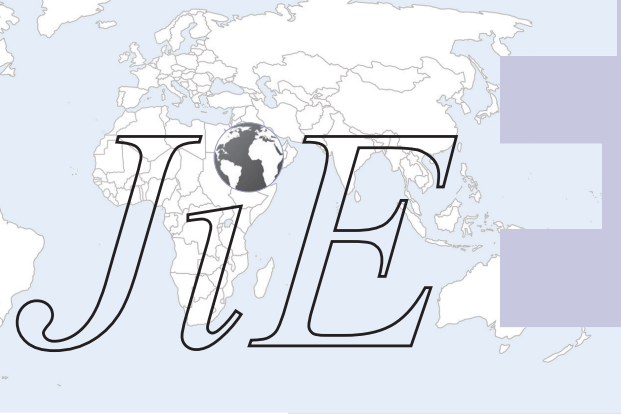

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Contents

From the Editor's Desk...

It gives me immense pleasure to release the latest edition of Journal of International Economics. As this latest edition goes into print, let's delve into *The World Economic Forum's Global Risks Report 2024 which says that the biggest short-term risk stems from misinformation and disinformation. Two-thirds of global experts anticipate a multipolar or fragmented order to take shape over the next decade. The cascading shocks that have beset the world in recent years are proving intractable. War and conflict, polarized politics, a continuing cost-of-living crisis and the ever-increasing impacts of a changing climate are destabilizing the global order. The growing concern about misinformation and disinformation is in large part driven by the potential for AI, in the hands of bad actors, to flood global information systems with false narratives.

The report identifies the Top 10 Global Risks within the 2 years to be misinformation and disinformation, extreme changes in weather, societal polarization, cyber insecurity, armed conflict, lack of economic opportunity, inflation, involuntary migration, economic downturn and pollution. It also states that the Top 10 Global Risks within 10 years would be extreme weather changes, critical changes to the Earth systems, bio-diversity loss, collapse of the ecosystem, shortages in natural resources, misinformation and disinformation, conflicting outcomes of AI technologies, involuntary migration, cyber insecurity, societal polarization and pollution. Over the next two years, the report states, "foreign and domestic actors alike will leverage misinformation and disinformation to widen societal and political divides". This risk is enhanced by many elections in the near future, with more than 3 billion people due to head to the polls in 2024 and 2025, including in major economies like the United States, India and the United Kingdom. The report suggests that the spread of misinformation and disinformation around the globe could result in civil unrest, but could also drive government-driven censorship, domestic propaganda and controls on the free flow of information.

This issue consists of articles illustrating on remarkable issues such as Assessing the Performance of various Equity Schemes: A Study on Nippon Mutual Fund; The Impact of Port Infrastructure on International Trade-A Study on Indian Ports; A Study On Women participation Informal And Informal Sector; Intertemporal Sustainability of India's Current Account Balance Under the New Policy Regime and a case study on Paytm's Crisis Management: Regulatory Compliance and Market Impact.

I am sure this issue will be a valuable addition for our readers. We request our subscribers and readers to contribute articles, case studies and book reviews.

Dr. K. Bhavana Raj

** World Economic Forum's Global Risks Report 2024; The Global Risks Report is an annual study published by the World Economic Forum ahead of the Forum's Annual Meeting in Davos, Switzerland.*

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Assessing the Performance of Various Equity Schemes: A Study of the Nippon Mutual Fund

Ajay Prasad Tiwari*

Abstract

As money makes money in the world. Every segment of the population curious and run after the money in thriving it in a short period of time. Mutual funds are one of the sources where the people can trust and hope for their lives. It pools of money directed by Experts or Fund Manager and put the money in the market for the best return. It is a trust that collects money from a various number of investors who share a common investment objective and invests the same in equities, bonds, money market instruments and/or other securities. The focus of this study to evaluate the performance of various equity schemes under the Nippon Mutual Fund. In addition, this study also helped to understand the performance of the schemes and compare them to the industry average. The Sharpie ratio, Treynor ratio and Jensen Alpha are the main tools used to calculate the performance of certain specific mutual funds. It focuses on the returns generated by mutual funds and analysing them with the help of the ratios. This analysis is used by many individuals and institutions to examine and get a better insights of the fund's performance. The analysis is limited to secondary data only. The tools used to analyse have helped to understand the fund's performance. The study concluded that only one fund has shown a significant return on investment when compared to industry average.

Keywords:

Introduction

Mutual funds are investment pools that are expertly managed by finance experts and fund managers. The incomes and earnings from various sources, investments are dispersed among the participants proportionately by determining the graphic's "Net Asset Value," or NAV, which is

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determined after subtracting any necessary expenses and taxes. The system developed for purchasing stocks, bonds, money market instruments, and/or other securities with a pooled investment amount from several people who have planned for investment intentions support extended by the trust.

For investors who want to grow their money but lack of time or resources to conduct market research, mutual funds are the ideal choice. The money received is invested in mutual funds by qualified fund managers in line with the program's stated objective. In return, the fund house charges a small fee that is deducted from the investment. The fees that mutual funds may charge are capped by the Securities and Exchange Board of India (SEBI). India has one of the greatest rates of savings worldwide. Due to their propensity for wealth creation, Indian investors now need to take mutual funds into consideration rather than the traditional favourites, bank FDs and gold. Unfortunately, due to ignorance, mutual funds are losing favour as an investment alternative. Investment choices for a variety of financial circumstances are provided by mutual funds. Products required to achieve various investing objectives – such as covering post-retirement costs, financing a child's schooling or marriage, purchasing a property, etc. – also vary. According to the needs of various investor types, the mutual fund industry of India offers a broad selection of programs. Mutual funds offer normal investors an excellent means of capitalizing on capital market uptrends. Investment in mutual funds has benefits, but picking the proper fund can be difficult. Because of this, before making a choice, investors should do a thorough analysis of the fund, weigh the risk against the reward, and consider their time horizon. A certified financial advisor is another option available to them. Additionally, to maximize their profits on mutual fund investments, investors ought to diversify among a range of fund types, including debt, gold, and equities.

Objectives

- To examine the impact performance of equity mutual fund.
- To evaluate the trends in mutual funds.
- To assess the challenges and return factor.

Scope

The scope of the study is restricted to certain mutual funds from a specific mutual fund company in the mutual industry. I have analysed the funds only in the equity segment and have used Sharpie Ratio, Treynor Ratio and Jensen Alpha to evaluate their performance. But apart from them there are various other schemes in the mutual fund industry like Debt funds, Hybrid Funds, Index Funds etc.

Data and Methodology

The study is based on secondary data. The sources of data are collected from the based on the secondary data. Data are collected through online sources like NSE, BSE, and Money control, ET Money, Fincash and Morning Star etc. 5. Data collection Secondary data has been used for this research, collected from various research papers. The study considers the period of 5 years from 2016 to 2020.

Sample Design The research is based on the descriptive type of research design used in this research project. 4. Sources of Data The sources of data are collected from the based on the secondary data. Data are collected through online sources like NSE, BSE, and Money control, ET Money, Fincash and Morning Star etc. 5. Data collection Secondary data has been used for this research, collected from various research papers. The study considers the period of 5 years from 2016 to 2020.

Tools Used for Analysis

Sharpe Ratio

In the world of finance, one often used measure to evaluate an investment's performance in relation to risk is the Sharpe ratio. The economics Nobel laureate William F. Sharpe created it. This ratio is especially useful for investors who want to know how well an investment has performed in relation to the amount of risk it carries. The Sharpe ratio is computed by deducting the investment's return from the risk-free rate of return, which is often estimated by the yield on Treasury bills. Then, the difference is divided by the standard deviation of the investment's returns. It can be stated mathematically as:

Sharpe Ratio = (Rp – Rf) / StdDev

Where:

- Rp = Expected portfolio return
- Rf = Risk-free rate of return
- StdDev = Standard deviation of portfolio return (or, volatility)

Sharpe Ratio Grading Thresholds:

- Less than 1: Bad
- 1 – 1.99: Adequate/good
- 2 – 2.99: Very good
- Greater than 3: Excellent

Treynor Ratio

To assess portfolio performance after accounting for systematic risk, one indicator to employ is the Treynor Ratio. The portfolio's beta, or measure of systematic risk, is included in the Treynor Ratio, unlike the Sharpe Ratio, which just takes the return in relation to the portfolio's standard deviation.

The ratio of return divided by risk is used to compute both ratios, which are used to analyse the risk and return profile of a portfolio. Honouring American economist Jack Treynor, who was instrumental in the creation of the Capital Asset Pricing Model (CAPM), is the Treynor Ratio namesake. The Formula for the Treynor Ratio is:

The Treynor Ratio is calculated by dividing the excess return of a portfolio over the risk-free rate by the portfolio's beta, which measures systematic risk. The formula for the Treynor Ratio is as follows:

Treynor Ratio = rp−rf/ βp

where:

rp = Portfolio return

rf = Risk-free rate

βp = Beta of the portfolio

Jensen Alpha

The excess return of a mutual fund or portfolio relative to its expected return, considering its level of risk, is assessed using Jensen's alpha, a risk-adjusted performance indicator. The economist who created it, Michael Jensen, is honoured with the name. Jensen Alpha's formula is as follows:

Alpha = R(p) - (R(f) + B x (R(m) - R(f)))

R(p) = the actual return of the portfolio or investment

R(m) = the realized return of the appropriate market index

R(f) = the risk-free rate of return for the time period

B = the beta of the portfolio of investment with respect to the chosen market index

Limitations of the Study

- The study in limited to certain selected mutual funds.
- The study is limited to only the Equity Funds.
- The limited information is collected in the form of secondary data available.
- The analysis is only restricted to certain ratios.

Advantages of Investing in Mutual Funds

Professional Management

It could be the case that investors do not have the options – money, time, or experience – to do their homework and purchase particular stocks or bonds. Managing mutual funds is the responsibility of full-time, qualified money managers who possess the tools, know-how, and resources needed to buy, sell, and manage investments. An investment manager monitors investments closely and rebalances the portfolio as needed to meet the plan's objectives. Qualified fund managers offer one of the biggest advantages of investing in mutual funds: portfolio management.

Risk Diversification

Investing in mutual funds is a simple approach to spread the risk of your assets by distributing them among a variety of securities and asset classes, including gold, debt, and equity. This way, you won't put all of your eggs in one basket. This works well when there are market challenges for an underlying securities of a particular mutual fund scheme. The risk attached to one asset class is offset by the others when there is diversity. Certain investments in the portfolio may not be affected by a decline in value, and they may even rise in value. To put it another way, even if one element of your portfolio has significant volatility, you won't lose out on the full value of your investment.

Affordability & Convenience (Invest Small Amounts)

Acquiring each individual security that a single mutual fund holds directly may prove to be more costly for numerous investors. Most mutual funds, on the other hand, have lower initial investment minimums.

Liquidity

Open-ended mutual fund schemes allow you to readily redeem (liquidate) units to satisfy your needs for quick access to money on any business day that the stock market and/or banks are open. Depending on the type of plan, for example, liquid funds and overnight funds, the redemption amount is paid out the following business day, and the redemption amount is credited in your bank account between one to four days of the redemption.

Low Cost

A significant advantage of a mutual funds is the cost of the fund in low when compared to buying a single stock. Mutual funds schemes have a low expense ratio which includes the expense ratio of the fund which can be the administration, management, advertising related expenses etc.

Well-Regulated

The Securities and Exchange Board of India (SEBI), which oversees the

capital markets, regulates mutual funds in accordance with the SEBI (Mutual Funds) Regulations, 1996. To maintain investor protection, transparency, and a suitable framework for mitigating risk, SEBI has established strict rules and regulations. These include fair valuation standards.

Tax Benefits

Under section 80C of the Income Tax Act, 1961 according to the old tax regime, investments made up to ₹1,50,000 in ELSS are eligible for tax benefits. Long-term holdings in mutual funds result in tax savings.

Disadvantages of Investing in Mutual Funds

Below are the drawbacks of mutual funds that every potential investor should be aware of:

Entry or Exit Load: Certain mutual funds impose entry or exit loads, or sometimes both. These charges are typically applied to cover operational expenses and staff salaries. Entry or exit loads can be as high as 3% of the net investment amount, although they generally hover around 1%. From August 2009, however, SEBI has done away with this practice of charging entry load for mutual funds.

While these loads can cut into your profits, funds with higher loads often offer superior returns compared to average mutual funds. Therefore, it's essential to assess the fund's historical performance before deciding.

Diversification: May Impact Profits Diversification, while effective in reducing risk, can also limit profit potential. This effect is particularly noticeable in balanced or hybrid mutual funds, which invest in both equity and debt instruments. Profits in one asset class may be offset by losses in another.

Market Volatility: Although long-term investors typically avoid significant losses, investing during a downturn can result in capital losses. Mutual fund returns are not guaranteed, so it's prudent to have a basic understanding of the economy and fund performance before investing.

Liquidity: Certain mutual fund schemes, such as fixed maturity and ELSS schemes, come with lock-in periods. ELSS typically has a lock-in period of three years, while fixed maturity plans' lock-in periods depend on the underlying instrument's maturity. For example, if a plan invests in a bond with a five-year maturity, you cannot withdraw units before five years.

Capital Gains Tax: Both short-term and long-term capital gains from mutual funds are subject to taxation. Profits withdrawn within one year of investment may incur a tax rate of 15% to 20%, while those withdrawn after a year may be taxed at a rate of 10%. Understanding concepts like indexation can help investors calculate taxes more efficiently.

Background of Nippon Mutual Fund

In India, Nippon Mutual Fund ranks eighth in terms of asset size among mutual fund houses. As of the June 2020 quarter, the fund company managed assets under management (AUM) of Rs 1.34 lakh crore. From its March 2020 quarterly number, the fund house's asset size dropped by 2.90%. Over eleven years have passed since the fund house opened. AMC announced that the schemes of Nippon Mutual Funds had Assets Under Management (AMU) of Rs. 2.6 lakh crores as of March 31, 2023.

The mutual fund division of Nippon Bank Limited, the third-biggest private bank in India, is called Nippon Mutual Fund. The fund house is owned by Nippon Bank Limited to the tune of 74.99%, with Schroder Singapore Holdings Private Limited controlling the remaining 25%. The three guiding concepts of the fund house – long-term wealth development, customer view, and long-term relationship – are credited with its success. Nippon Mutual Fund places a high priority on planning and risk management in its business philosophy. By adopting a comprehensive perspective, it concentrates on the underlying desire, aspiration, or objective of investors as opposed to just investing their surpluses. With more than 60 lac active investor accounts across many schemes, it is present in more than 100 cities across the nation.

About 56 programs are available to investors through Nippon Mutual Fund. It provides 13 schemes for equities, 19 schemes for debt, 20 schemes for hybrids, 4 ETFs, Gold, and Fund of Funds schemes. Among its roster of popular equity schemes are the Nippon Blue-chip Fund, Nippon Long Term Equity Fund, Nippon Small Cap Fund, and so forth. Nippon Mutual Fund provides quality debt funds as well. Nippon Credit Risk Fund, Nippon Banking & PSU Debt Fund, Nippon Strategic Bond Fund, and others are a few of the well-known debt programs. One well-known brand in the hybrid scheme market is Nippon Arbitrage Fund. For a one-year period, the approximate percentage of schemes that outperformed the benchmark in all of its categories was 68%. The fund house's mission is to judiciously manage the capital of its investors while taking various investment risks into account.

With Nippon Mutual Fund, the mission is to empower, enable, and support people to feel confident about a better, more affluent future. With its rich investment philosophy, the committed fund house encourages investors to view the mutual fund category from a long-term perspective and to focus on forming meaningful connections rather than completing transactions.

