which influence them to buy organic food product and 29% respondents considered for the purpose of the study disagree that cost is one of the factors which influence them to buy organic food product. It has a mean score of 3.10
- From the above table it can be analyzed that 42% of respondents considered for the purpose of the study agree that that availability is one of the factors which influence them to buy organic food product, 46% of respondents considered for the purpose of study neither agree nor disagree that that availability is one of the factors which influence them to buy organic food product and 10% of respondents considered for the purpose of the study disagree that availability is one of the factors which influence them to buy organic food product. It has a mean score of 3.36
- From the above table it can be analyzed that 82% of respondents considered for the purpose of the study agree that that high quality is one of the factors which influence them to buy organic food product and 10% of the respondents strongly agree that that high quality is a factor which influence them to buy organic food product and 7% of

respondents considered for the purpose of study neither agree nor disagree that high quality is one of the factors which influence them to buy organic food product. It has a mean score of 4.02

- From the above analysis it can be inferred that the mean score of the factor health consciousness is 4.08, it is found that majority (42%) of respondents agree that health consciousness is one of the factors which influence them to buy organic food product Health consciousness is a dominant motivation towards organic food consumption. People want to use organic product for better health, to avoid chemical residue, chemical fertilizer, and pesticides.
- From the above analysis it can be inferred that the mean score of the factor safe to consume is 4.12, majority (61%) of respondents agree that that organic food product is safe to consume is one of the factors which influence them to buy organic food product. As consumers believe organic food products are free from chemical fertilizer and pesticides.
- From the above analysis it can be inferred that the mean score of the factor taste is 3.98, majority (59%) of respondents agree that taste is one of the factors which influence them to buy organic food product. As consumer believe that organic food products taste better when compared to regular conventional food product.
- From the above analysis it can be inferred that the mean score of the factor environmentally friendly is 4.12, majority (58%) of respondents agree that food products grown using organic technique are environmentally friendly is one of the factors which influence them to buy organic food product. As organic food production combines best environmental practices, a high level of biodiversity and the preservation of natural resources.
- From the above analysis it can be inferred that the mean score of the factor high quality is 4.02, majority (82%) of respondents agree that that high quality of organic food product is one of the factors which influence them to buy organic food product. Due to special production methods organic food products are perceived as high quality and premium products.
- From the above analysis it can be inferred that the mean score of the factor saving resource for next generation is 3.88, majority (47%) of respondents agree that saving resource for next generation is one of the factors which influence them to buy organic food product. As organic food production combines best environmental practices, a prominent level of biodiversity and the preservation of natural resources.
- From the above analysis it can be inferred that the mean score of the factor

availability is 3.36, majority (42%) of respondents agree that that availability of organic food product is one of the factors which influence them to buy organic food product. Consumers tend to have positive view of organic food product and all major grocery stores have an organic section in the produce department.

- From the above analysis it can be inferred that the mean score of the factor cost is 3.10, majority (45%) of respondent considered for the purpose of study neither agree nor disagree that cost is one of the factors which influence them to buy organic food product. It implies that consumers are not able to decide whether cost is an influencing factor or not.

DISTRIBUTION OF RESPONDENTS BASED ON LEVEL OF SATISFACTION

Parameters	Highly dissatisfied (1)	Dissatisfied (2)	Neutral (3)	Satisfied (4)	Highly satisfied (5)	Mean score
Quality	0(0%)	0(0%)	36(19%)	132(69%)	23(12%)	3.93
Price	0(0%)	22(12%)	70(37%)	76(40%)	12(6%)	3.35
Availability and Information	0(0%)	8(4%)	85(45%)	39(20%)	59(31%)	3.78
Overall	0(0%)	14(7%)	75(39%)	63(33%)	39(20%)	3.66

Data source: Primary data

DATAANALYSIS

- It can be analyzed that 69% of respondents considered for the purpose of study are satisfied with the quality of organic food product, 12% of the respondents are highly satisfied with the quality of organic food product and 19% of respondents are neither satisfied nor dissatisfied with the quality of organic food product. It has a mean score of 3.93
- It can be analyzed that 37% of respondent considered for the purpose of study are neither satisfied nor dissatisfied with the price of organic food product, 40% of respondents are satisfied with the quality of organic food product and 12% of respondents are dissatisfied with the price of organic food product. It has a mean

score of 3.35

- It can be analyzed that 4% of respondents considered for the purpose of the study are dissatisfied with the availability and information about organic food product, 20% of respondents are satisfied with the availability and information about organic food product, 45% of respondent are neither satisfied nor dissatisfied with the availability and information about organic food product and 31% of the respondents are highly satisfied with the availability of organic food product. It has a mean score of 3.78
- It can be analyzed that 33% of respondents are satisfied with overall aspect (quality, price, availability, and information) about organic food product,

39% of respondent considered for the purpose of study is neither satisfied nor dissatisfied with overall aspect (quality, price, availability, and information) about organic food product. It has a mean score of 3.66

HYPOTHESIS TESTING

H_0 – There is no significant association between health consciousness and buying behavior of Organic Products.

H_1 – There is significant association between health consciousness and buying behavior of Organic Products.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Health consciousness * frequency	191	100.0%	0	0.0%	191	100.0%

Count

Health consciousness * frequency Crosstabulation

		Frequency					Total
		2-3 times a week	Once a week	Once a fortnight	Once a month	Occasionally	
Health consciousness	Strongly disagree	0	0	0	0	0	0
	Disagree	0	0	0	0	0	0
	Neutral	14	27	0	6	0	47
	Agree	1	4	11	48	17	81
	Strongly agree	2	12	13	25	11	63
Total		17	43	24	79	28	191

test stastics	132.4663
LOS	5.00%
DOF	8
p-value	8.71362E-25
critial value	7.961645572

The test statistics is higher than critical value we reject null hypothesis. There is significant association between health consciousness and buying behavior of Organic Products.

SUMMERY OF FINDINGS, SUGGESTION AND CONCLUSION

- It can be inferred that consumers are satisfied with quality of organic food product with a mean score of 3.93,

Organic foods have been grown or farmed without the use of artificial chemicals, hormones, antibiotics or genetically modified organisms and due to special production methods organic food products are perceived as high quality and premium products.

- It can be inferred that consumers are neutral about over all aspect of organic food products i.e., quality, price, availability and information with a mean score of 3.66.
- It can be inferred that consumers are neither satisfied nor dissatisfied with the price of organic food product with a mean score of 3.35.
- It can be inferred that consumers are dissatisfied with availability and information about organic food product with a mean score of 3.78. This could be due to the non-availability & easy accessibility, dearth of information which acts as hindrances in forming cheerful outlook which create dissatisfaction among respondents.

SUGGESTIONS

There is a need to open organic products marketing shops to spread awareness about organic products.

There is a lack of awareness about organic products among consumers. The familiarity of the organic food products among

customers depends on the promotional efforts of the marketers. The availability of organic food products needs wider advertisement. Education programme on the benefits of organic products and consumption of organic food products will make the consumers more environmentally conscious. Consumers show positive perception towards organic food products and perceive that healthier than conventional food. Organic product mislabeling, lack of knowledge regarding certification procedures holdback some consumers who are willing to buy organic food. Consumers in India need to educated to understand the difference between conventional and organic food. Consumers are not aware of the certification system as a result it is exceedingly difficult to make difference between fake and real organic food products. Marketing campaign should be conducted on regular basis to promote and create awareness regarding reliable International and national standard for organic food such as FASSI, USDA organic, and organic India. Government should play a significant role to promote organic farming and support farmers and producers by granting subsidies to them. Some amount of budget should also be allocated to R & D agencies to find out different production /cultivation technique to reduce the cost of organic food production/cultivation. Currently in India, organic producers adopted export-oriented approach to earn more profit from western country. Organic producer and government need to support the domestic

organic food market to fulfill the demand of existing domestic consumers.

CONCLUSION

The purpose of this research was to determine the consumer perception regarding organic food in Bengaluru. Understanding consumer's perception and decision making towards organically grown products it has been found out that health, safe, taste and environmental concerns were the most crucial factors deciding consumer's attitude and preference towards purchasing organic products. The study also revealed the availability also can influence consumer's preferences and choices for purchasing organic food products.

Majority consumers are aware of organic food, its benefits and problems associated with conventional food. However, this awareness was more among educated respondents. However still majority buy conventional food and not organic regularly due to some prominent reasons like – High price of goods, lack of information related from where to buy, lack of easy as well as regular availability, risk of getting cheated.

Thus, effective marketing structure and necessary support from the governmental agencies for organic food is required. It can also be done through NGOs and other Government agencies. Improvement in supply chain management and production planning will solve the issues like irregular supply, limited stocks. It is the time for

Government to take effective policy decision in association with Agriculture department to encourage farmers to produce and market organic products.

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RESEARCH

An Empirical Study On The Awareness Of Investment Pattern And Trading Application Among Students In Bangalore District

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ABSTRACT

Online trading applications have an increasing trend in present world. There are huge number of transactions on a daily basis. This study consists of awareness of trading applications among students in the Bangalore district. The main objective of the study is to analyse the students on their awareness about the trading applications and the stock markets. The data collected through questionnaire consists of 113 responses. Statistical tools like Correlation and Chi Square tests are used to analyse the data, From the data being analysed it was being found that there is a lack of saving and investment habit among the students due to the income factors. It was being found that awareness about the trading applications need to be improvised and there is need to enlighten the students about the benefits of investment. Thus, it could be concluded that the knowledge on the various investment and trading patterns could be better utilised only when such knowledge is put into action by investing certain amount in shares, mutual funds or any other investment options by the students which could help them in building saving habit and generate income for future use.

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1.1 INTRODUCTION

Investor awareness is the process in which the investors improve their knowledge about the financial markets, products, risks and concepts. Awareness of the market refers to the bird's eye view on the performance of companies listed under various stock exchanges. Each decision to take regarding the stock markets depends on the amount of knowledge and tactics the investor possess. The more the knowledge, wiser are the decisions and vice versa. Many investors does not acquire adequate knowledge about the markets and tend to lose their money. India, is a hub for the savers and for investors but, for the growth of companies as well as the economy, it is important to mobilize the funds in a right manner which reaches the required group of people. Trading can also be referred as the movement of price over a period of time in the markets.

Internet has gained a rapid momentum in recent times. The same is bought into stock market i.e. 'online trading'. Online trading in India is an internet based activity that involves direct investment by the broker in securities. There are many leading portals through which the online trading can take place. Online trading has made the path of the investors easy to invest and book profits. Awareness of these kind of applications is the need of the hour. Online trading has various options and also variety of features to analyse, predict and also show the performance of the companies on

real-time basis. It is user friendly and also easy enough to gain access and investing through minimum amounts. It also improves the decision making of the investors by providing all the necessary information about the performance of the company, past details, financial reports, fundamental analysis and technical analysis. Online trading has opened up the gate of opportunities to the customers to get a handon experience of the working of the stock markets.

Previous generations used traditional methods like investing in banks, gold to save and invest their amount so as to reserve their funds and generate a better return in the future. But over a period of time the trend has been changed where people started investing in the shares, mutual funds etc so that it generates a better return on the investments being made rather than investing in banks with a comparatively less return. Due to these factors there is a greater need for the awareness and knowledge among the students of the present generation about the investment and trading application which facilitates the investment and trading activities. Hence, the current research article focuses on the investment and trading application among the students with special reference to Bangalore District.

1.1 STATEMENT OF PROBLEM

Saving certain amount of the income earned is essential for any person so that such savings could come into hand during uncertain

situations. When there is a need for increasing the value of the money, we need to invest such amount in sources which could offer a better interest and returns in the future such as shares, stock etc. As these securities offer a better return on the invested amount it also involves added risk along with it. Hence, investing in securities like stocks and shares are best suitable for persons who take up the risk associated with the returns on the invested amount. As there is an advancement of technology in these trading process the shares and securities which were traded in the stock exchanges before could be bought and sold through the trading application using the mobile phones which makes the investor more convenient for trading their securities.