Nippon Mutual Fund

Sponsor	Trust	AMC	Custodian and Fund Accountant	RTA	Auditor
NIL	Nippon Mutual Fund Trust	Nippon Mutual Fund Asset Management Limited	NIFT PSU Bank	Media and Entertain-ment	Walker Chandiok & Co LLP

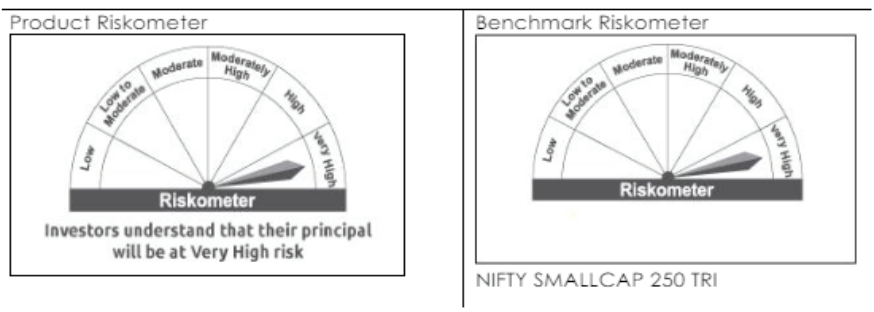
Review of Literature

Investigated the effects of Treynor's Ratio and Sharpe Ratio on a particular mutual fund scheme. This research project focuses on the performance of a specific mutual fund schemes, that a basic market index which offers comparative monthly liquidity, returns, systematic & unsystematic risk, and comprehensive fund analysis using a distinctive reference of Treynor's ratio and Sharpe ratio can accurately compare the risk profile of every single category of mutual funds. **(**Dr Sandeep Bansal, Deepak Garg, and Sanjeev K. Saini 2012). has studied Emerging Scenario of Mutual Funds in India: An Analytical Study of Tax Funds. Selected equity funds from mutual funds in the public and private sectors serve as the foundation for this analysis. Corporate and Institutional contributions amount to a substantial Rs. 2,87,108.01 crore, or 56.55% of the total net assets in the mutual fund sector, although making up only 1.16% of all client accounts in the business. Moreover, it was discovered that MFs did not favour the debt segment by Dr Yogesh Kumar Mehta (Feb 2012)Aimed to directly compare equity investment and mutual fund investment in a study titled "A Comparative Study of Mutual Fund Investment vs. Equity Investment of Indian Individual Investors." utilizing random sampling, a survey was conducted utilizing primary and secondary data, with a sample size of 100 respondents. The results showed that mutual funds are a better option than stocks, and that the participants lacked education Pasalkar, N.V. (2015). Investigated "Investor behaviour toward equity and mutual funds." The purpose of this study was to analyse investor behaviour in terms of avenue selection for equity and mutual fund investments. Non-probability convenience sampling was used for the survey, and a sample size of 75 people was chosen for further study. According to the study's findings, 60% of investors lack rationality. The disposition effect affects 60% of the respondents. Among investors, 40% lean toward conservatism. Cognitive dissonance affects sixty percent of investors. Sixty percent of investors have no regrets. R. Jayaraman, Dr G. Vasanthi, M.S. Ramaratnam (2014).

Results and Discussions

Nippon Small Cap Fund

Risk O Meter



Investment Objective

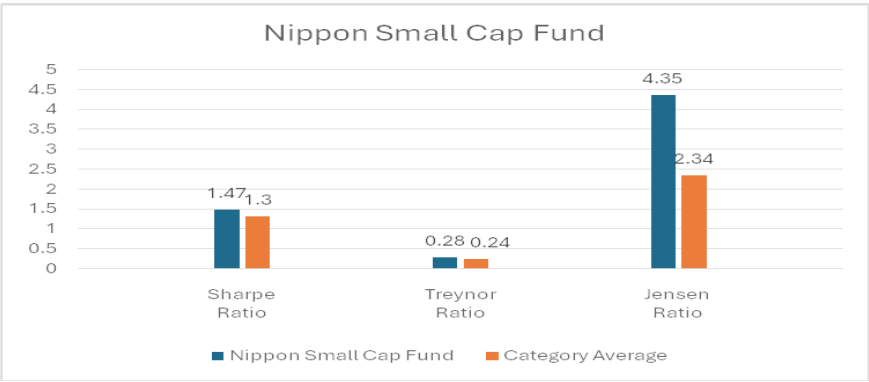
To generate long-term capital appreciation from a diversified portfolio of predominantly equity & equity related instruments of small cap companies.

Asset Allocation

Instruments	Indicative Allocations (% of total assets)		Risk Profile
	Minimum	Maximum	High / Moderate / Low
Equity and equity related instruments of small cap companies	65	100	High
Equity and equity related instruments of non-small cap companies	0	35	High
Debt* & money market instruments	0	35	Low to moderate
Units issued by REITs & InvITs	0	10	Moderate to High

Performance Indicators

	Sharpe Ratio	Treynor Ratio	Jensen Ratio
Nippon Small Cap Fund	1.47	0.28	4.35
Category Average	1.3	0.24	2.34

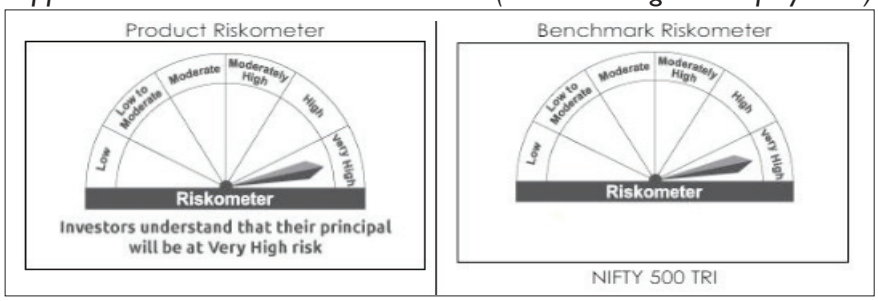


Analysis

From the above we can understand that the Nippon Small Cap Fund is an equity scheme which has a very high risk according to the Risk O Meter and the fund should invest 65% of AUM (Assets under management) to small cap companies. These types of mutual funds can be volatile and have the potential to earn higher returns as well as incur huge losses. The above mutual fund has been giving good returns over the past years and by calculating the ratios of this mutual fund we understood that the Sharpie ratio of the fund is above 1 which is considered to be good and is greater than the category average meaning that the funds returns are justified for the risk taken on and that the returns are more than the risk-free

return. The Treynor ratio of the fund is 0,28 and suggest that the fund has provided higher returns per unit of Beta(systematic risk) when compared to the category which is 0.24. The Jensen Alpha indicates that the fund has outperformed category average and that it has excess returns relative to the expected returns.

Nippon ELSS Tax Saver Direct Plan Growth (NIPPON Long Term Equity Fund)



Investment Objective

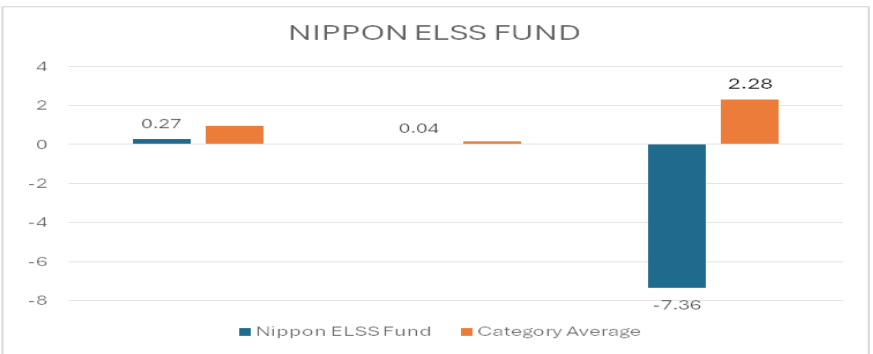
The investment objective of the Scheme is to generate income and long-term capital appreciation from a diversified portfolio of predominantly equity and equity-related Securities. However, there can be no assurance that the investment objective of the Scheme will be achieved.

Asset Allocation

Instruments	Indicative Allocation (% of net assets)		Risk Profile
	Minimum	Maximum	Low / Moderate / High
Equity and equity-related securities*#	80%	100%	High
Debt* & money market instruments^	0%	20%	Low to moderate

Performance Indicators

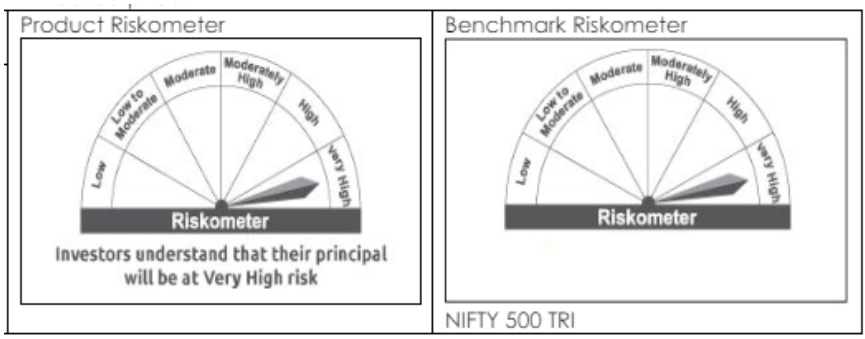
	Sharpe Ratio	Treynor Ratio	Jensen Ratio
Nippon ELSS Fund	0.27	0.04	-7.36
Category Average	0.95	0.15	2.28



Analysis

The Nippon ELSS fund is an open-ended equity linked savings scheme with a statutory lock in period of 3 years and has a tax benefit. The fund's AUM of 80% is invested in Equity and Equity related securities and has a very high risk. The Sharpie ratio of 0.27 of the fund's indicates that the fund is performing bad, and it has provided lower risk adjusted returns compared to its category average of 0.95. The Treynor ratio of the fund is 0.04 which is lower than the category average of 0.15 when compared to the returns per unit of systematic risk. The Jensen ratio is in the negative of -7.36 whereas the category 2.28 indicating a poor performance of the fund.

Nippon Focused 25 Direct Plan Growth
Risk O Meter



Investment Objective

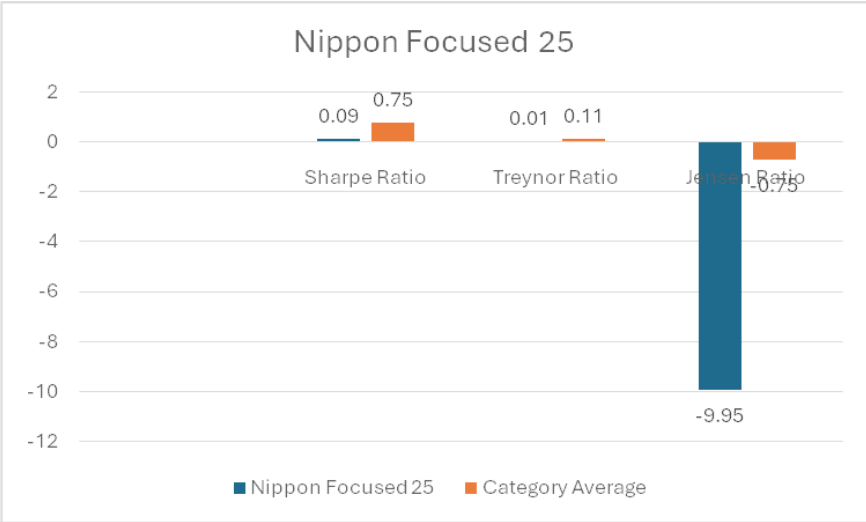
To generate long term capital appreciation by investing in a concentrated portfolio of equity & equity related instruments of up to 25 companies.

Asset Allocation

Instruments	Indicative Allocations (% of total assets)		Risk Profile
	Minimum	Maximum	High / Moderate / Low
Equity and equity-related instruments (of not exceeding 25 companies)#	65	100	High
Debt & money market instruments*#	0	35	Low to moderate
Units issued by REITs & InvITs	0	10	Moderate to High

Performance Indicators

	Sharpe Ratio	Treynor Ratio	Jensen Ratio
Nippon Focused 25	0.09	0.01	-9.95
Category Average	0.75	0.11	-0.75

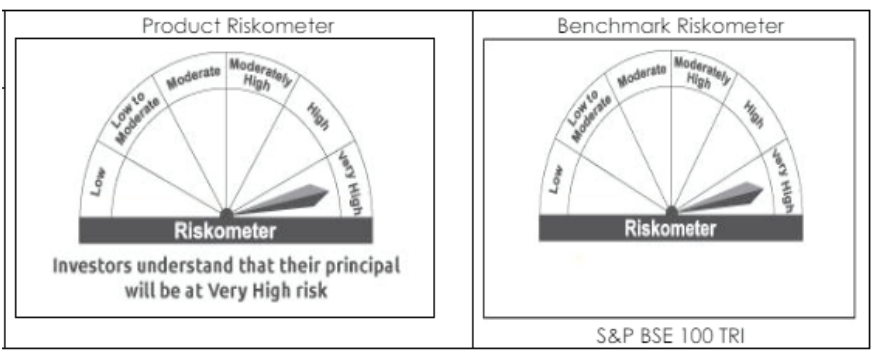


Analysis

The Nippon Focused 25 is an open-ended equity scheme which has a very high risk and 65% of its AUM (Assets under management) should be invested in Equity and Equity Related instruments not exceedingly more than 25 companies. The Sharpie Ratio of the fund is 0.09 and less than the category average which is 0.75 suggesting that it has provided lower risk adjusted returns which means it could not get the required returns for the risk taken on. The Treynor Ratio of the fund 0.01 is less than the category average of 0.11 indicating that it has provided lower returns per unit of systematic risk compared to the category average. The Jensen Alpha calculates the excess return, and the fund has a negative return of -9.95. The fund has underperformed by a large margin when compared to the category average.

Nippon BlueChip Fund Direct Plan Growth

Risk O Meter



Investment Objective

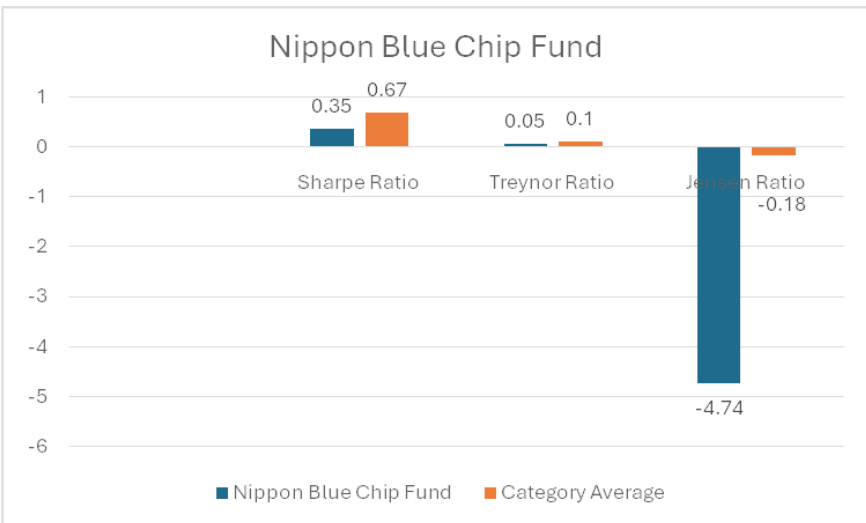
To achieve long term capital appreciation by investing in a diversified portfolio predominantly consisting of equity and equity related securities of Large Cap companies including derivatives.

Asset Allocation

Instruments	Indicative Allocations (% of total assets)		Risk Profile
	Minimum	Maximum	High / Moderate / Low
Equity and equity-related instruments of large cap companies#	80	100	High
Equity and equity-related instruments of other companies#	0	20	High
Debt & money market instruments*#	0	20	Low to moderate
Units issued by REITs & InvITs	0	10	Moderate to High

Performance Indicators

	Sharpe Ratio	Treynor Ratio	Jensen Ratio
Nippon Blue Chip Fund	0.35	0.05	-4.74
Category Average	0.67	0.1	-0.18



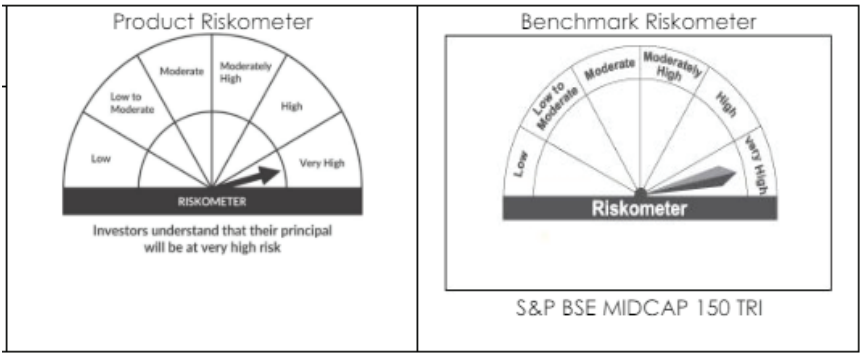
Analysis

The Nippon Blue Fund is an equity scheme which mainly investing in large cap companies and is a very high scheme but not as volatile as the Mid Cap and Small Cap and can be a good capital appreciation scheme.

The sharpie ratio of fund is 0.35 and has provided a lower risk adjusted returns when compared to the category average which has a ratio of 0.67 which indicates inferior returns for the level of risk. The Treynor ratio of 0.05 suggests that the fund has given lower returns per unit of systematic risk when compared to the category average of 0.10. The Jensen ratio of the fund suggests that the fund which is -4.74 has drastically underperformed the category average which is -0.18.

Nippon Midcap Fund

Risk O Meter



Investment Objective

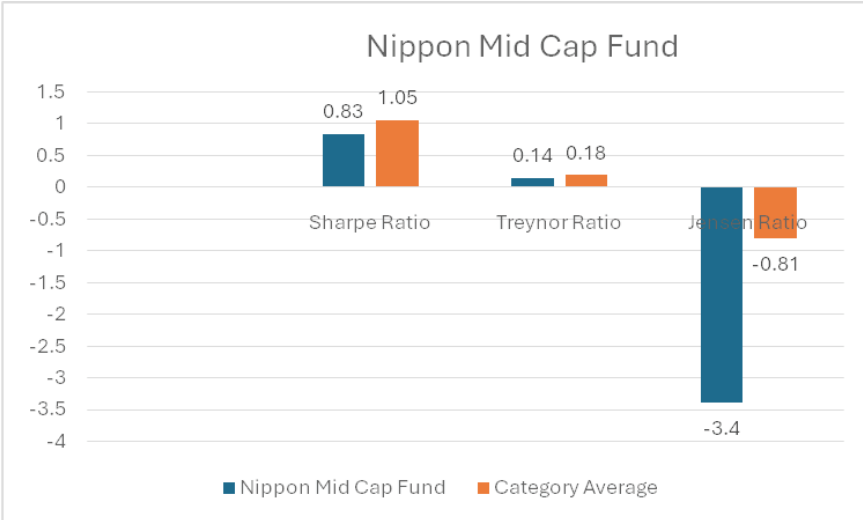
To achieve long term capital appreciation by investing predominantly in equity & equity related instruments of Mid Cap companies.

Asset Allocation

Instruments	Indicative Allocations (% of total assets)		Risk Profile
	Minimum	Maximum	High / Moderate / Low
Equity and equity-related instruments of mid-cap companies#	65	100	High
Equity and equity-related instruments of non-mid-cap companies#	0	35	High
Debt* & money market instruments#	0	35	Low to moderate
Units issued by REITs & InvITs	0	10	Moderate to High

Performance Indicators

	Sharpe Ratio	Treynor Ratio	Jensen Ratio
Nippon Mid Cap Fund	0.83	0.14	-3.4
Category Average	1.05	0.18	-0.81



Analysis

The Nippon Mid Cap is an equity scheme which mainly invests in the mid cap companies and according to the risk o meter the risk is very high. The scheme must invest 65% of its AUM in Equity and Equity related instruments of Mid Cap Companies. The Sharpie Ratio of the fund is 0.83 but it is still considered bad because it is less than 1 and has provided lower risk adjusted returns. The Treynor ratio of 0.14 of the funds indicates that it has provided lower returns per unit of systematic risk compared to the category average of 0.18. The Jensen Alpha suggest that the fund has underperformed by a significant margin at -3.4 when compared to the category average of -0.81.

Limitations of the Study

- The study in limited to certain selected mutual funds.
- The study is limited to only the Equity Funds.
- The limited information is collected in the form of secondary data available.
- The analysis is only restricted to certain ratios.

Conclusion

Mutual fund industry in India has grown significantly in the recent years and has become an important part of the investment world and this is an

attempt made to understand the performance of equity schemes under Nippon Mutual Fund by comparing it to the industry average. Sharpie ratio is mainly used to help understand if the mutual fund is performing well by accessing if the returns received are on par with the level of risk. Treynor Ratio is used to evaluate the return per unit of systematic risk. Jensen Alpha concentrates on the excess return of the mutual fund and if an investment should be made in a specific mutual fund. The figures given after analysis with the tools has helped to understand that Nippon Small Cap Fund is performing relatively well when compared to other mutual funds despite the volatility of investing in Small Cap Companies and the other mutual funds have underperformed compared to the category average making the Nippon Small Cap Fund a good choice among the funds.

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The Impact of Port Infrastructure on International Trade – A Study on Indian Ports

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Abstract

The development of a nation's competitiveness and long-term economic prosperity is powered by its infrastructure, which is the foundation and a requirement for that nation's development. In the Competitiveness Index 2022, India ranks 49th out of 140 countries globally in terms of infrastructure quality. The latest estimations show the importance of infrastructure development of ports, efficient transportation facilities and communication facilities is crucial to increase the size of the market and transform the vision of the 5 trillion economy.

This article attempts to study and exemplifies the key drivers, economic policies, and steps taken by India to increase its competitiveness in the development of Indian ports as well as exports. In addition, it aims in defining how several research shows that the value-addition in the Logistics System of India plays a dominant role in strengthening and diversifying the export structure for a developing nation like India. This article is divided into the following five sections

Section-1 defines the importance of the infrastructural development of Indian ports for the country's growth and reviews the literature. **Section-2** addresses the current challenges facing Indian port infrastructure. **Section-3** defines the Sagarmala Project and key initiatives by the Sagarmala Project. **Section-4** attempts to understand port infrastructural development through discussion and analysis of eight years of Sagarmala Project and historical export data to capture the overall development of Indian exports. **Section-5** provides a conclusion and outlook for India's future in exports.

Keywords: Exports Diversification, Government of India, New Reforms and Economic Policies, Port Efficiencies, Ports Infrastructure, Port Management

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Objective of the Study

The objective of the study is to track the progress and advancements made by the Indian ports, and forecast on the future scope, prospects and requirements of the major ports to withstand the competitive market environment.

Introduction & Review of Literature

'For humans, the oceans have always been a foreign environment. For fear of tumbling off the edge of the planet, ancient humanity dared not venture too far out into the ocean. Humanity learned more about this uncharted realm as science advanced. Trade relationships existed between coastal cities in ancient civilizations. When it was established that the globe doesn't have edges, the long-held belief was disproved according to Luis Filipe de Castro (1970)[1]'. A port is a place on the coast or coastline with one or more harbours where ships can dock and unload or load passengers or cargo. Port locations are chosen for economic demand, ease of access to land and navigable water, and protection from wind and waves (G.S Dwarakisha, Akhil Muhammad Salima-2015)[2]. As per Mukherjee (2001),"India ranks seventeenth globally in terms of gross registered tonnage (grt) and fifteenth globally in terms of deadweight tonnes and has the largest merchant shipping fleet among emerging nations (dwt)[3]". Around 90% of the world's trade in goods and commodities is thought to be transported by ships. Although the quantities have significantly expanded over the last two decades, this percentage has stayed steady over the past century. "The decomposition of production and the integration of world trade led to this increase in shipping volumes globally. According to Feenstra [3](1998)".

Infrastructure facilitates outsourcing and a country having a good infrastructure, emerges as a destination for outsourcing. India is emerging to be a global destination but the trade disruptions and resource mobilization for infrastructure development are refraining them from participating and investing efficiently which is discouraging inflows of Foreign Direct Investments."The word "infrastructure" is made up of the two words "infra" and "structure". Infra means that which lies beneath. Infrastructure means that which lies beneath the structure. Services provided by the infrastructure are not immediately productive. While they don't serve as actual items for end use, they do assist in the execution of numerous production operations. "Both productivity growth and the provision of facilities that improve quality of life are ways that infrastructure supports economic development (Dash, 2008)[4]"."Making economic structures work correctly is currently

1 "Castro, Xavier de; Hamon, Jocelynn; Thomaz, Luis Filipe de Castro, 2007."
2 "G.S. Dwarakish, Akhil MuhammadSalim-2015"
3 "Feenstra, R.C. 1998"
4 "Dash L N (2008)"

the most important challenge faced by the infrastructure sector. In those industries where the fundamentals of competition and moderate regulatory oversight have been widely accepted, development has been quick, and the quality of private provision and services is catching up to international standards.[5] (Bhattacharya and Patel 2005)".

Road transportation consumes ten times as much energy as port conveyance, while railway transportation consumes twice as much energy as those compared to other transportation options. The globe has become more ecologically conscious over the last few decades, and marine transportation is undoubtedly more environmentally friendly than other modes of transportation due to its reduced energy use. In coastal regions, ports play a significant economic role. More infrastructure, supplies, and related services are needed as throughput of goods and passengers increases year after year[2] (G.S Dwarakisha, Akhil Muhammad Salima). The majority of studies on the economic effects of seaborne trade focused on a single seaport or area, providing a clear picture of how seaborne trade helps the entire world. The economy is still a mystery. "Two relatively recent studies, one in context of South Korea (Jung, 2011) and other in context of China (Deng et al., 2013), claim also that ports have a declining impact on the economy"[6]. Das R.U. (2017) has claimed that "the role of infrastructure in the economic growth is twofold. First, the infrastructure facilitates the development of other sectors, contributing to the production process of other sectors. Second, a strong infrastructure lowers operating and other expenses, improving factor performance overall and enabling a more effective use of the available resources. It is necessary for India to tap the enormous potential of the Ocean based Blue Economy, which will propel the nation into a higher growth trajectory"[7]."There is a close relationship between economic growth and infrastructure, of which transport infrastructure is a significant component. Infrastructure has often been classified into three functional types in the academic literature, Keynesian, Ricardian, and Neo-Classical to reflect the stimulus to aggregate demand, the enhanced efficiency because of reduction in cost of transportation and distribution, and the productivity impacts, respectively [8](Roland-Holst,2009)".The infrastructure sector includes a broad range of services that have a direct impact on how a corporate operation operates and are significant from a social perspective. "Better transport infrastructure is seen to influence trade performance through reduction in monetary transactions costs, loss, damage, and spoilage to goods in transit, and ensuring timeliness of delivery, among other factors[9] (Brooks, 2016)". Infrastructure represents

5 "Bhattacharya, Saugata, and Urjit R. Patel. 2005a"
6 "Deng P, Lu S, Xiao H (2013)"
7 "Das R.U. (2017)"
8 "Roland-Holst D. (2009)"
9 "Brooks D.H. (2016)'

the wheel of economic progress. Productivity increases and production costs decrease with good infrastructure. Adequate infrastructure plays a role in determining whether efforts to diversify output, boost commerce, deal with population expansion, combat poverty, and improve environmental conditions are successful. The ability of the economy to adapt to changes in prices or the endowments of other resources depends in large part on infrastructure. "The goal of infrastructure policy is to effectively deliver infrastructural services of high quality at low prices to households and firms in the country[10] (N Bhanu Prakash and B V Ramalingeswara Rao-2011)". If India wants to increase their exports share in the global market, then it is crucial to decrease logistics costs. Exports are the key component in promoting the economy of the country. Not only do they bring more revenue but they also open new markets for the country. Increasing exports are extremely vital for India not only to become a 5 trillion economy but also to achieve the visions of the "Atmanirbhar Bharat"or "Self-reliant India" campaign.

Substantial literature exists on the importance of infrastructure and how different infrastructure impact development (Buddhadeb Ghosh and Prabir De, 2022; N Bhanu Prakash and B V Ramalingeswara Rao 2011).

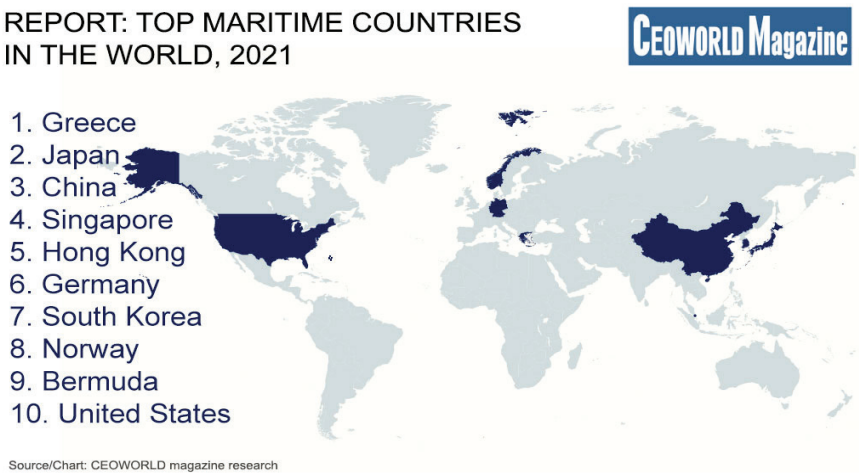
The objective of these articles is to give a brief description of the contribution of Indian ports to the country's economy. Relevant government reports, articles from relevant journals, and reports from relevant industry groups have been considered to reach the following conclusion.

Present Challenges of Indian Ports

As a result of its location between the Indian Ocean on the south, the Arabian Sea on the west, and Bay of Bengal on the east, India has a very long coastline measuring approximately 7,516.6 Km. India is considered the peninsula because it is flanked by three seas. As a sixteenth-largest maritime nation, India today conducts 70% of its volume and 95% of its value trade through sea transit. The world now has far larger and far more trade-capable nations that have far greater commercial capacity that has increased significantly over a last few decades. Countries around the world like United states of America contributes 25% of world's GDP. Whereas China's is at 16%, Japan's is at 6%,Germany contributes around 5%of world's GDP and India accounts around 3% of world GDP. Three percent of world GDP and yet the percentage of trade contribution is lesser than that. India is a trade deficit nation The Indian manufacturing sector contributes 16% to the country's GDP and 1.8% to world manufacturing, whereas China's manufacturing sector contributes 34% to the country's GDP and 13.7% to world manufacturing. Since 1980's, the manufacturing

10 'Prakash, N Bhanu; Rao, B V Ramalingeswara ((Dec 2011)"

GDP share has remained stagnant at 15-16% of India's GDP, while it has increased significantly in comparable economies that have a substantially higher manufacturing GDP share between 25% and 34% (Planning Commission of India). Trade deficit of a country increases when theimport value of commodities is higher than export value. There are multiple factors that can be responsible. One of them is that some goods are not being produced domestically. In that case, they must be imported. The poor port infrastructure is one of the most important reasons why India is a trade deficit nation."Strong infrastructure at the ports is essential for maintaining the adequate expansion of the nation's trade and commerce. Infrastructure has a significant impact on how an economy develops and maintains its competitive advantage, especially in commerce[11] (Ahmad 2015; Anderson and Wincoop 2003)". "Researchers estimated that poor infrastructure penalizes international trade. Even though infrastructure affects the cost of production and level of trade [12](Clark X. 2004), many international trade theories overlooked the role of infrastructure. Moura, T.G.Z, (2018) has examined the contribution of transportation infrastructure and economic growth[13]".



(Some nations are industry titans in shipping. For instance, leading nations that have dominant shipping sector include Europe's Greece and Germany have sizable commercial fleets, whereas China is one of the world's top naval powers.)

India, however not withstanding that, though having its lengthy maritime and seafaring history and being in a strategic and prime location in the Indian

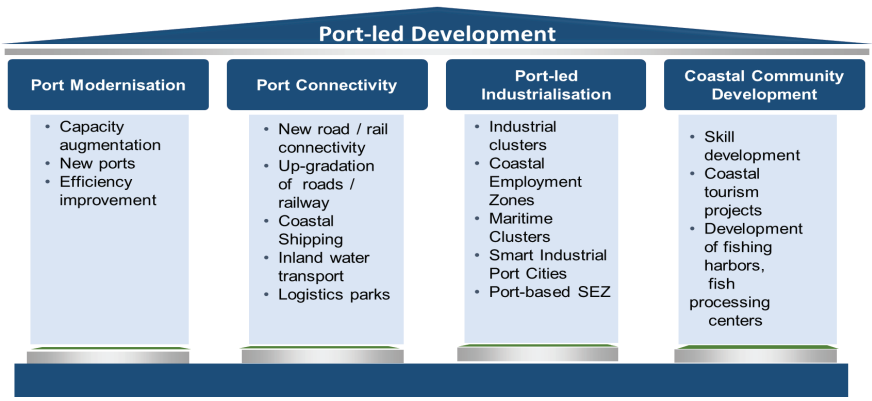
11 Ahmad et al. 2015; Anderson and Wincoop 2003
12 Clark X, Dollar D, Micco A (2004)
13 Moura, T.G.Z. Garcia-Alonso 2018

Ocean, when compared to countries like small countries like Singapore, Hong Kong, who have emerged to be one of the leading manufacturing hubs or a country like China, that despite having a disadvantage to the approach to the sea initially, have invested heavily on their infrastructure and now are particularly strong in shipping, ports &logistics. India, on the other hand, has struggled and lagged significantly to fully realize ad take advantage of this potential and has fallen behind in developing its maritime industry. The port and shipping facilities could have served as the impetus for the marine sector to emerge as a significant component and contributor to India's development tale, but the systematic inefficiencies slowed the endeavours and left India's maritime economy trailing in practically all metrics.