In the society as youth form a major part where majority of them are students. As students are one of the major aspects forming a part of the society there is need for creating and building knowledge about such investment options which are coming up. Hence as there is need for creating and building awareness about these investment patterns and trading applications among the students the present study aims to study such awareness among the selected population and their investment habits irrespective of the income factor of the students.

1.2 REVIEW OF LITERATURE

Dr. A Abdul Rahim (2013), the present research article studies the problems and prospects of online share trading practices in

India. The objectives of the study were to find out the benefits of online share trading, to analyse the problems faced by online share traders and to offer suggestions based on the study. The study used purposive random sampling technique to collect the data from 13 blocks of Kanyakumari district with 90 respondents. From the data being analysed the author has concluded that higher the risk, higher the potential returns; high risk also indicates that the investor stands to lose some or all his investments if prices move unfavourably and one needs to study equity markets and stocks in which investments are being made carefully before investing. **A Walia N and Kumar R (2012)**, Investors' preferences for traditional and online trading, as well as investor perceptions of online trading and current utilisation of online and offline trading, were investigated in this paper. According to this report, just 28 out of every 100 investor's trade online, raising the question of why investors failed to recognise the relevance of technology in stock trading. The study's main results are that Indian investors are more conservative, that they do not switch brokers for trading, and that net traders prefer online trading because of its transparency and complete control of the terminal. **Rebecca Davies and Stuart Cunningham (2012)**, This research report investigated investors' preferences for this work weaves together existing literature relating to eBay's activities and contributions, analysing them in a cohesive, meta-analytic manner. Two studies have been conducted to

offer a view of current internet trading practises in the United Kingdom in order to further expand knowledge in the field (UK). Data was gathered through the use of online surveys and the Repertory Grid technique for conducting interviews. This method is based on Personal Construct Psychology and allows participants to express their perceptions and preferences in their own words, or personal constructs. **PetricLoanaAncuta (2015)**, The author in his research paper “Benefits and drawbacks of online trading“, has explained that the Other elements that impact the decision to switch from conventional to online trading should be studied by investment and financial services organisations in order to lead their marketing campaigns to recruit more investors for online platforms. He also claims that when investors have a high degree of stock market understanding, as well as greater education and internet awareness, they will convert to online trading..**Dr. Sarika Srivastava (2016)**, in his article “Impact of Internet Growth on the Online Stock Trading in India”, Customers are increasingly aware of financial products and services because of the internet, which has erased geographical constraints. The main goal of this study paper is to look into the impact of the internet's growth on stock market transactions. The study also analyses the current situation of internet trading in India, as well as the extent of the Indian online trading business. **K.Alamelu, Dr.G.Indhumathi (2018)**, the present research study is on the Technical

Implications And Growth Of Online Trading With Special Reference To Madurai District. The objectives of the research were to study about the emergence and growth of online Trading in India, to analyse the Online Trading services available from different stock traders and to know the Preference of Factors influencing in Online Trading. The study was conducted in Madhurai district with a sample size of 100 respondents it was being found that with the increase in cyber education, the awareness towards online share trading has increased by leaps and bounds. **Mohamad Fazli Sabri Leila Falahati (2012)**, the present study is an estimation of the financial well being among the college students. The researchers have reported that a number of variables appear to influence financial well-being or financial satisfaction. Among the most common are demographic and socioeconomic characteristics such as gender, ethnicity, age, income, education, and marital status etc. The study also brings out the influence of financial socialisation agents, peers, parents on financial decisions and well among the students. The study brings out the findings that socialization agents particularly peer, media and the Internet have negative effect on students' financial literacy level and there is a positive influence of financial management on financial well-being which indicated that those with greater financial management and were effective in managing their finances are perceived higher level of financial well-being. **Sylvie Formánková, Oldřich Trenz,**

Oldřich Faldík, Jan Kolomazník, Jitka Sládková (2019), The paper deals with the awareness of Millennial of corporate social responsibility and their attitude to sustainable and responsible investment. The research is focused specifically on students of economically oriented higher education institutions studying in Czech Republic. The study has conducted interview from 213 respondents of Mendel University and found out that degree students are better incorporate in studies and were willing to sacrifice a part of their investment to social responsibility activities which was being used by the investment institution as a means of strategy.

Hazlina Mohd Padil1, Eley Suzana Kasim, Norhidayah Ismail, Norlaila Md Zin, & Salwa Muda (2020), The study aims to analyse the financial literacy and awareness of Investment Scams among the students of higher education. The study was being conducted in Malaysia where the researcher collected the data from 211 students through online applications and the data so being collected was being analysed using SPSS software. The study found that based on the factor analysis and confirmation on the reliability of those items in the factors, a total of five items were dropped from the factors. Thus the study concludes that Financial literacy helps students to engage in wiser decision by differentiating between the needs and desires. Lack of knowledge and awareness on investment scams may influence students to get involved in fraudulent investment schemes due to the

attractive offer in multiplying their funds with high returns in specified period. Consequently, poor investment decisions may bring students to another level of financial difficulty in long term as the impact of greed and unwanted borrowings. This paper emphasized on the factors that reflect financial literacy and awareness of investment scams among university students

1.3 INVESTMENT PATTERN AND TRADING APPLICATION

“Art is the imposing of a pattern on experience, and our aesthetic enjoyment is recognition of the pattern.” – Alfred North Whitehead.

In the recent competitive world, investment and making the money work for you has gained a lot of popularity. Inflation has curbed the returns of the normal savings account and fixed deposits and the new medium to earn money and gain profits is to invest in Shares and mutual funds. The share market and the mutual funds market have a rapid growth in the pandemic period, people urge to gain profits and these markets became one of the medium to invest and make money. There are various schemes and plans under both the markets with various risk and return factors attached.

Investing and strategizing the mobilization of personal funds into these to ensure less loss and hedge funds in a manner which overcomes the loss factor is the recent trend. The best and most popular example of

investment strategy is the 50:30:20 ratio where 50% of income goes towards the needs, 30% of the income towards the wants and remaining 20 % towards the savings and investment. Another subtle way to stay in the market and earn profits is by knowing the power of 'Compounding'. Compounding provides rapid growth in funds and excellent returns for long term investments.

To satisfy the investment goals and to achieve the ease of investing, many companies have come up with various trading applications. These applications are user friendly and tailor-made to serve the users to maximum extent in an understandable way. Trading applications have made the life of the investors easy by providing all the necessary information required before investing like the CAGR, PE ratio, Return percentage, Growth of a company, Annual returns and many more which helps the investor in decision making.

1.5 RESEARCH SCOPE

Having a well planned financial portfolio is very important for a person. The current generation students are being exposed to various sources of making investment so as to get a better and higher returns for the amount being invested. But these students are being given the theoretical knowledge and awareness about investment patterns but the study aims to find out to what extent is there an awareness and usage of trading applications by the students as the students are more compatible with the usage of modern

techniques of trading rather than the traditional methods. The study is analysing the details with regard to the investment awareness among the students based on various factors such as income, trading application usage, family support etc.

1.5 OBJECTIVES OF THE STUDY

- To study the Investment pattern as a saving habit among the students in Bangalore District.
- To identify the awareness about the various Share Trading Application among the students of Bangalore District.

1.6 NEED FOR THE STUDY

- To gauge the knowledge of the youngsters about the stock markets
- To analyse the awareness of students about various trading applications.
- To analyse the usage patterns of students of the trading applications

1.7 LIMITATIONS OF THE STUDY

- The study has collected data from Bangalore district only.
- The study mainly focused only on students in Bangalore district which limited the prospects of the study population.

1.8 RESEARCH GAP

The ability to manage the personal finance has become increasingly important today, people

should plan for long term investments. As youths, majorly students form a major part there is a great scope for them to make investment. There are various investment avenues emerging in order to attract the investors to invest with a minimal amount. With this regard, as students are a part of society who are dependent in respect of income factor on a major basis have been sidelined from making investment in various securities such as shares, mutual funds, bonds etc. even though the trading of these securities have been made on a single touch through the trading applications. Hence, the study aims to identify the gap between the investment knowledge among the students and the factors that draw them back from making investment.

1.9 HYPOTHESIS OF THE STUDY

H_0 = There is no significant association between the awareness of Trading Application and usage of Trading Application among the students in Bangalore District.

H_1 = There is a significant association between the awareness of Trading Application and Investment pattern among the students in Bangalore District.

H_0 = There is no significant relationship between the income level and the use of trading application among the students in Bangalore.

H_2 = There is a significant relationship between the income level and the use of

trading application among the students in Bangalore.

1.10 RESEARCH METHODOLOGY

The study has undertaken a research on the awareness of Investment pattern and Trading application among the students in Bangalore District. The present study has collected the data from both primary as well as secondary sources. Where primary data was being collected through various modes like personal interview and mailed questionnaire method. Along with primary sources, secondary data was also being collected from various journals, newspapers and websites. The study has collected data from over 113 students from Bangalore District belonging to various streams and specialisation. The data so being collected is analysed using Tabular representation, graphs and statistical tools like Correlation Analysis etc.

Data Analysis and Results

Table 01: Age of the respondents

	Below 15	16-20	21-25	26 and above	Total
Number of respondents	00	84	29	00	113
Total					113

Source: Primary data

Table 02: Income per month

	No Income	Less than Rs. 5,000	Rs. 5,001 – Rs. 10,000	Rs. 10,001 and above	Total
Number of respondents	90	06	09	08	113
Total					113

Source: Primary data

CORRELATIONS

		Income	Use of Trading App for Investment
Income	Pearson Correlation	1	-.246**
	Sig. (2-tailed)		.009
	N	113	113
Use of Trading App for Investment	Pearson Correlation	-.246**	1
	Sig. (2-tailed)	.009	
	N	113	113

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data

From the above results obtained it can be observed that there is a significant relationship between the dependent and independent variable i.e, there is a significant relationship between income level and use of trading application for investment purpose. Therefore it can be said that the null

hypothesis is rejected and the alternative hypothesis is accepted.

Table 03: Awareness and Usage of Trading Application among the students

	Yes	No	Total
Awareness of Trading Application	84	29	113
Use of Trading Application	32	81	113

Source: Primary data

Chi-Square tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	15.412 ^a	1	.000		
Continuity Correction ^b	13.593	1	.000		
Likelihood Ratio	23.041	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	15.276	1	.000		
N of Valid Cases	113				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.21. b. Computed only for a 2x2 table

Source: Primary data It is observed from the above analysis that there is a significant association between awareness of Trading Application and the usage of such trading application among students in Bangalore District. It means that the usage of various trading application by the is dependent upon the awareness of such trading application and hence as the significance level is less than 0.05, it can be said that the null hypothesis is rejected and H₁ is accepted.

Table 04: Source of Investment advice (1 being highest and 5 being lowest)

	01	02	03	04	05	Total
Newspaper	19	19	24	13	13	88
Financial Advisors	18	19	23	20	09	89
Internet	20	13	14	25	26	98
Certified Market Professional	19	13	19	20	19	90
Family/Friends	22	25	22	18	08	95
Magazines	25	28	12	16	02	83

Source: Primary data

From the following table it is being observed that 24 respondents have their source of investments as newspaper, 23 students gather their information from financial advisors, Internet viewers are around 26 students where they depend on the net for investment strategies, 20 respondents gather their information from certified market professionals, 25 people depend on family and friends for their source of information and 28 respondents follow financial magazines for the source of investment advice.

1.11 FINDINGS AND SUGGESTIONS

- As the study concentrated on students as the major respondents majority of the respondents i.e, 84 respondents are between 16-20 years age group and the remaining 29 respondents are between 21-25 years.
- 79.6% of the respondents have no income of their own and is dependent on their family income which acts as a drawback for the investments to be made in stocks and shares.