India imports 95% of the global trade and 95% of the trade of India happens through marine areas. Indian ports handle around 95% of EXIM (Export-Import Bank of India) cargo by volume and 70% by value. India's growing economic integration with the world economy has largely been responsible for the growth of port traffic, and any measure of this connection has increased dramatically over the past five years. Despite this, India's increase in port capacity has accounted for around half of the country's rise in commerce in goods. Hence considering the significance of this sector, The Government of India (GOI) permits up to hundred percent Foreign Direct Investment (FDI) using the automatic route for projects relating to the development and upkeep of ports and harbours. There are numerous outdated, inefficient and inconsistent port logistics systems in India, which limits the efficient operation of port logistics. Given that developed countries' average logistics costs range from 7-9%, India's delayed freight movement has made it one of the most costly comparable countries in its worldwide peer group globally in terms of logistics costs, which are 13-14% of GDP. Based on the World Bank Performance Index (2018) it claims that India was ranked 44th in the logistics performance index. Indian ports' typical turnaround time of cargo on an average is 12 times longer than that of global leaders like Singapore or Hong Kong. Port Congestion is another threat India is facing to derail boosts in exports. There is also major inefficiency in the infrastructure of transport communication due to the interconnectivity of the hinterland via inland, waterways, coastal ports, and rail, road and highways. This in turn raises the price of transportation and moving cargo. An Indian port's inspection and scrutiny continue to be lengthy, which means that you'll be spending more time in the documentation process than exporting your product and all these disparities are the reason why India lost its historical competitive advantage as a global economic hub in trading at the center of the world.

The Sagarmala Project

In 2018, India was ranked 44th in the World Bank Logistics Performance Index. India currently records relatively high logistics costs at 13-14% of GDP. This sector is highly fragmented and unorganized with over 20 government agencies; 36 logistics services; 500 certifications, this means that a company or an individual will spend more time and money in certifications. The logistics sector did not just become costly and inefficient, but it also slows down the progress of the huge consumer market that we have in India, and this is where the government is coming with something called the Sagarmala project. The new policy will bring in an integrated and tech enabled approach to cater to the demand of logistics operations and to bridge the efficiency gap.



Source: Ministry of Ports, shipping and waterways (Sagarmala).

The Sagarmala Policy under The Ministry of Shipping focuses on largely four aspects of development. The first one is portlet development. This will not only involve the redevelopment of older major and minor ports in the country but development of six new mega ports in the country which are not the current existing major ports. These are new port locations identified under the CEZ (Coastal Economic Zones) namely- Vadhavanin Maharashtra, Enayamin Tamil Nadu,Tajpurin West Bengal, Pradip Outer Harbourin Odisha, Sirkazhiin Tamil Nadu, Belekeriin Karnataka.So, the first aspect focuses on port infrastructure and the major component is port-linked development. The second aspect focuses on the development of Commercial areas around the ports called as Coastal Economic Zones which will focus on development of complete ecosystem of development around the port. The third aspect focuses on development of the coastal community. 25% of the Indian population lives in the 100-kilometer range of the coast and to encourage the local participation, the project focuses on providing them the competitive advantage of modernization, urbanization.

The fourth aspect is focused on creating assets for transportation and connectivity from these port areas to achieve Multimodal Transport Network.

The Indian maritime coastline is blessed with the strategic location which van be utilized for ship building, ship repair and ship disposal as well. Cruise ships and roll on and roll off services (RO-RO services) is also one of the ways India can utilize its shipping industry and all these measure aids the blue economy of India. There have been few legislations as well that have been introduced to help Indian businesses to grow. One of them is Right of First Refusal (ROFR) for the Indian made vessels have the first rights over the items that must be transported in India. Priority of charting of vessels is given to Indian-Built, Indian-flagged, and Indian-owned vessels are given preference. This legislation amendment is also in pursuance of 'Make in India' policy. Similarly, India has also initiated the National Logistics Policy for marine transport and via this portal the concerned parties can tack their goods in marine transportation. The Major Port Authority Bill 2020-tariff authority was passed, replacing the Major Port Trust Act, 1963. The statute gives the board the authority to use its property, assets and funds as deemed suitable for development of major ports and it will also have power to fix tariffs along with the ports under public-private partnerships models for various port services and market conditions. Currently, the major ports handle 58% of traffic whereas, minor ports handle 42% of traffic.

One of the elements of the PM Gati Shakti-national master plan for multi-model connectivity includes the Sagarmala Project as one of its components. The integration of several models of connectivity will allow and offer for seamless flow of people, commodities, and services. It will also make it easier to connect infrastructure to the last mile and shorten travel times for people. Even though India's extensive network of inland waterways offers a more environmentally friendly and affordable transportation option than roads and trains, they have never been used for economic gain. This was likely due to the unrealized promise of utilizing inland waters for this purpose. The Sagarmala Programme provided a new boost, and in 2019, the first shipment arrived in the presence of the Prime Minister at the inland waterway Multi Modal Terminal at Varanasi from Kolkata on the River Ganges. India's interior waterway infrastructure expansion will improve the hinterland's connectivity to the port's system along the coast. A long-delayed development in India, inland waterway transportation is widely utilized in nations having a connected marine network. Here, it is still in its early phases and accounts for less than 6% of all commodities transportation that are carried out this way. In order for it to be a viable alternative to the current rail and road network, it has been included in the

government's National Maritime Development Project (NMDP) and will need consistent work to become a competitive alternative to the current rail and road network.

Before moving on to the next phase, Indian ports still have operational and infrastructure issues to resolve. For instance, despite years of improvement of Indian ports' operational effectiveness has increased over time, efficiency wise it still falls short of the global average. The average Turnaround time (TAT) at major ports was roughly 2.5 days in 2018-19, while the guideline for the world as a whole is 1-2 days. Some of India's ports operated by the private sector, like Mundra and Gangavaram, have been able to complete turnarounds in less than two days. Second, one of the main obstacles to the efficient flow of cargo to and from the hinterland is highly hampered by the last-mile connectivity to the ports.

Table-1: Per metric ton cost of different modes of transport

Modes of Transport	Transportation Cost (Rs/Ton-Km)
Road	2.0-3.0
Rail	1.2-1.5
Waterways	1.1-1.2
Pipelines	0.1-0.15

Source: Ministry of Ports, shipping and waterways (Sagarmala)

Table-1 shows that over 87% of Indian freight is transported by either road or rail. Due to capacity restrictions on the roadways and railroad lines that connect ports to manufacturing and consumption hubs, a sizeable portion of this cargo faces "idle time" on its route to the ports. Despite being significantly safer, more affordable, and more environmentally friendly than other modes of transportation, waterborne transport only makes up less than 6% of India's modal split. In contrast, China's freight mode mix includes 47% of coastal and inland water transportation, compared to 34% and 12.4%, respectively, in Japan and the US. Moving industrial goods like coal, iron ore, cement, and steel to inland and coastal waterways can result in significant cost reductions (Ministry of Shipping-Sagarmala).

With a totaling cost of Rs. 6.01 lac crores, more than 574 projects related to port modernization, port connectivity, port driven industrialization, and coastal community development have been identified for implementation as part of the Sagarmala Programme. A total of 493 projects were either completed 121, in progress 235, or under development 137 as of September 30, 2019.The Maritime Vision 2030 is one of the identified projects which will be developed over the four pillars of Sagarmala policy, and it has planned to increase the port's capacity increasing to 2600 million tonnes.

Indian Maritime Economy

The Sagarmala plan calls for the construction of six mega ports, though the soon-to-be-released Maritime Vision 2030 will offer a better picture. The building of ports and harbours is now eligible for 100% foreign direct investment with a 10-year tax exemption. Under the National Maritime Development Program (NMDP), numerous rail and road projects are in progress with the goal of enhancing port connectivity and infrastructure. In order to increase and optimize port operations, the Shipping Ministry also created Project Unnati, the majority of which have already been carried out.

Infrastructure Development in Ports

Analysis & Discussion

There are 802 projects totaling a combined investment of Rs. 5.54 lakh crore for implementation under the Sagarmala Programme by 2035, according to the Ministry of Shipping's annual report for 2021-2022. Out of which, 185 projects totaling Rs. 94,789 crore have been finished, and 211 projects totaling Rs. 2,09 lakh crore are in the process of being implemented. Along with the aforementioned, 406 projects totaling 2.49 billion rupees are under various phases of development.

Table-2: Cargo handled at major ports (in Million Tonnes)

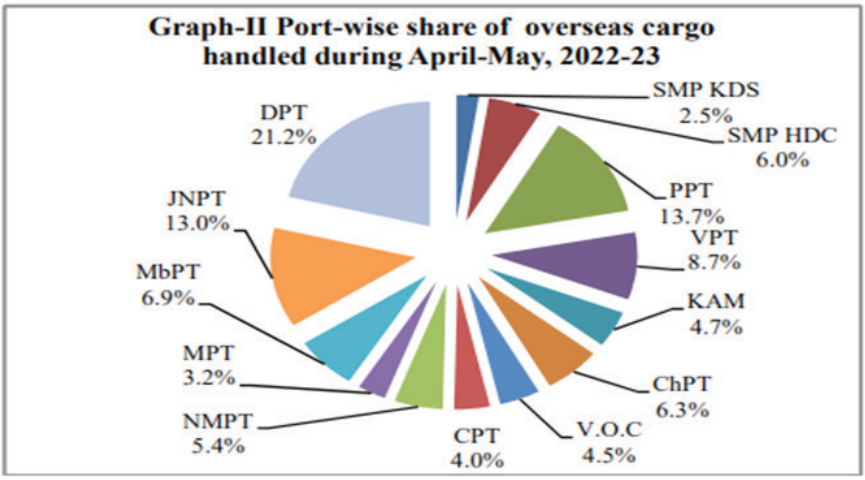
S. No.	Commodity	Actual 2020-21	Provisional 2021-22 (Upto December, 2021)
1	POL	206.764	162.524
2	Iron Ore	64.282	37.182
3	Fert. & Fert. Raw Materials	17.671	11.690
4	Coal	126.750	109.246
5	Containerized Cargo	143.773	124.535
6	Others	113.440	84.167
	Total	672.680	529.344

Source: Ministry of Ports, shipping and waterways (Sagarmala).

Table-2 demonstrates how cargo is handled in India's largest state-owned major ports saw negative growth rate of -21.308% from the previous year of 627.680 million tonnes to 529.344 million tonnes in the year 2021 December. However, Cargo traffic at India's 12 major ports during April-May, 2022-23, increased by 7.3% to 130.84 million tonnes from 121.96 million tonnes cargo handled during April-May, 2021-22. Cargo handled in May 2022 at India's major portsis 65.88 million tonnes showing an increase of 10.3% as compared to the corresponding period of the previous year. The coastal cargo handled at Major Ports during May 2022 increased

by 18.0% from 12.83 million tonnes in May 2021 to 15.14 million tonnes during May 2022. The overseas cargo handled at Major Ports also increased by 8.2% to 50.74 million tonnes in May 2022 as compared to 46.91 million tonnes during May 2021.

Figure-1: Overseas cargo handled by major ports



According to the data, Deendayal Port handled the most overseas cargo among the major ports, handling 21.21 million tonnes with a share of 21.2% followed by Paradip Port (13.7%), JNPT (13.0%), Vizag Port (8.7%), Mumbai Port (6.9%), Chennai Port (6.3%), SMP Haldia Dock (6.0%), NMPT (5.4%), Kamarajar Port (4.7%), VOC Port (4.5%), Cochin Port (4.0%), Mormugao Port (3.2%) and SMP Kolkata Dock (2.5%) during April-May, 2022-23.

The administration has devised a strategy for expanding the capacity to 3300+ MMTPA under the Sagarmala project in order to accommodate the expected 2500 MMTPA increase in cargo traffic at Indian ports by the year 2025. This comprises new port development, capacity expansion of current ports, and improvements to port operational efficiency.

Table-3: Ports Average Turnaround Time (2021-2022)

S. No.	Port	Average Turn around Time / (Hours)#	
		2020-21	2021-22 (Upto December, 2021(*)
1	Kolkata	76.22	68.81
2	Haldia	74.16	58.96
3	Paradip	58.10	54.74
4	Visakhapatnam	66.09	75.71
5	Chennai	51.38	53.68
6	V.O. Chidambaranar	46.08	48.48
7	Cochin	35.83	34.55

S. No.	Port	Average Turn around Time / (Hours)#	
		2020-21	2021-22 (Upto December, 2021(*)
8	New Mangalore	45.89	46.67
9	Mormugao	75.66	75.70
10	Jawaharlal Nehru	28.56	27.84
11	Mumbai	59.07	74.29
12	Deendayal (Kandla)	67.92	59.52
13	Kamarajar (Ennore)	42.97	46.83
	Total (All Ports)	55.99	54.07

(*) Provisional (#) Calculated from Pilot Boarding till Deboarding

The average turnaround time for container ship of Major Sea Ports has been reduced from 36.94 hours in 2019-20 to 27.38 hours in 2020-21

Source: Ministry of Ports, shipping and waterways (Sagarmala)

According to Table-3, every hour a ship spends in port results in savings for shippers, ports, and ship capital costs as well as holding expenses for inventories. The average turn around time for ships at major ports in India has been reduced by 36% over the last eight years indicating significant improvement in the countries port infrastructure. Ships turnaround at the country's major ports fell from 4 days in 2014-15 to 2.33 days in 2020-2021 to 2.25 in 2021-2022. The Jawarlal Nehru Port or JLN port in Navi Mumbai recorded the lowest (1.16 days) turnaround time followed by Cochin port in Kerala with (1.43 days) of turnaround time.

Table-4: Indian Exports from 2011-22

Year	Billions of US $	% of GDP
2021	$660.50B	20.81
2020	$499.10B	18.71
2019	$529.24B	18.69
2018	$538.64B	19.93
2017	$498.26B	18.79
2016	$439.64B	19.16
2015	$416.79B	19.81
2014	$468.35B	22.97
2013	$472.18B	25.43
2012	$448.40B	24.53
2011	$447.38B	24.54
2010	$375.35B	22.40

Source: macrotrends

Table-4 depicts that from the year 2015 was ($416.79B) to 2017 was ($498.26B), India witnessed an increasing growth rate of 19.5%, In the year 2018 was ($538.64B) an increase growth percentage of 8.1% was

witnessed from the year 2017, that was ($498.26B). From the year 2018 ($538.64B) To the year 2019 ($529.24b) a decline of -1.74% was witnessed in terms of exports. Exports for 2020 ($4.99.10B) witness a decline of -5.7% from the year 2019.2021-2022 recorded the highest growth rate of 32.33% from ($499.10B -$660.50B).

Inadequate infrastructure facilities at major ports hamper the progress of the ports in India. Government and the management trusts of the major ports need to initiate steps to develop the ports in these areas.

India's ports urgently need to increase productivity and capacity to handle the soaring demand. The effectiveness of any approach depends on the port's efficiency to establish a country as a leader in the global trade system. India has started a complete resuscitation that of the maritime industry through a number of legislative strategies and programmes for development, however port turnaround times in India are still rather slow by global standards. This can be seen by significant improvement of India's position in export. India intends to boost its export contribution to global trade economy to 3% by 2027 and 10% by 2047 from the current share of 2.1% in global market.

India is blessed country that is located on key international trade routes on the Indian Ocean. Sagarmala, the flagship programmes of the government is the maritime equivalent of the Golden Quadrilateral network of highways and India's most ambitious maritime modernization programmes aiming to capitalize on potential of India by maritime resources for accelerating economic development in the country. Sagarmala's goal is reduced logistics costs for both domestic and EXIM (Export-Import Bank of India) cargo by building various agencies of the government and improve multi-modal connectivity and linkages with minimum infrastructure investment.

The government of India initiated these programmes in 2015. If we analyze the 7-8 years of Sagarmala, since the launch, the work initiation and process has not been up to the mark and many projects have been getting delayed. The standing committee report noted that there have been delays in implementation of some projects. They have been concerned to know that no progress is made on all-weather all-cargo project in Vadhavan Port. The most recent budget has taken about 208 project worth 1.36 lakh crore and under that we have only completed 56 projects with a worth of 19, 488 crores have been utilized. This shows that the work is getting lagged and delayed. The government should be more magnanimous in terms of to ensure the speedy modernization of ports, which the committee noted have seen a cost escalation of 20,000 crores. The committee also asked the Ministry of ports for port-wise reasons for delays and steps to be taken to address these delays. Hence, the government must ensure there is very strict monitoring in terms of Sagarmala progress.

The committee also addressed the key importance of technology and the Indian Port Association, has already taken initiatives such as Ports Community System (PCS) and Electronic Data Interchange (EDI) which will ensure electronic flow of trade related information for all ports entities.

The committee also acknowledges that the PM-Gati Shakti bring all the existing infrastructure projects together on a single platform to ensure synchronized and integrated planning. They even emphasized that the issue of connectivity must be taken more seriously to ensure that every major and minor port has last mile connectivity to compete in global market. The most crucial aspect to take into account while establishing and developing export infrastructure is hinterland access to ports.