- From the data being collected through personal interview it was being found that 55 out of the total number of the respondents find opening a Bank Account as the most preferred option rather than investing in shares, as only 48% respondents prefer investment in shares as the best option for students.
 - 81% of the respondents have not made an investment in shares due to various reasons such as no income, lack of investment awareness, risk involved etc.
 - 74% of the total respondents are aware of the various trading applications in use. Out of which Upstox Pro, Money Control, Goww etc are few trading applications which students are largely aware of.
 - There is a significant gap between the awareness and usage of trading application among the students as nearly 74% of the respondents are aware of the various trading application but only 32% of the respondents use those trading application for investment purpose.
 - Lack of knowledge on use of trading application, lack of convenience and difficulty to trade are the reasons which were found which restrict students from using the trading application.
- Thus, from the above findings it is being suggested that there is a need for the development of awareness among the students regarding the investment

opportunities available and the most used trading application which could act as a best option for making investment in shares and develop the habit of saving among the students.

It is also being suggested that it is necessary to educate the students the various benefits and opportunities of investing in shares through the trading application.

1.12 RECOMMENDATIONS

- It is being recommended that there is a need to establish a link between the financial literacy and the financial well being among the students as there is lack of relationship between these two variables.
- As there is a need to save money for future uncertainties and requirements, it is being recommended that there is a need for students to start investing their savings money at their initial stages as it can generate a lump sum amount after few years.
- It is being recommended that as income is the major factor that drives back the students from investing in stocks and shares, there is a need to create financial independence among the students and to educate them about the various sources of investments that can generate returns in future through the small savings being made today.
- The parents should begin discussing

sound money management practices with their children at an early age and reinforce with them that financial education is a life-long pursuit so that it enhances the saving and investment habits among the students.

1.14 CONCLUSION

From the study it is being observed that though there is an awareness about the trading application there is lack of knowledge among the students about the various saving and investment opportunities available apart from having a bank account. Investing in shares could help the students in building a saving habit where there are various mobile trading application which facilitates the investors to make the investment instantly and with minimal risk. Therefore, it is being concluded that mere awareness about the investment pattern and trading application could not help, until and unless such knowledge is being into the practical use by making an investment through the use of applications meant for trading purpose. Thus there is a need for inculcating knowledge about the various investment opportunities among students in the selected sample area.

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A Study On Sustainability And Its Practices Adopted By Indian Business Organisations Towards Achieving Sustainable Developmen

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ABSTRACT

INDIA has carved a niche for itself in the global market at different level considering the fact that as a nation, it is progressing and its presence felt at all the economic corridors. There is a need to take a giant leap towards creating a sustainable environment. Achieving success at make in India product, defiantly call for creating a much-needed eco-space and an environment for developing sustainable practices. Sustainability is set to be a valuable tool in today's world for providing guidelines to adopt global and local strategies of the processes that are affecting to the environment and human survival. When we hear the word sustainability, we connect to the things like eco system protection, use of renewable resources and behaving in an environmentally conscious manner but we cannot stick sustainability to environment has the concept also encompasses with economic development and social equity. This paper is concentrating on how the companies improvising their policies and practices that is embracing sustainability reporting on a regular basis. Sustainable development implies economic growth together with the protection of environmental quality, reinforcing the other. This paper studies about the sustainable development practices prevailing in various sectors in India, the role of government, companies and other stake holders in attaining desirable standards in sustainable development, and also the efficiency of sustainability index as an effective tool for measuring sustainable development. This paper also concentrated on India's urban aspirations and challenges. It is well known that government has introduced various financial instruments that supports the sustainable economic activities and projects. But in today's competitive world companies engage incorporate social responsibility in order to build a good will with this they also use sustainability strategy that integrate the policies and practices to generate profit, build brand image and also maintain a eco-friendly chain system.

Key Words: *Sustainable development, Environmental quality, Sustainability index, Global protocol.*

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INTRODUCTION

Sustainable development defined as the “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs”. It Defines and distinguishes between sustainable development and sustainability by defining sustainability as something that has the capacity for continuance, while defines sustainability has a development which meets the basic principles of a sustainable development. The view of sustainability is a push from sustainable to more sustainable conditions. The social progress index is just one of many development indexes that has been designed in response to a growing disenchantment with economic growth as the one and only indicator and measure of development of the society. Unlike the measurement of social, cultural, human capacity development and eco system health, economic development has been reduced to be measured in simplistic quantitative terms resulting from production and service transactions. Economic value is also used as development parameter. We can tell that when economic growth becomes the primary aim of development with GDP has it measures both human wellbeing and eco system health suffer.

The interaction of the people with each other and with their natural environment resulting in positive or negative social and environmental outcome reflects the emerging

economic activity. It is therefore necessary to guide, regulate and govern this activity that has the equitable and sustainable development for all, now and in the future. The essence of the goal of sustainable production and consumption is about improving quality of life of all people without increasing the burden on environment. Because goods and services contribute to improving quality of life, business has an important role in the fulfillment of the goal. There is no substitute for sustainability as stepping towards sustainability itself is motto of environmental protection that results into social and economic development. The substitution principle in sustainability is the maxim that processes, services and products should be replaced with alternative which have a lower impact on the environment, i.e., the hazardous chemicals should be systematically substituted by less hazardous alternative.

The start up eco system will flourish only if they are nurtured in adopting themselves to compete with the global competitors. Sustainable development in India encompasses a variety of development schemes in social, clean-tech, human resource segment having caught the attention of both central and state government and also the public and private sector. The areas that the paper covers are global protocol for sustainable development, strategies adopted by Industry sector for sustainable development in India, challenges and

sectorial barriers for sustainable development.

STATEMENT OF PROBLEM

Natural resources in our country are in abundance. However, utilizing the resources needs to be prioritized in each sector. The economic maxim of minimisation of cost, maximisation of profits with optimal utilisation of resources needs to be followed in an even more orthodox manner. Sustainability is the key in achieving success at levels of manufacturing and further reaching out to the end consumers. Today, when India is progressing towards self-sufficiency, there is a greater need to ensure the right usage of terminal resources, thereby clocking self sustainable in all areas of business. This research paper aims to study the gaps which are prevailing at present and creating a void and hindrance in the growth of business units, due to lack of sustainable efforts.

RESEARCH GAP

The present study on the designated topic reflects a wide gap with respect to how a business establishment can adopt the best practices across the industries thereby progress towards sustainable development. The researcher has found that there is not much a reference towards the government companies and stakeholders to attain a desired level of sustainable development. Study of a sustainable development index as an effective tool for measuring sustainable development is

only seen as an passing reference. Hence, the study on the title is originated.

OBJECTIVE OF THE STUDY

- To study on the sustainable development practices prevailing in various industrial sectors in India.
- To study the efficiency of sustainability index has an effective tool for measuring sustainable development.
- To analyze the role of Government in attaining desirable standards in sustainable development.

SCOPE OF THE STUDY

The research paper studies about global protocol for sustainable development, strategies adopted by various industries sector for sustainable development in India, Indian agenda, challenges and sectorial barriers for sustainable development. In the study the researcher has laid hands and has done in depth study on several sustainable development practices adopted by manufacturing organization. The scope of the study is very vast considering the fact that sustainable development is a enormous field which can be an eye opener in promoting sustainable growth. Hence the researcher has narrowed down the study and has restricted the manufacturing sector alone. Few selected companies have only been chosen to restrict the work for publication of the article.

RESEARCH METHODOLOGY

Research Methodology adopted for the purpose of the study is descriptive and exploratory in nature. Past data has been rightly picked and has been widely researched to draw inferences and conclusions.

DATA COLLECTION

Data for the purpose of the study has been collected from secondary sources. Mainly from company's websites for sustainability report, articles and industrial forum for assessment of sustainability reporting practices.

OPERATIONAL DEFINITIONS

According to BBVA, “Sustainability Index are instruments to measure the responsibility of a certain company in social and environmental areas. The more they take these aspects into account as they develop their business, the higher the score they will obtain.”

According to European Environment Quality,” Properties and characteristics of the environment, either generalized or local, as they impinge on human beings and other organisms. Environmental quality is a general term which can refer to: varied characteristics such as air and water purity or pollution, noise, access to open space, and the visual effects of buildings, and the potential effects which such characteristics may have on physical and mental health (caused

by human activities).”

According to UNESCO, Sustainable development is the overarching paradigm of the United Nations. The concept of sustainable development was described by the 1987 Brundtland Commission Report as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

There are four dimensions to sustainable development – society, environment, culture and economy – which are intertwined, not separate. Sustainability is a paradigm for thinking about the future in which environmental, societal and economic considerations are balanced in the pursuit of an improved quality of life. For example, a prosperous society relies on a healthy environment to provide food and resources, safe drinking water and clean air for its citizens.

LITERATURE REVIEW

GUPTA and SINHA (1999), they have talked of additional properties of a good indicator like tarsimony, internal or external validity, understandability by various user group, inter connectivity among different sub system and gender sensitivity.

George C Varughese and Ms. Zeenat Niazi, (2000) in their paper have discussed the New Economy Paradigm to achieve the Sustainable Development Goals. They talk about the emerging view, that economic activity reflects the interaction of people with

each other and with their natural environment, resulting in positive or negative social and environmental outcomes. It is therefore, necessary to guide, regulate and govern economic activity in a way that the key objective – that of just, equitable and sustainable development for all, now and in the future, is achieved.

Hitesh Sharma, (2000) in the paper the author states the merits of achieving sustainable development by ICT-led quality education. He highlights the importance of ICT and stated that information and communication technology enable volume and variety of learning along with velocity so as to build a generation with systemic knowledge, comprehensive skills and an attitude to act at scale with speed. In striving for a sustainable society, these attributes form prerequisites in the younger generation to co-create the future we want.

Mandavkar (1999), enumerated pre criteria for indicator that are economic viability, management of technology and knowledge, equity for sustainability and long-term productivity of natural resources management program.

Shankar Venkateswaran, and Alka Upadhyay,(2002) from Tata Sustainability Group of Tata Sons have written about Responsible Consumption & Production and the role for business. They have highlighted that the essence of this sustainable development goal is about improving quality of life of all without increasing the environmental burden. They mention that

because goods and services contribute to improving quality of life, business has an important role in the fulfilment of this goal.

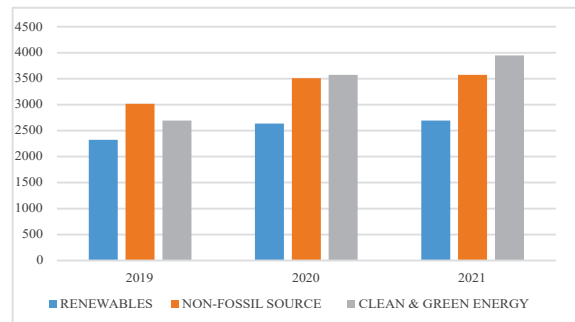
TERI PROJECT REPORT (2000), reviews the indicator prepared by the commission of sustainable development (1992) from a developing country perspective.

DATAANALYSIS

The researcher has analyzed the data with the help of reports published in the articles, conference documents and companies' websites for sustainability report.

DISCUSSION ON OBJECTIVE 01 POWER AND ENERGY SECTOR: TATA POWER ECO-FRIENDLY GENERATION CAPACITY(MW)

YEAR	RENEWABLES	NON-FOSSIL SOURCE	CLEAN & GREEN ENERGY
2019	2325	3018	3393
2020	2637	3508	3883
2021	2694	3574	3949



Note:

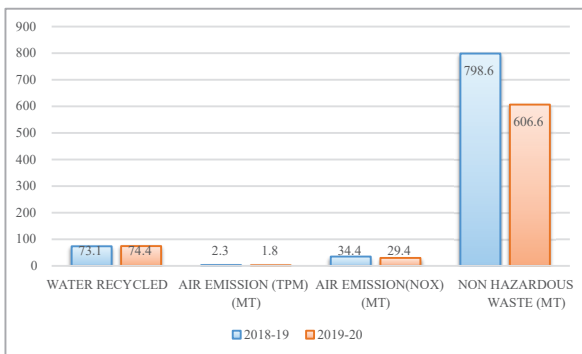
- **Renewables:** Solar and Wind capacity
- **Non-fossil source:** Renewables and Hydro
- **Clean & Green energy:** Non-fossil source and Waste Heat Recovery