Conclusion

Currently, only two Indian major ports were able to feature themselves in the Top 40 global container ports. This also shows that there is a significant potential for port infrastructure development in India and become competitive with other leading maritime countries globally by driving cost effectiveness. The lack of logistics connectivity between major ports and high fuel costs creates industrial clusters and make transportation inefficient and slow. India is developing industrial corridors and dedicated rail trade corridors, via which India can become a trans-shipment place. India is blessed with a vast coastline and over the course of time, if all the policies implemented and leveraged effectively, India can not only become a trade leader but can also become an intermediate destination place which can import and export for the countries like Bhutan, Nepal and Bangladesh. India has an inherent advantage of being much larger area and number of portsthan the other countries, however, the Indian port tariffs are too high to compete with other countries like Singapore and Sri Lanka. The average vessels of 3000 TEU (Twelve-foot equivalent unit) capacity of India of 4-5 times higher than that of Singapore and Colombo. Also, the minor as well as the non-major ports require equal seriousness and connectivity because these are national assets and they should not be neglected being termed as just private, small, or state-owned ports. The government needs to understand that a port can cater the demand of that area, community wellness and these minor ports can be as effective in their performance as any other major port available in the country. Indeed, the initiatives like Sagarmala, Blue Ocean economy and the maritime development funds are trying their best to bring in Infrastructural development, but we are also tremendously lagging in technology and technology is the key factor that will help the country optimize its operations, seamless integration, and availability of services in real time. The government is intending to build a platform where all the transportations systems can be booked and tracked

together but, even though these initiatives look like a brilliant structure, the real time execution of them requires extraordinary coordination among different managements, cutting edge logistics solutions and all the logistics process should be transparent enough for businesses to track their shipments.

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A Study on Women Participation in Formal and Informal Sectors

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Abstract

In every country's development women play a vital role economically, politically as well as socially. This study focuses on the only one economic aspect out of multidimensional roles of the women in this era. So, this paper contributes to enhance our understanding regarding the role of women in growth of an economy. Data from about 60 women is gathered to examine the contribution of females in both formulas well as informal sector.

Keywords: Development, Formal Sector, Informal Sector, Multidimensional

Introduction

In India, almost 94% of total Women Workers are engaged in informal sector, of which about 20 percent work in the urban centres. Majority of women workers in informal sector come from those sections of the society which need income at any cost. Nearly 50% of these women workers are sole supporters of their families. Indian economy developing economy in which agriculture is the backbone of the Indian economy 60% of Indian population are on the below poverty line. Indian economic is it. Countries which are on the part of progress and which have their potential for development are called economy. So, India is termed as developing economic by modern views. **Features of Indian economy Low per capital income**: Co-existence of large public sector beside with free Enterprises under private sector has transfigured under the economy into a

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mixed one Industrial policy, 1918 and 1956 established by the government of India has made accouterment for such co-existence. Some planned basic and strained industries are being run under the public sector. Moreover, with the deregulation of India economy, the scope of private sector has promote improved. **Public sector participation for giant Industries**: Just after Independence, as the country was facing from lows organizational facilities, low rate of industrialization etc. According, a high number of public sector enterprise has been developed to run,some basic and heavy industries, transport system, energy project etc. Particularly after the Introduction of Industrial policy 1956. Around 50% investments were made in the state sectors during the last four and a half decades. **Government central and Regulation of private sector**: In India, the private sector, that is managing the totally free in its separation. The government started to central and regulate the private sector since Independence Through its various industrial financial and fiscal policies thus in a regulates the private sector exclusively in the interest of, investor economy. Income and wealth of the extreme degree are economically harmful, socially unjust and politically undesirable. Extreme inequalities reduce social welfare and generate classicalists. In this direction the government has imposed direct taxes at progressive rates through incomes tax, tax on capital gains,wealth tax. Death duties, gifts tax etc. The status of women has been subject to many great changes over the past few millennia. Both from ancient times through the later years of medieval period, to the promotion of equal rights by many reformers, history of women has been eventful. In modern India, women have adorned higher offices and posts including that of the president, prime minister, speaker of the Lok Sabha and as influential leaders of opposition. However, women in India generally still are exposed to the numerous social issues, “According to a global study conducted by Thomson Reuters, India is the “fourth most dangerous country” in the world for women”(owlcation.com). Larger involvement from women in labour force has both an economic and social impact. The female labour force participation rate for India remains appallingly low at around 27% when the male labour force participation rate is 79.9%. Labour force participation rate, female (percent of female population ages 15+) in India has reduced from 31.11% in 1990 to 27.45% in 2016. Labor force engagement rate, female has a decrease trend through 1990 to 2016. In the present paper factors influencing to female labour force participation in India have been expected using regression analysis for the time period 1990 to 2016. Data on all the relevant factor have been taken from World Development Indicators, World Bank. Women are over represented in the informal sector worldwide. The basic fact has multi-dimensions. Firstly, the unorganized sector is basic source of employment for women in most

growing countries. Existing data adviced that the greater of economically active women in developing countries are engaged in the informal sector. The percentage of the women workers in the informal sector exceeds that of men in most countries. Women's share of the total informal workforce outside of the agriculture is higher than men's share in 9 out of 21 developing countries for which data are present.

Objective of the Study

- To analyses female participation rate informal and informal sector in village Gamri in district Sonipat.
- To analyse the determinants for their engagement in Informal and formal sector.

Research Methodology

Keeping the above objectives data was collected form primary sources. The primary data was collected the aid of well – structured questionnaire on 60 household randomly selected form the study area. The analysis is complete with the help of percentage analysis tabular analysis and frequency. In this research study also used secondary data. Secondary data will be collected from various sources like as E Journal, famous research article, report, census etc. The percentage method is almost used to analyse the data. In this research study also used secondary data like as the sample size is taken approximately 3.52 percent of total population of Gamri Village.

Review of Literature

K.M Naidu 2003 defined that the social security measures for labour has become relevant in after the application of economic reforms. Tito Boeri 2005 showed that the merging to the Lisbon employment targets need absorbing large pools of long terms job seekers, increasing labour force participation and dealing with a sizeable informal sector, composed for the most of low productivity of jobs. Siddharth Sakar 2007 in his paper titled "Health Insurance for the poor in informal sector'', showed that the realization that the several health insurance schemes catering to the unorganized coverage as well as some critical issues with regard to enhancing health insurance coverage to poor household in general and those working in informal economy in particular.

Mombasa Kenya 2008 in his article titled "Pension coverage and informal sector workers: International Experience'' showed that the pension reform around the world in recent decades has focused mainly on the formal sector. Considering the implementation of their own pension reform to ensure that informal sector workers receive the retirement benefit they need.

Saibal Karand Sugata Marjit 2009 showed that trade liberalization in the important competing sector brisker informal wade across occupational types, and expand production and employment in the informal industrial segment. additional using Indian provincial data on wage, capital stock and value added in the informal sector they show that real informal wage increased with trade reform and transmitted beneficial impact on urban poverty reduction.

Participation of Women Informal and Informal Sector in Gamri Village

General Profile in Gamri Village: Gamri village in a village placed in Gohana Block of Sonipat District in Haryana. As per the census data 2011 there are 863 females per 100 males out of 3670 population in village. There are 908 Girls per 1000 Boys under 06 years of age in village. Total literacy rate of Gamri is 76.42% for male literacy is 86.1% and for female literacy rate is 65.12%. Total working population of Gamri is 1442 which are either main or marginal workers. Total workers are 886 out of which female main workers are 743 and male main workers are 143. Total marginal workers of village are 550.

Table-1: Demographic Profiles in Gamri Village, District Sonipat

Particulars	Total	Male	Female
Total No. of houses	700		
Population	3677	1974	1703
Child (0-6)	458	240	218
Schedule caste	1004	553	451
Schedule tribe	0	0	0
Literacy	75.55%	86.10%	65.12%
Total workers	1442	965	477
Main worker	886		
Marginal worker	556	222	334

Source: Census 2011

Table-2: Age Group

Age Group	No of Persons(%)
15-30	33.33
30-45	51.66
45-60	15

Sources: Field survey

Table-2 explains the total no. of women is 60 and 33.34 percent household of this village in the age group of 15-30 age group and 51.67 percent in age of 30-45 age group and 15 percent in age of 45-60 age group.

Table-3: Education Level of the Respondent

Education Level	No of persons (%)
Illiterate	15
Below Metric	15
10th	30
12th	16.66
Graduation	20
Above	3.33
Total	100

Sources: Field survey

Table-3 represents that 15 percent women illiterate and 15 percent women are below metric educated and 30 percent women are metric educated and 16.67 percent women are completed are their schooling and 20 percent women are graduated and only 3.34 percent women are above graduated.

Table-4: Personal Annual Income

Personal Income	No of Persons(%)
10,000-50,000	25
50,000-1,00,000	25
Above 1,00,000	50

Sources: Field survey

Table-4 represents that 25 percent women have personal annual income between 10000-50000 and 25 percent women have annual income 50000-100000 and 50 percent women have personal annual income above 100000 and 75% of women have no personal annual income between 10,000-50,000 as well as 75% of women do not earn in the income group of 50,000-100,000 also 50% of women does not lie in the income group above 100,000.

Table-5: Employed of Respondent Employed

No of Persons(%)	
Yes	**No**
11.66	88.33

Sources: Field survey

Table-5 represent that 11.66 percent women are employed and 88.33 percent women are unemployed. 88.33% women out of total are not employed anywhere and 11.66% are employed.

Table-6: Occupation Structure of the Respondents

Occupation	No of Persons (%)
Formal Sector (11.66)	
Government Sector	14.28
Private Sector	85.71
Informal Sector (88.33)	
Farming	5.66
Household Activities	96.22
Self-employed	3.77
Animal Husbandry	52.83
Street Vendors	0

Sources: Field survey

Table-6 represents that 11.67 percent women under formal sector are indulged and 85.71 percent indulged in Private Sector and 14.28 percent indulged in Government Sector 88.33 percent women are indulged in informal sector and under informal sector 5.66 percent women are indulged in farming sector and 96.22 percent women are indulged in Household activities and 3.77 percent are indulged in self employed and 52.83 percent women are indulged in Animal Husbandry and 0 percent women are indulged in street vendors.

Table-7: Willing to work of Respondent

Willing to Work	No of Persons (%)	
	Yes	No
	50	50

Sources: Field survey

Table-7 represents that 50 percent women willing to work and 50 percent women not willing to work.

Table-8: Reasons for the participate in Formal or Informal sector of Respondent

Reasons of the Participation	Yes (in %)	No (in %)	Total No of Persons (in %)
Security concerns in formal sector	18.33	81.67	100
Security concerns in informal sector	25	75	100
Transport facilities	18.33	81.67	100
Paid maternity leave in your job	15	85	100
Day care center for children available	55	45	100

Sources: Field survey

Table-8 explains that 18.33 percent women agree with security concerns and 81.67 women are not agree. 25 percent women agree with security concerns in formal sector and 75 percent are not. 18.33 percent women agree with Transport facilities available from their place to work place and 81.67 percent women are not. 15 percent women are agreeing with maternity leave in job and 85 are not. 55 percent women agree with Day care centre for children and 45 percent are not.

Table-9: Reasons for Face Wage Differentials of Respondent

Reasons of wage differential	No of persons(%)
Lack of skills	47.05
Less capacity to work	47.05
Don't know the reason	29.42
Any other reason	0

Sources: Field survey

Table-9 explains that 47.05 percent women agree with wage differential in Lack of Skills and 47.05 percent women agree with face wages differential due to less capacity to work and 29.42 percent women agree with Don't know the reason.

Formal sector: Sector which encompasses all jobs with normal hours and regular wages, and are recognized as income sources on which income taxes must be paid.

- Lack of interest: In this village women are interested in household activities. may be that all is happening due to lack of education or awareness about women empowerment so women of this village can interest in formal sector.
- Higher novation in agriculture sector: Women of this village are indulged in agriculture sector. May be due to not good family conditions or some of women may be due to their skills of hardworking and it is also possible because of they have large piece of land.
- Lack of preparation: Some of women in this village are interested in formal sector but due to lack of near coaching institutes or sometime may be due to lack of awareness they can't updates about formal sector vacancies.
- No available good environment: Sometimes women are not indulged informal sector because of lack of good environment, such as Damage Roads, Highways and long route etc.
- Management: some women are not able to manage their both personal and official life. And when they failed to manage their personal life,

social life, family life and official life they take the decision to leave the official life or some of their family life.

- Lack of capacity or skills: In this village women are not aware about their skills and informal sector there are demand only for skilled labour. like as;Manager, Engineer,Teacher, Doctor etc. So, these women who's are not aware about their skills can't including in formal sector. While some of have skills but not capacity to do work continue for 8 hours.

Informal sector: Informal economy can be Characterised by no qualifications or raining required unregulated hours and pay labour interspine, same Illegal business.

- Lack of proper sanitation: Women in rural India today face a problem of getting even the basic sanitation facilities.
- Gender discrimination: Rural households that are head by women, suffer more from poverty than those needed by men. Social and cultural barriers atack of kindergartens, as well as the burden of unpaid housework present women from developing their skills and from generating an income.
- Child Marriage: Child marriage represents a grave violation of the United nations Convention on the right of the child world wide, more than Bo million women are estimated to be married before they reach the age of is years and more than one third of these women, live in south asia.
- Lack of Education: Women in the rural areas are not allowed to have education as they are heart to do household chores which will help then after marriage in consideration of this, rural areas where the literacy rate is minimal among women are actively targeted to improve the situation of women though education.
- Poor health: Women are negatively affected by the geographic bias within implementation of the current healthcare system in India. According to Government of India national family health source of the maternal mortality in rural areas is approximately 132 percent the number of material mortality in urban areas.
- Family force: Some of families due to lack of awareness think negative about or informal sector and some of families feel uncomfortable and not agree to do hard work or some of families think that the reputation will be louse to women work in informal sector.

Main Findings of the Study

15 percent women are illiterate and 20 percent women are graduate while only 3.33% women are postgraduate. 11.66 percent women are employed

in formal and informal sector while 88.33 percent women indulged in agriculture sector or household activities. 85.7 percent women indulged in private sector while only 14.28 percent women indulged in government sector may be due to lack of skills or education. The 85.71% women indulged in private sector and 88.33% women indulged in Informal sector. 80% family's occupation is agriculture may be due to lack of education or because they have large pieces of land or due to higher interest in agriculture 46.66% women participate in agriculture sector. The main reasons for this participation are like as 1) due to good physical condition 2)may be due to poor family background. 50 percent women earning income above Rs.100000. While only 25 percent women earn income between 10,000-50,000. And 50 percent women are not willing to work. Maybe due to higher family background or due to lack of skills on capacity 65 percent women are not aware about any government schemes. 71.67 percent women are agreeing with same wages for same work may be due to awareness 1) education 2) due to join services by these women of this disagreement may be lack of education or skills.

Ways Forward

As regards excess to credit and finance action at the macro level aim at linking informal group-based mutual credit schemes to the commercial banking system is necessary.

- Government should set up a developing networks and alliances among informal sector to build capacities of informal sector.
- Public should change their thinking about the formal sector better than the informal sector.
- Government should continue increase the schemes such as (i) specially designed insurance schemes (ii) the extension and reforms of formal sector social insurance.
- Public should acquisition and transfer of skills in informal sector, such as the traditional apprenticeship.
- Government should orient existing training system to providing small business and entrepreneurship skills.
- Property rights should be reformed, so that private assets serve as an engine of growth and productivity.
- Government should be reforming the taxation systems by lowering the overall tax rate, by targeting corporate and income taxes, also. There is a need to assess the input on the level and structure of employment

from a macroeconomic point of view. There is a need to promote macro-economic policies that stimulate growth in the urban economy as a whole. In the absence of such a balanced policy package, the formal sector will be the main source of growth, having the informal sector as a rare safety value.

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Intertemporal Sustainability of India's Current Account Balance Under the New Policy Regime

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Abstract

For a developing country like India, Current Account Deficit to a great extent is preordained. Now if the deficit is inevitable, the only way to minimize the risk is by maintaining the current account deficit at sustainable levels. In order to maintain the current account deficit at sustainable levels, we first need to analyze the potential factors which impact the current account balance of our economy. Therefore, the following study focuses on analyzing some of the possible determinants of the current account deficit. In order to analyze the possible determinants of the current account deficit we have made use of the Ordinary Least Squares method of estimation. The results confirm that the gross domestic product, fiscal deficit, crude oil prices, trade openness and lagged value of the current account balance have a positive and significant relationship with Current Account deficit whereas real effective exchange rate has a negative relationship with the current account deficit. We also looked into the long run and short run dynamics of the current account balance. To test the long run relationship, we have used the ARDL – Bounds testing approach. Results obtained from the bounds test confirm that there exists a long run relationship. The error correction model for short term dynamics shows that the error correction term is significant and the coefficient is (-0.40). We further tested the intertemporal sustainability of the current account balance. Results confirm the long run association of Exports and Imports (inclusive of net interest payments abroad) which signifies the sustainability of current account balance. In terms of policy implications,

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the study show that the expenditure switching policy is redundant in case of India. The Indian economy being more consumption driven supports the "Twin Deficit Hypothesis".