Analysis and Interpretation

From the above table and graph, it can be interpreted that TATA POWER is consistently increasing the generation capacity of eco-2021 to meet the growing demand of the consumers and helping to elevate the quality of life of millions of people. At the initial growth stage, TATA POWER was focusing primarily on fossil fuel for the capacity generation. But now focusing on generation through the renewable, transmission and distribution, services and energy solutions business to address the future requirements and challenges

RELIANCE POWER

Year	Water Recycled	Air Emission (tpm) (mt)	Air Emission (nox) (mt)	Non-Hazardous Waste (mt)
2018-19	73.1	2.3	34.4	798.6
2019-20	74.4	1.8	29.4	606.6



Analysis and Interpretation

From the above table and graph, it can be interpreted that Reliance power believes in using the best technology for all its business to lessen the environmental impact. The company would be using super critical

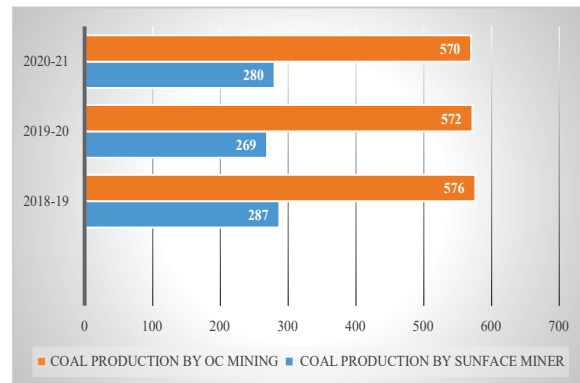
technology and ultra-technology that enables better combustion of coal and thereby reducing the emission levels apart from the Flue Gas- De - sulphuration plant that reduces Sulphur de oxide emissions in Flue Gas. The outcome of the above chat is that cleaner air, water, soil preserving marine eco system, flora and fauna, the recognized task force on climate related disclosures, delegate use of scare resources with minimal environmental impact.

MINING SECTOR - COAL INDIA

ENVIRONMENTAL SUSTAINABILITY- ECOFRIENDLY TECHNOLOGY.

Coal production by surface minor v\s open cast mining (in MT)

YEAR	COAL PRODUCTION BY SUNFACE MINER	COAL PRODUCTION BY OC MINING
2018-19	287	576
2019-20	269	572
2020-21	280	570



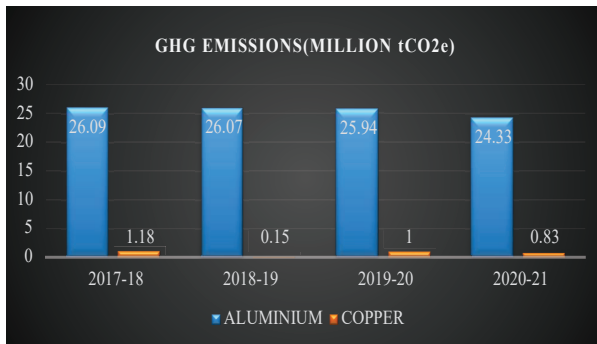
Analysis and Interpretation

CIL believes in working in line with the principles of sustainability while striving to achieve long term business success on viable

basis. CIL's sustainability policy lies emphasizes and responsibility on environmental, economic and socio-cultural sustainability. Efforts are undertaken to reduce the environmental impact of mining and minimize the footprint of the activities throughout the mining cycle including working to reclaim post mining eco system. The above graph shows the capacity of production increasing by using eco-friendly technology year by year.

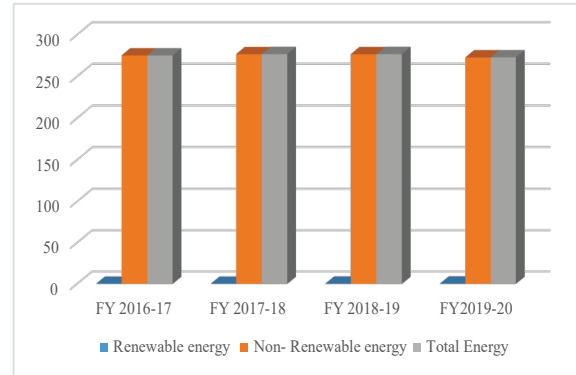
HINDALCO SUSTAINABILITY REPORT

YEAR	ALUMINIUM	COPPER
2017-18	26.09	1.18
2018-19	26.07	0.15
2019-20	25.94	1.00
2020-21	24.33	0.83



MINING SECTOR – HINDALCO

PARAMETER (million GJ)	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Renewable energy	0	0.01	0.14	0.23
Non-Renewable energy	275.17	276.77	276.64	272.73
Total Energy	275.17	276.78	276.78	272.96



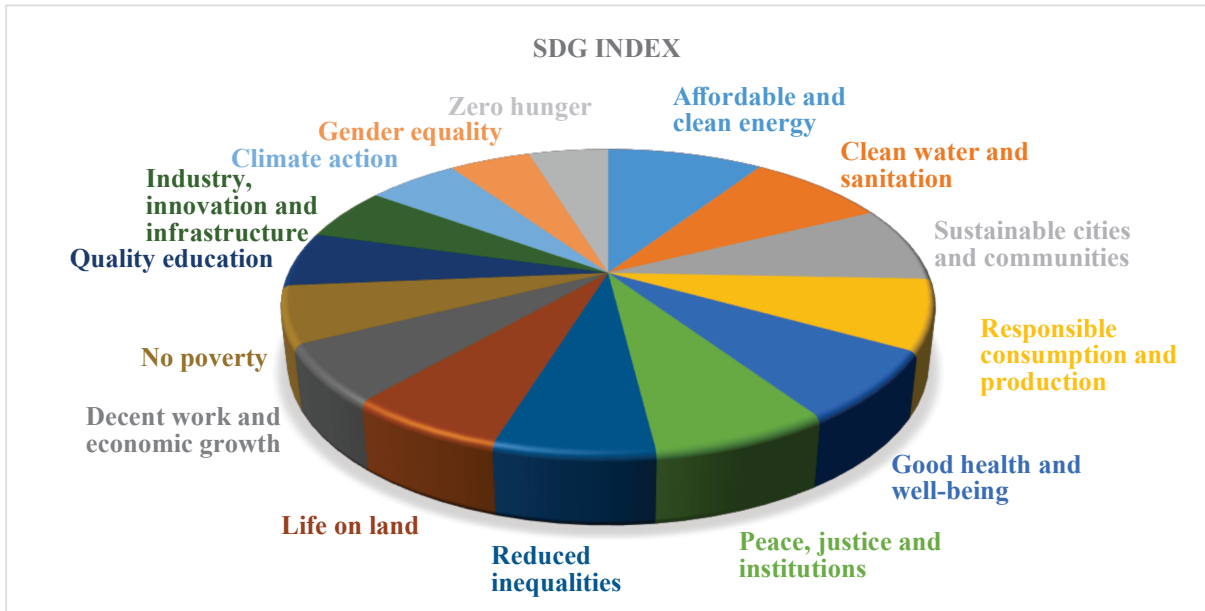
The energy consumption of Hindalco needs is mostly met through fossil fuels. They consume renewable power from capital solar hydro power plants in addition to third party purchases. The energy consumption details represented in below diagram.

The above graph shows the energy consumption of renewable resources is increasing year by year and non-renewable resources consumption is going down.

DISCUSSION ON OBJECTIVE 02 and 03 SUSTANABLITY DEVELOPMENT GOAL INDEX INDIA 2021

The sustainable development goal index has played a vital role in driving the SDG agenda in India. Of the various targets set to be achieved by 2023, the country has performed well in providing affordable energy to citizens. This particular goal achieved a SDG index of 92 for the current year 2021.

CHARACTERISTIC	SDG INDEX
Affordable and clean energy	92
Clean water and sanitation	83
Sustainable cities and communities	79
Responsible consumption and production	74
Good health and well-being	74
Peace, justice and institutions	74
Reduced inequalities	67
Life on land	66
Decent work and economic growth	61
No poverty	60
Quality education	57
Industry, innovation and infrastructure	55
Climate action	54
Gender equality	48
Zero hunger	47



TOP 5 MOST SUSTAINABLE COMPANIES IN 2022

Environmentally friendly companies not only produce products that are sustainable and sourced ethically, but they also follow environmentally friendly manufacturing and production methods. Environmentally friendly companies are also working to fully change the landscape of businesses' involvement and responsibility in environmental protection. Here some of the top five companies which recognized for sustainable development.

1. Schneider electric

Schneider Electric, has been recognized as one of the world's most eco-friendly companies. The European energy and automation MNC were recognized for its expedient and continuous commitment to ESG – environmental, social, and governance challenges, rising from 29th place in 2020.

2. Orsted

Orsted was named the world's second most sustainable firm after pledging to battle climate change with renewable energy. Despite falling from first place overall in 2020, the Danish power company remains the world's most sustainable energy firm, a designation it has held for three years.

3. Nvidia

Nvidia is one of the world's largest manufacturers of semiconductor chips. It is one of the world's leading designers of graphics processing units (GPUs) and system on chip units (SOCs) for the gaming, mobile, and automotive industries.

4. Neste

Neste is a global leader in sustainability, renowned for its renewable diesel, sustainable aviation fuel, chemical recycling to reduce plastic waste, and innovation in refining raw materials into renewable fuels. The Finnish firm went from third to fourth place in a year, but it is still on the Corporate Knights Global 100 Index for the 15th year in a row, which is far longer than any other global energy firm.

5. Stantec

Stantec is not just one of the world's most environmentally friendly companies, but it also leads the way in North America. Half of the company's overall score came from clean earnings and clean investment, which are commodities and services that have a proven environmental and social impact. Stantec President and CEO Gord Johnston stated that their outstanding track record on sustainability is the product of their

people's profound commitment and excellent leadership across their worldwide operation. Their teams are working to improve sustainability in their own operations, as well as assisting clients in setting and achieving their sustainability objectives.

PROPOSED INITIATIVES

Proposed Initiatives in adoption of Sustainability Reporting norms:

- Recognitions of sustainable development initiatives through Award functions will enhance public image of companies and motivate them to do more in this regard
- Thought leadership papers published and sustainability reporting workshops organized by industry bodies like CII and TERI plays a role in reducing the ignorance about the subject and encourage more participation. There are also industry conferences that provide a platform for partnership or innovative thoughts.
- Analytics combined with IT solutions facilitate easy measurement and monitoring of sustainability initiatives, making it easier for management to track and realize the benefits.

- Initiatives to inform businesses on the advantages of earning additional revenue from carbon credit trading will help increase the number of businesses running sustainable operations.

LIMITATIONS OF THE STUDY

- The findings are based on secondary data only.
- This paper is interpreted from the perception of the author.
- Due to time constraint, the study was limited only to few manufacturing units.

CONCLUSION

Its long way to go for Indian companies to adopt sustainable development practices as per global norms. Companies like Tata, Reliance, ITC and Infosys have adopted these practices at a larger scale and paved a path for other businesses to follow. As per GRI's year in review 2020-2021, 92% of GRI sustainability reports from India contain complete information relevant to the reporting organization. The initiatives adopted by the industry organizations and the government are bound to provide an impetus to the trend of adopting business sustainability as a competitive advantage. A sincere effort by Indian organisations would take us a long way in terms of creating room for innovation and sustainable development.

SCOPE FOR FURTHER RESEARCH

In this study researcher has narrowed down few sustainable development practices in several business organizations which will eventually benefit the organization in long run if adopted in an orthodox manner.

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1. Passion:

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

2. Breakthrough Thinking:

We foster academic rigour in an environment conducive to innovation.

3. Result oriented, Process driven Work Ethic:

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

4. We Link and Care:

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



Quality policY

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

We shall endeavor to do this by:

- Providing the best learning resources.
- Making the environment conducive for students to develop their creativity, Leadership skills and ability to learn continuously.

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



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