Keywords: India's Current Account Balance, Intertemporal Sustainability, Econometric Analysis, Macroeconomic Fundamentals

Introduction

Post globalization, the importance of the external sector of India has increased to a great extent. In order to compete with the other countries in the global market, the performance of the external sector is very much crucial. To measure the performance of the external sector of an economy, the current account balance is considered to be a key economic barometer. Most of the emerging market economies experience high volatility in their external balances. During the last 7 decades, few events like the devaluation in 1966, the first and second oil shocks of 1973 and 1980,external payments crisis of 1991, the East Asian crisis of 1997 and the Global financial crisis of 2008 had a notable impact on our external sector.

Most of the open economy macroeconomic literature consider external instabilities due to the huge imbalances in the current account as a major source of constraint on the economic growth. Current account deficit that are not sustainable in nature can lead to instability in the financial sector and insolvency in the external debt and ultimately leading to a situation of crises. During the past few decades, India has been suffering from severe current account imbalances. In the early 1990s, due to continuous deficits in the current account, India had to face a situation of the BOP crises. However, the structural reforms taken up at that time which included the liberalization of the current account and capital helped in containing the crisis. Till 2006-07, the current account deficit was quite moderate in nature at around 0.7% of the GDP. Post global financial crisis, there was a sudden surge in the deficit to about 4.8% of the GDP.

Considering the current scenario, where the world is suffering from the global pandemic, the current account balance of our country has recorded few abnormalities. The current account balance of India has recorded a surplus of $ 19.8 billion i.e. 3.9% of the GDP during the first quarter of 2020-21. When we hear such a news for the first, for once it might sound something to be happy about during this pandemic, but when we look at it in comparison to the previous year (2019-20) first quarter which had recorded a deficit of $15 billion, it actually shows a sign of economic slowdown in the economy. This was very much evident from the growth that we all

experienced in the year 2020-21. The surplus was mainly because of the shrink in the trade deficit of $10 billion and not because of some rise in export etc. a major portion of this shrinkage is mainly because of the net oil balance. This actually portrays the level of volatility that is present in the current account balance. Therefore, considering factors which affect the current account balance is of utmost concern while framing the policies. Analyzing the determinants and their relationship with the current account balance is of great importance at this point of time. The study aims to analyze the major developments of the Current Account of India's Balance of Payments. We further aim to identify some of the potential macroeconomic determinants of India's Current Account Deficit. The study takes into consideration factors like Gross Domestic Product, Real Effective Exchange Rate, Fiscal Balance, Crude Oil Prices and the Trade Openness. Finally, we shall also test the intertemporal sustainability of India's Current account deficit by considering the quarterly data on export to GDP ratio and import (inclusive of interest payment) to GDP ratio.

Objectives of the Study

- To analyze the major developments of the Current Account of India's Balance of Payments.
- To identify some of the potential macroeconomic determinants of India's Current Account Deficit.
- To test the intertemporal sustainability of India's Current Account Deficit.

Major Developments of Current Account of India's Balance of Payments

India's current account balance has experienced deficit over a major time period except for the period of 2001-02 to 2003-04. Deficit in this account has increased from US $5 billion during the 1990s to around US$ 60 billion during the recent times. We cannot include the surplus that our current account has been experiencing during the recent times as it is an outcome of low economic activity. Our current account mainly includes two components. The first component is the merchandise trade which includes imports and exports. The second component is the invisible trade which primarily includes the Services, Income in the form of profit, dividend and interest; and Transfers which include remittances. The figure shown below depicts the growth rates of India's exports and imports.

Figure-1: India's Exports and Imports Growth Rates

Source: Author's Calculations

To begin with, till 1990s our exports did not experience much of growth and remained more or less stable for most of the time. However, post reform period had experienced a sudden rise in exports. If we consider during the 1970's, there were few export promotion schemes that were adopted which resulted in an annual growth of about 5%-6% in the year 1971-72 and then saw a sudden rise of about 20% in during the next 5 to 6 years' time. However there continued to remain fluctuation in the annual growth of exports during the 1980's.

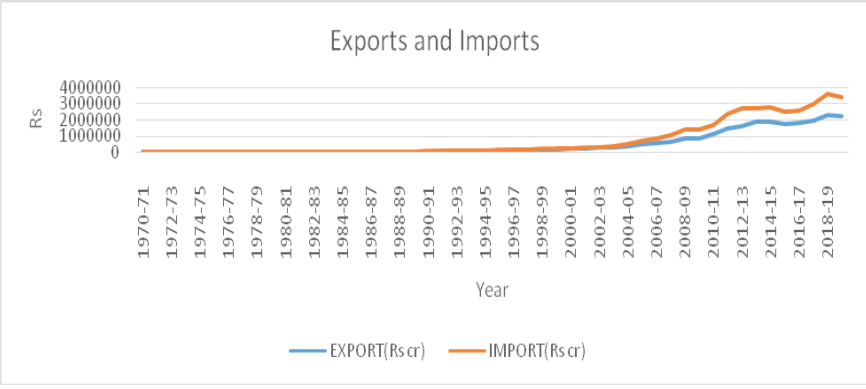
Post reforms, the exports had experienced a steady rise where the annual growth remained around 20% for most of the time but again from the year 1996-97 to 1998-99, exports fell due to the Southeast Asian crisis. Post Crisis period, the exports had not recovered completely when another event occurred in September 11, 2001 which caused a steep fall in the growth rate of exports. For the next few years, exports saw a steady rise and then in the year 2008, the global financial crisis had led to a steep fall in the export growth. The very next year i.e., 2010-11 had experience the highest growth in exports. Between 2011-15, much growth was not observed in exports mainly because of the fall in the world income post GFC. However, during 2018-19, exports recorded the historical peak of $330 billion. But once again our exports have got affected during the recent times because of this global pandemic.

During 1991-92, due import restrictions, imports have fallen drastically but later as the restrictions were eased during the second half of 1991-

92 they have started increasing slowly till 2004-05. In 2007-08, crude oil prices surged by 12.9 per cent and other imports also rose as South Asian Free Trade Area (SAFTA) reduced customs duty. This was followed by Global recession in 2008-09 due to which there was a fall in the imports.

From 2011-12 to 2015-16, imports have remained more or less stagnant mainly due to fall in the domestic economic activity. However, from 2016-17, there has been a continuous increase in India's imports crossing $500 billion as against the $465.58 billion during the period of 2017-18. But during this covid scenario, the import have once again started experiencing a downfall which is again due to low economic activity. The image shown below clearly shows the rise in the gap between imports and exports.

Figure-2:India's Exports and Imports

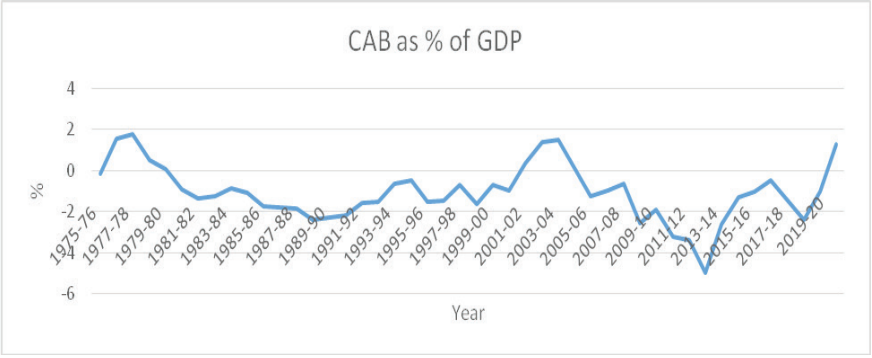


Source: RBI, Handbook of Statistics on the Indian Economy

Over the years, trade deficit has been one of the major contributors to the CAD. Here, the role of invisibles have remained very much crucial in terms of keeping our CAD at sustainable levels. Post 1990's our invisible have always been on the upper side i.e. surplus in nature. Rise in net invisibles is mostly due to rise in exports of non-factor services, receipts from business services and inflows of private transfers. For majority of the years more than 60% of our trade deficit has been financed through the surplus gained through invisibles. From 2001 onwards, rapid growth was observed in the invisible and the surplus was able to cover 82% of the trade deficit. However, post financial crisis a nose dive was observed in the invisibles. Since then, our invisible have grown at a decent pace with a few years of slowdown observed post 2013.

Therefore, the current account balance as a percent of GDP which includes all the 3 components of trade balance, transfer balance and income balance looks as follows.

Figure-3: India's Current Account Balance as % of GDP



Source: World Bank, World Development Indicator

Accumulated Wisdom

Analyzing the determinants of current account balance is very much essential from the viewpoint of policy framing. These policies aim at maintaining the current account balance at sustainable levels. In terms of identifying some of the potential determinants of the current account balance a number of studies have been performed. Panel of 94 countries comprising of both industrialized and developing countries, from 1973 to 2008, has been use by (Cheung C, 2013) for assessing the cyclic and non-cyclic factors behind the current account balances separately. The empirical analysis of supports the hypothesis that during the years leading up to crisis, the widening pattern of external imbalances partially reflects the financial flows from emerging economies with underdeveloped financial markets to economies with efficient financial systems. However, post financial crisis, a part of narrowing of the current account balances can be accredited to various cyclic factors like changes in the oil prices, exchange rates and so on.

In terms of finding some of the major macroeconomic, institutional and financial determinants of the current account deficits, study by (Çetrez,2020) has used data of 97 developing and developed countries for a time period from 1986 to 2013. The study has found that current account balances are very much related to factors like trade openness, stage of economic development, exchange rate, stability of the macroeconomic fundamentals, terms of trade and quality of institutions.

One of the methodologies developed by IMF's Research Department, highlights the role played by policy distortions on current account and exchange rate. "The External Balance Assessment (EBA) Methodology" (Phillips S, 2013)comprises of three methods where two are analysis based

on panel regression of current account and exchange rate, whereas third technique mainly concentrates on the analysis of sustainability. The EBA methodology distinguishes between the descriptive perception of current accounts and undertaking normative evaluation. One of the most important distinguishing feature of the EBA is that it takes into consideration factors like politics, cyclical conditions and condition of the capital markets abroad which can influence real exchange rate along with current account. According to the authors, some of the non-policy variables like expected real growth and cyclical factors like the terms of trade play a key role along with the REER (real effective exchange rate).

To examine whether the economic fundamentals reflect the behaviour of the current account during the post liberalization period, (Bhavesh Garg, 2017) has performed a study taking the case of India. The paper suggests that developments in the current account in India are very much determined by both external factors as well as the macroeconomic factors. The results are very much in favor of the twin-deficit hypothesis. The "Feldstein-Horioka Hypothesis" is also rejected in case of India.

Identifying the long run and short run relationship between the current account balance and the determinants is also very crucial from the policy perspective. In order to identify the long run and short run relationship, (FAYAZ, 2016) has adopted "Johansen Cointegration Approach" and the "Vector Error Correction Model". "The variables of interest in this study are Net Foreign Assets, Gross Domestic product, Inflation Real Effective Exchange Rate and Trade Openness. The results obtained from johansen cointegration test signify that there exists a long run relationship between the current account deficit and the variables that are considered. In order to explore the sustainability of the current account balance (Bhavesh Garg, 2020) investigate the long term relationship amid imports and exports. He then further goes on to perform the Maximum Likelihood system estimator of the Johansen so as to account for the structural breaks in the cointegration relationships. Empirical findings of study conclude that when structural breaks were not taken into consideration, the current account deficits of all the countries considered were not sustainable. Once we have incorporated the information on structural breaks, apart from Australia and UK all the remaining countries had sustainable current account deficit.

Empirical Findings and Analysis

In order to assess some of the factors that play a significant role in impacting the scenario of the current account deficit of India, we hereby present the empirical analysis that has been carried out in our study. The analysis has been carried out keeping in view the objective of the study which includes analyzing the linkage amid current account deficit of India and some

fundamental macroeconomic variable. We also try to look into the long run and short run dynamics of determinants of current account deficit and finally we try to test intertemporal sustainability of CAD of India.

Determinants of Current Account Deficit

The dependent variable in our study is current account deficit as % of GDP of India. Based on the literature, the six potential determinants that are included in the model are Gross Domestic Product, Fiscal Deficit, Crude oil price, Real Effective Exchange Rate, Trade Openness and Lagged value of the Current Account Deficit. The data set considered is quarterly in nature covering a time period from 1996 Q1-2019 Q4. All the variables have been considered in their log form. The variables given above were in different units. Thus log transformation was taken to bring them in same units. Further log transformation gives us the elasticity and thus it becomes easy to interpret the coefficient of the model.

Considering the Economic relationship of the dependent and independent variable

$$CAD = f(GDP, FD, OILP, REER, OPEN, CAD(-1))$$
$$(+) \quad (+) \quad (+) \quad (-) \quad (+) \quad (+)$$

The economic relationship shown above is based on the theory and the literature. The relationship between the Current Account Deficit and Gross Domestic Product was found to be positive. This is because with the rise in the national income, people tend to have higher disposable income to consume goods. If the domestic markets are unable to meet the domestic demand, consumers tend to import commodities from abroad, thereby leading to rise in current account deficit. A positive relationship is also observed between the fiscal deficit and the current account deficit. This is also known as the "Twin Deficit Hypothesis". The crude oil prices directly affect the current account balance of an economy. For a country like India which is a net importer of crude oil, a rise in the price will adversely affect the import bill, thereby leading to worsening of CAD.

Theories and studies indicate towards a negative relationship is between the real effective exchange rate and CAD. Similarly, the relationship between trade openness and CAD was found to be positive in case of developing nation because they usually import more of capital goods from the developed economies. Finally, the lagged current account deficit as one of the endogenous variables is a good indicator of the persistence of the CAD. Literature suggests a positive relationship between CAD and the lagged value of CAD. In various studies, it has been observed that the current account balances tend to show high persistence. This could be mainly associated with the habit formation in savings or consumption.

A times series regression is meaningful only when the variables are stationary. The stationarity results have been shown below.

Table 1: Stationarity Results

Variables	Levels		First Difference		
	t-statistics	p-value	t-statistics	P-value	Decision
lnCAD	-4.31149***	0.0046	_	_	I(0)
lnGDP	-2.587	0.2869	-10.757***	0.00	I(1)
lnFD	-12.5***	0.00	_	_	I(0)
lnOILP	-1.7715	0.7108	-7.5948***	0.00	I(1)
lnREER	-3.053	0.1236	-8.496***	0.00	I(1)
lnOPEN	-1.9291	0.6315	-12.13***	0.00	I(1)

Source: Author's Calculations The notification *** denotes 1% level of significance

Here we have used Augmented Dickey-Fuller test for checking the stationary of the variable considered. Selection of lag is based on the Akaike Information Criterion. Test equation also includes the trend and the intercept. First we shall check for the unit roots at levels. If the null hypothesis is rejected based on the t statistic, then we shall conclude that the concerned variable is stationary at levels. If the variable is found to be non-stationary at levels, then we can consider the first difference of the concerned variable and again check for the unit root. If null hypothesis or H0 gets rejected, we can conclude that variable is first difference stationary. Once we have converted all the non-stationary variables into stationary, we can now estimate the equation. The model we have estimated is as follows:

Equation 1: Macroeconomic determinants of CAB

lnCAB =0.000473 +0.000416*D(lnGDP(-3)) + 0.1206*lnFD(-4) +0.034*D(lnOILP(-1))
(-1.01) (5.23)*** (4.56) *** (4.15) **

-0.0252*D(lnREER(-1)) + 0.0798*D(lnOPEN(-3)) + 0.6871* lnCAB(-1) + 2.8*DUM
(-0.766) (2.86)** (13.3) ***

R-Squared = 0.78 F-Statistic = 43.23
Adjusted R-Squared = 0.76 Durbin –Watson Statistic = 2.19
Durbin –Wu –Hausman test = 1.04

Looking at R-squared value i.e. 0.78 ,we can infer that 78% of the variations in the dependent variable i.e. the current account deficit are being explained by the explanatory variable which can be considered as fairly good. Not much difference was observed when compared to the R-squared and adjusted R-squared. This validates the very fact that the model continues to be a good fit even after adjusting the R-squared value for number of terms in model. The F-statistic value which is 43.23 in case of our model, validates the goodness overall mode. The value of the

F-Statistic that we have derived in case of this model can be considered as a good fit. As mentioned earlier the DW statistic reveals the presence of autocorrelation in the model, which in this case is 2.19. This value lies well within the acceptable range of 1.8 -2.4. However, since the above model includes lagged value of regress and as a predictor variable, the DW Statistic would not be a suitable measure to check for the serial correlation. Therefore, we shall use "h Statistic". The h statistic in case of our model was found to be 1.04, which is less than the table value of 1.96. Therefore, we accept H0 of $\rho=0$, which means there is no sign of autocorrelation in the estimated model.

Considering the significance of the regressors, we need to analyze the coefficient and the t-statistics of each explanatory variable. The estimated model depicts a positive relationship between the Gross domestic product (GDP) and current account balance (CAB). The relationship was found to be significant when taken at a lag of 3 quarters; the t statistic had a value of 5.227 and the p value was close to zero. The coefficient value of the Gross domestic product suggested that a 1% rise in the GDP would lead to a rise of 0.00041% in the current account deficit. Next variable i.e. fiscal deficit as a ratio to GDP (FD) had a positive relationship with the dependent variable. The model suggests that Fiscal Deficit is significant at a lag of 4 quarters i.e. which is equivalent to a year. The t statistic was found to be significant with a value of 4.55 and the p value tending to zero. The coefficient suggested that a 1% increase in the fiscal deficit is associated with 0.12% rise in the current account deficit. Further, the next variable that we have considered are the Crude oil prices (OILP).The crude oil prices also had significant positive relationship with current account deficit. However, crude oil prices were found to be significant at a lag of one quarter and the t statistic showed a value of 4.15 with the p value again tending to 0.

The coefficient value in case of the Crude oil prices suggests that a percent rise in the crude oil prices would lead to 0.034% rise in the current account deficit. The negative relationship between REER and CAD has been observed in our study. But REER was not found to be significant in nature. The coefficient value of this variable suggested that 1% rise in REER lead to a fall in current account deficit by 0.025%. The t –statistic for this particular variable was -0.7668 along with a p value of 0.4453. Our model clearly shows significant positive relation between trade openness and current account deficit. Trade openness was found to be significant at lag of 3 quarters. The value of the t statistic was 2.86 along with a p value 0.0052. The coefficient in this case suggests that a 1% rise in trade openness would lead to 0.079% rise in current account deficit. Coefficient of the lagged current account deficit is positive and statistically significant.

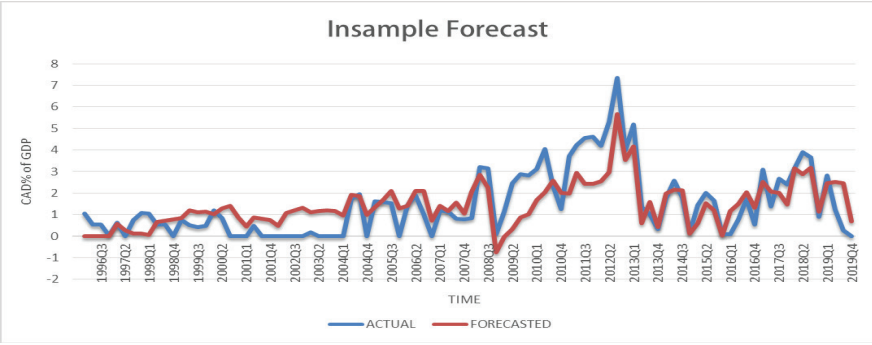
The t-statistic value was found to be 13.29. The size of the persistence i.e. 0.68 is very much in line with the literature on other emerging as well as developing economies.

The model has also made use of dummy for the 2nd quarter of 2013. One of the major events that occurred during this time period that affected the Global economy was the "Taper Tantrum". The model clearly suggests that the dummy variable is also significant with a t statistic value of 5.23 and the coefficient being 2.85.

In Sample Forecasting

In order to evaluate the predictive capabilities of a model we often make use of a process called in sample forecast. In this process the observed data is used to see how effective the algorithm is in reproducing the data. The graph shown below depicts the in sample forecast of estimated model.

Figure-4: In sample forecast



Source: Author's Calculation

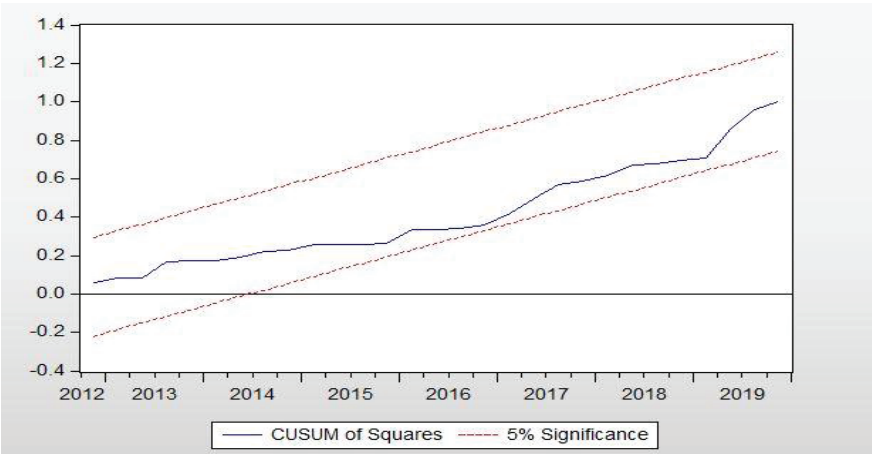
The results obtained from the in sample forecast show that both the value of Root Mean Squared Error (RMSE) and the Theil Inequality Coefficient (TIC) are well within acceptable limit. Both these values are less than 1 which actually depicts that the predictability of the model is good. Since both the values are less than 1, we can conclude that the error in the prediction is low and that the model can capture the turning points in the variable. However, the predictability of the model does get affected during the financial crisis period, but overall the model is neither overestimating nor underestimating.

Stability Test

Once the regression is estimated, the next important task to be performed is the parameter stability tests. The implied assumption which regression incorporates is that the β coefficients or parameters are constant, both for

the time period considered for estimating the model and also for the future time periods in the construction of forecasts.

Figure-5: Result of Stability Test



Source: Author's Calculations

After performing the stability test, we observe that the values are lying well within the confidence interval. The results show that the parameters are quite stable and there is not much of volatility that is visible. Therefore we can conclude that the model is stable in nature.

Long Run and Short Run Relationship

Using the Autoregressive Distributed Lag model, we will now analyze the long run and short run dynamics of the variables. In order to study the long-term relation between fundamental macroeconomic variable and current account deficit, lag length of ARDL model for long run equilibrium was determined based on AIC (Akaike Info Criterion).

Therefore, ARDL (4, 3, 3, 4, 3, 1) model can be represented in the form of the following equation:

Equation 2: ARDL model for long run relationship

$$ln\ CAD_t = \alpha_0 + \alpha_{1i} \sum_{i=0}^{4} ln\ GDP_{t-i} + \alpha_{2i} \sum_{i=0}^{3} ln\ FD_{t-i} + \alpha_{3i} \sum_{i=0}^{3} ln\ OILP_{t-i} +$$

$$\alpha_{4i} \sum_{i=0}^{4} ln\ OPEN_{t-i} + \alpha_{5i} \sum_{i=0}^{3} ln\ REER_{t-i} + \alpha_{6i} \sum_{i=1}^{1} ln\ CAD_{t-i} + \varepsilon_t$$

Most of the coefficients that were estimated by the model were statistically significant and with the same relationship as estimated by the OLS model. The coefficient of Gross Domestic Product and Fiscal Deficit was significant at 1% level. Crude oil prices, Trade openness and

real effective exchange rate were found to be significant at 5% level of significance. The lagged value of the current account deficit was positively correlated and significant at 1% level. The R-Squared value for the given model was found to be 0.83 which is a good fit. Thus, the results verify that these variables can ascertain the current account deficit in the long run.

In order, to test for the long run relation between the dependent variable and the explanatory variable we shall now make use of the Bounds test. The Bounds test signifies whether the variables that we have considered for the study of the long run relation is fit for estimation or not. The null hypothesis i.e., H_0 for bounds test states no long run relationship amidst variable considered.

Table-2: Results of Bounds Test

H_0: No long run relationship between the current account deficit and the independent variable			
F-Statistic	I(0)		I(1)
Critical Value at 5%	2.39		3.38
Calculated Value		4.546	

Source: Author's Calculations

The results obtained from the F-Bounds Test depict that the calculated value is greater when compared to critical value at 5% significance level. Therefore, rejecting the null hypothesis we conclude long run relation existing amid variable that we have considered for the analysis.

We shall now check for the error correction in model. Short run coefficient estimates that are related to long run relationships are obtained from the error correction form of the ARDL model. Based on AIC, lag lengths for the short run equilibrium was determined as ARDL (3, 2, 2, 3,2).

Equation 3: Error Correction model for Short run dynamics

$$D(lnCAD)_t = \alpha_0 + \alpha_{1i} \sum_{i=0}^{3} D(lnGDP)_{t-i} + \alpha_{2i} \sum_{i=0}^{2} D(lnFD)_{t-i} + \alpha_{3i}$$

$$\sum_{i=0}^{2} D(lnOILP)_{t-i} + \alpha_{4i} \sum_{i=0}^{3} D(lnOPEN)_{t-i} + \alpha_{5i} \sum_{i=0}^{2} D(lnREER)_{t-i} +$$

$$\delta lnECT_{t-1} + \varepsilon_t$$

Findings of this particular analysis depicts a strong short run relationship between current account and the factors considered. Almost all the coefficients were found to be statistically significant apart from few. However, the most important variable to look at is the ECT i.e., the error correction term. In the model that we have estimated, the coefficient of

the error correction terms is significant at 1% level. This actually proves a stable long run relationship. The error correction term has a coefficient of (-0.40), which means that 40% of the short run deviation are being corrected so as to maintain the long run equilibrium.

Testing Intertemporal Sustainability of Current Account

As part of the objective of our study, we shall now attempt to test sustainability of the current account from intertemporal perspective. For this study the empirical model can be presented as follows:

$EXt = \alpha 0 + \alpha 1\ MMt + \varepsilon t$

Where EXt is the exports and MMt are the imports which includes the net interest payments abroad. Based on the study by (Prabheesh, 2019), the current account is sustainable and intertemporal budget constraint is applicable only when there is proof of long term relationship amid exports and imports (net interest payment included). In order to test this, quarterly data of Export to GDP Ratio and Import (inclusive of interest payment) to GDP ratio has been taken from 1996 Q1 to 2019 Q4. We shall check for the long run relationship between the two using the Engle-Granger Cointegration Method.

First we shall check for stationarity of the variable. Both the variables were first order stationary. The empirical model shown above is estimated using the OLS method and then the residuals are checked for stationarity at levels. If the residual is found to be stationary at levels, then we can conclude that there is Cointegration between export and imports which would in turn imply the sustainability of current account.

The estimated model would be as follows:

$lnEX_t = -0.688 + 0.8633*lnMM_t$

(-27.57) (71.07)

R-Squared Value = 0.98 F-Statistic = 5051.913

Adjusted R-Squared = 0.97

Further, residual of above regression equation was also tested for unit root at levels and the results showed that the residuals are stationary at levels and integrated of order 0.

Table-3: Results of Unit Root Test for the Residuals of the OLS Regression

Variable	*ADF test statistic*	*Critical value at 1%*
Residual	-6.79	-4.05

Source: Author's Calculations

This implies cointegration of Exports and Imports in the long term. A r-squared value of 0.98 implies that 98% of the variation in exports are being explained by imports which includes net interest payments abroad.

The coefficient of imports i.e. 0.86 implies that for 1% rise in imports would lead to 0.86% change in exports. The coefficient was found to be statistically significant in nature with a high t-statistic value of 71.07. A high value of the F-Statistic also suggests that overall fit of the model is good. The long run cointegration of these two variables validates the fact that the current account deficit of India is sustainable.

Conclusions

This study was taken up in order to deal with some of the crucial question which often arise in the minds of the researchers and academicians while framing policies for the external sectors specifically, the current account balance. The very first motive of the study was to look into some of the major determinants which impact the current account balances. Once the relationship between them was analyzed we moved forward to fulfill our next motive of the study, which was to look into both long and short duration relation of current account balance and determinants that were taken into consideration in the previous objective. Once the relationship was analyzed we moved towards are third objective which was mainly to examine the sustainability of deficit in current account. In our study we have considered the availability of capital flows while testing for sustainability of current account balance. To incorporate the component of capital flows we have included net interest payment abroad into the imports and then checked for sustainability of balance of current account.

The empirical analysis performed in the following study shows that India's current account balance is determined by both external factors and macroeconomic factors. Since the study has observed positive association amid fiscal deficit and current account deficit, a fiscal coalition of any form would help in reducing the gap between the investment and savings, thereby reducing the deficit in the current account. From exchange rate point of view, any kind of depreciation in the Indian rupee might not help in improving the current account balance. It might in turn put inflationary pressure in the economy. The literature suggests that the M-L condition and the J-curve Effect do not hold in case of the Indian context. Therefore, expenditure switching policy might be redundant in case of India. Also, government can surely focus on policies which help in reducing too much of dependence in oil imports. The consumption of oil can be discouraged to a great extent by forming appropriate pricing policy for oil. Too much of dependence on foreign commodities should always be put under check. Proper policy setup in terms of tariffs and duties must be put into place so as check any unnecessary imports and also at the same time encourage

the domestic economy to focus more on production and innovation, which definitely is being done by the current government in the form of "MAKE IN INDIA" programme and so on.

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Cashless Transactions in Rural Area: A Study of Mahendargarh District in Haryana

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Abstract

Indian people depend on cash too much. People who live in rural areas face problems accessing hard cash and are not aware of cashless transactions.

After demonetization, the Indian government supported cashless transactions because they can be used anywhere at any time. Cashless transactions create many patterns like shopping and spending.

This paper researched cashless transactions in rural areas of Mahendargarh. Responses from the respondents show that most of them are aware of cashless transactions but they do not feel safe because they are made through the internet.

They agree that it can be used anywhere. They use different payment methods.

They get many benefits by adopting these online methods of payment but they face many challenges like network problems and the fear of money insecurity.

Introduction

A cashless economy is a situation where digital currencies are used for all economic transactions. Cashless India means cashless transactions. In 2016, India's Prime Minister Narendra Modi introduced demonetization. The main aim of demonetization was to remove black money and support cashless transactions. There is a good sign towards Make in India and Digital India. In India, 60% of people belong to rural India and 50% of people are illiterate, so they face many challenges. (Maravi 2020)

Demonetization created many opportunities for digital wallet companies. Companies introduced many digital wallet apps like UPI, BHIM, and Mobikwik. (Singh 2017)

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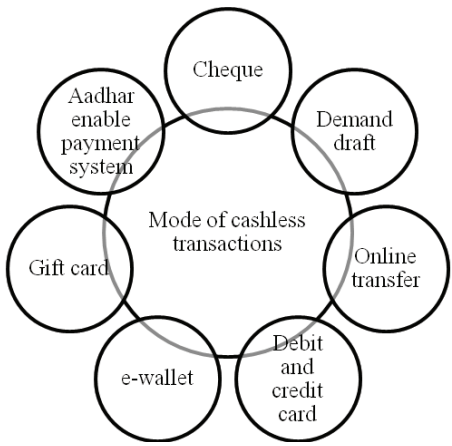
The government focused on faceless, paperless, and cashless transactions. The aim of the Niti Aayog committee was to identify various digital payment apps. Many steps were taken by the RBI and government to discourage the use of cash:

- Introduced many payment apps
- Promoted e-commerce
- The government withdrew surcharges or service charges on cards. (Ramya and Ali 2018)

Modes of Cashless Transactions *(Ramya and Ali 2008)*

There are various modes of payment. These methods are:



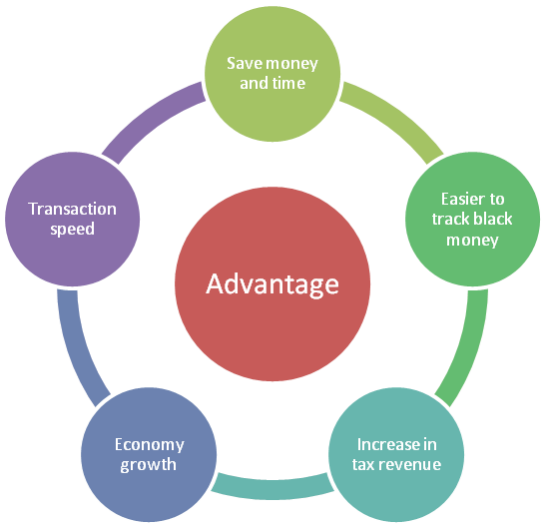
- Cheque: It is a well-known and very old method. In this method, a cheque is issued for a specific amount. The entire transaction is done through a cheque. Sometimes cheques are dishonored. To avoid such issues, we can use cashless transactions.
- Demand draft: A demand draft can also be compared to a cheque. It is like a negotiable instrument. It has two parties: the drawer and the drawee. A demand draft cannot be dishonored.
- Online transfer: Online transfers use NEFT and RTGS. If we use online money transfer, we need internet banking facilities. Online transactions can be used anywhere at any time. In comparison to DD and cheques, it is a very fast way to make payments.
- Credit and debit cards: Debit cards draw money directly from our bank accounts. With credit cards, banks charge high-interest rates. Banks decide the credit limit.
- E-Wallets: In the last year, e-wallet transactions have continuously

increased. People use many digital wallets like Paytm, Google Pay, and Mobikwik.

- Gift cards: A gift card is a pre-loaded card that can be purchased from a bank or merchant. Gift cards are loaded with a fixed amount.
- Aadhaar enabled payment system: AEPS is one of the most famous cashless transaction apps. In AEPS, it is mandatory to link your Aadhaar card to your bank account. It performs transactions like Aadhaar-to-Aadhaar fund transfers, cash withdrawals, and cash deposits.

Advantages of Cashless Transactions *(Shankar and Kausalya)*

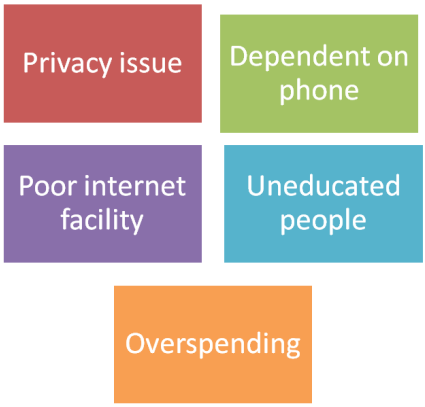
There are many advantages of cashless transactions. These are the following:



- **Easier to track black money:** An advantage of cashless transactions is that it is easier to track black money.
- **Increase in tax revenue:** All transactions will be through organized channels, resulting in increased tax revenue.
- **Economic growth:** Going cashless is not an easy task because rural people are not aware. Cashless transactions help in stopping black money and corruption. Then it can also help in economic growth.
- **Transaction speed:** Cash payments are time-consuming. So, many businesses and organizations decide to use cashless transactions. Cashless transactions are easy to use anywhere at any time.
- **Save money and time:** Our society is moving from cash to cashless transactions. Cashless transactions save money and time. Even when we use digital payment systems, many companies provide cashback.

Disadvantages of Cashless Transactions

There are many disadvantages of cashless transactions. These are:



- Privacy issues: Technology will never be perfect. In a cashless society, people face many challenges like privacy issues, data theft, hackers, and security issues.
- Dependent on phones: Being dependent on your phone poses many challenges. If we are going to villages and small towns where phone payment services are not available, we face many problems.
- Poor internet facilities: In big cities, online transactions cannot be made because of poor infrastructure facilities.
- Uneducated people: In India, half of the population belongs to rural areas. Rural people are not well educated and do not know how to use digital transactions.
- Overspending: There is no denying the fact that cashless transactions are easier to make. With just a simple click, people can make payments.

Literature Review

- Podile, Rajesh (2017): After demonetization, people started using electronic payments for their transactions. Small merchants and vegetable vendors are using digital payments. Slowly, India is moving from cash to cashless transactions and increasing the use of credit and debit cards.
- Ali, Hasan, Atif Aman (2020): Developed and developing countries also focus on cashless transactions. Sweden is the first cashless economy, and major banks have stopped working with cash. The Government of India introduced various schemes like Digital, mobile banking, BHIM, and Lucky Grahak Yojana.

- Akhalumeh and Ohioke (2011): Found out some challenges faced by the general public. Their findings show that 34.0% of respondents face internal fraud.
- Survase: The dream of a cashless India cannot come true. The Government of India introduced awareness camps. The trend of digital transactions is also increasing, but the rate is relatively low.
- Garg and Panchal (2017): The government is working on various levels to reduce the dependency on cash. RBI has also issued licenses to small finance banks and payments banks. A cashless economy also reduces the cost of banking services.

Research Methodology

Research methodology talks about how the research is conducted and what the procedure of research will be. This chapter includes various parts like the objective of the study, research design, sample size, sampling design, and tools and techniques.

Objectives of the Study

- To study cashless transactions in rural areas.
- To know the different benefits of cashless transactions.
- To highlight the different methods used in cashless transactions.
- To know the reasons for using cashless transactions.
- To identify the different challenges.

Research Design

In this study, a descriptive research design is used. A statistical sample of the population is taken in this study which helps in examining cashless transactions in rural areas. This study is conducted in the form of a survey to observe the intention of rural people about cashless transactions.

Data Collection

Data collection is about collecting information from respondents. In this study, information is gathered from primary and secondary data.

For the collection of primary data, a questionnaire is prepared. Secondary data for the research is collected from various sources like articles, journals, and internet websites.

Time Frame of the study: February 2021 – June 2021

Sample size: The sample of 70 respondents has been selected because of limited time.

Sampling Design
Sampling technique: Convenience sampling
Sample size: 70
Duration of data collection: 2021

Tools and Techniques: Percentages, tabulation, pie charts, and graphs are used in this study to analyze the data. Microsoft Excel Software is used for tabulation, pie charts, and graphs. Google Forms is used for filling out the questionnaire.

Rationale of the Study

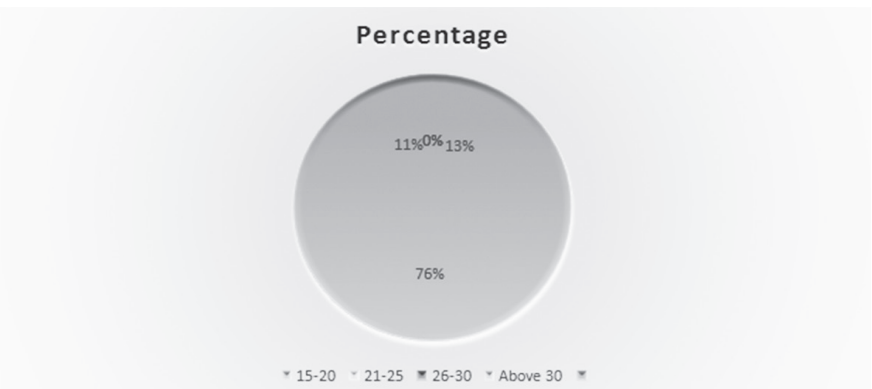
Cashless transactions are very important in the present day. The main advantage of cashless transactions is that they secure all economic transactions. The advantage for citizens of the country in a cashless economy is reducing the risk of carrying currency notes. Cashless transactions provide security. They also help in increasing tax revenue.

Data Analysis and Interpretation

Age

Table-1: Age of Respondents

S. No.	Age	No. of respondents	Percentage
1	15-20	9	12.8
2	21-25	53	75.7
3	26-30	8	11.4
4	More than 30	0	0
	Total	70	100

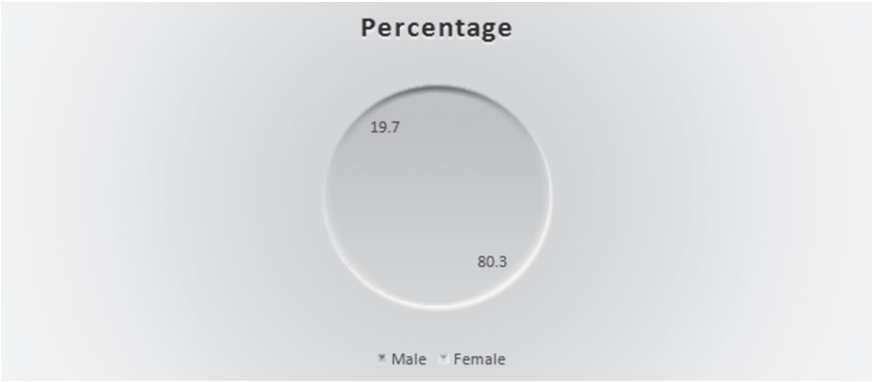


Interpretation

Figure-4.1 shows that there are 13% respondents from the 15-20 age group, 76% respondents from the 21-25 age group, 11% respondents from the 26-30 age group, and 0% from above the 30 age group. Most of the respondents are from 21-25 age group.

Table-2: Gender of the Respondents

S. No.	Gender	No. of Respondents	Percentage
1	Male	57	81.4
2	Female	13	18.5
	Total	70	100

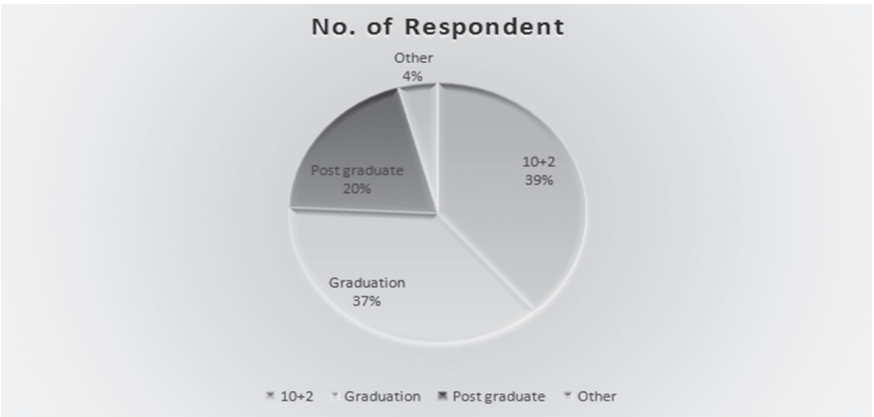


Interpretation

Figure-4.2 shows that there are 80.3% male respondents and 19.7% female respondents out of the total seventy respondents. Most of the respondents are male in comparison to female respondents.

Table-3 Education Qualification

S. No.	Education Qualification	No. of Respondents	Percentage
1	10+2	27	38.5
2	Graduation	26	37.1
3	Post graduate	14	20
4	Other	3	4.2
	Total	70	100

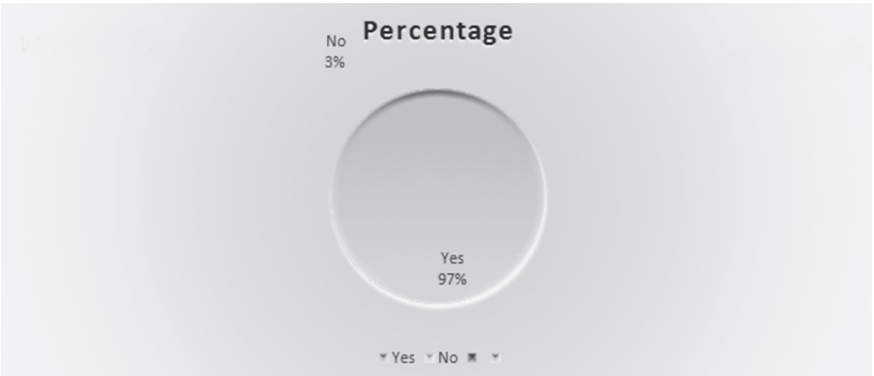


Interpretation

Figure-4.3 shows that most of the respondents have the qualification of 10+2. We can see that 39% of the respondents have the qualification of 10+2, 37% of the respondents have the qualification of graduation, 20% respondents have the qualification of post-graduation, and 4% respondents have the qualification of other.

Table-4 Are you aware regarding the cashless transactions?

S. No.	Aware Regarding Cashless Transactions	No. of Respondents	Percentage
1	Yes	68	97
2	No	2	3
	Total	70	100



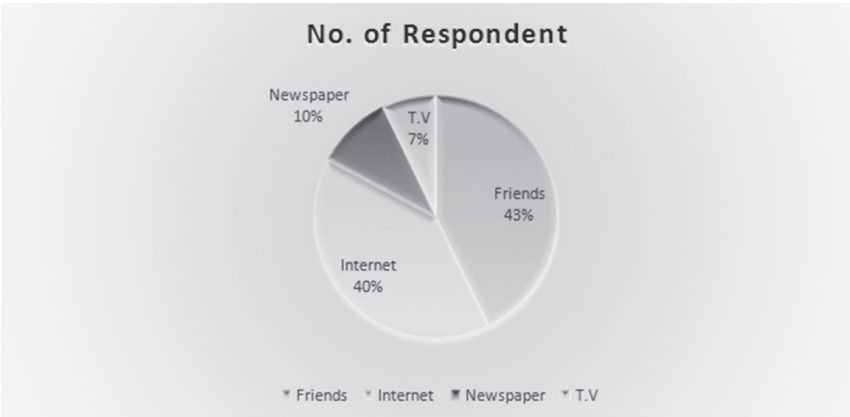
Interpretation

Figure-4.4 shows that 97% of respondents are aware of cashless payments, and 3% of respondents are not aware of cashless transactions.

Information about Cashless Transactions

Table-5: Where did you get information about cashless transactions?

S. No.	Get Information About Cashless Transactions	No. of Respondents	Percentage
1	Friends	30	43
2	Internet	28	40
3	Newspaper	7	10
4	T.V	5	7
	Total	70	100



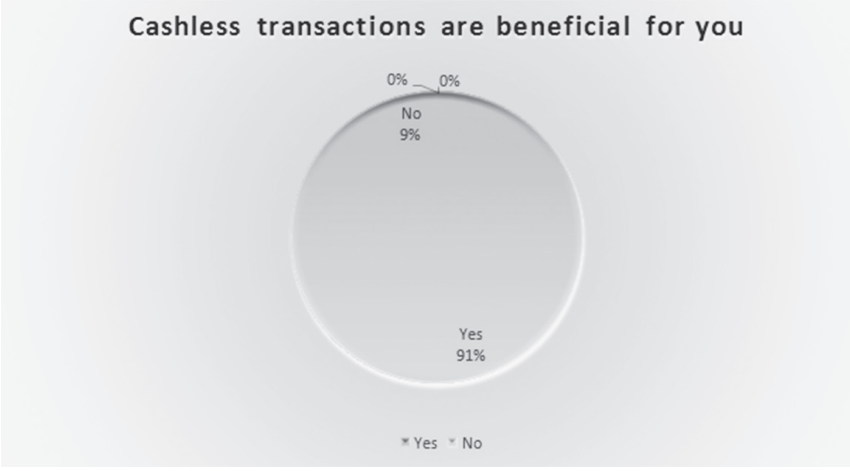
Interpretation

Figure-4.5 indicates that most of the respondents got information from their friends. We can see that 43% of respondents got information from their friends, 40% of respondents got it from the internet, 10% of respondents got it from newspapers, and 7% of respondents got it from T.V.

Benefit from Cashless Transactions

Table-6: Cashless transactions are beneficial for you

S. No.	Cashless Transactions are Beneficial for You	No. of Respondents	Percentage
1	Yes	64	91
2	No	6	9
	Total	70	100



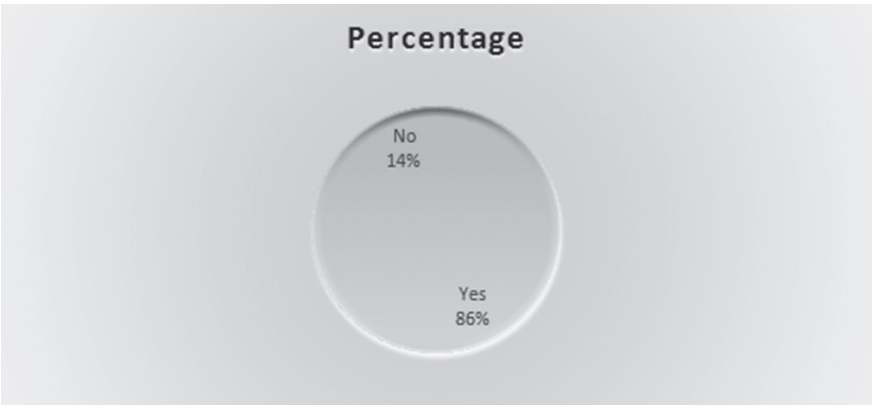
Interpretation

Figure-4.6 shows that 91% of respondents got benefits from cashless transactions, and 9% of respondents did not get any benefit from it. We can see that most of the respondents agree that cashless transactions are beneficial for them.

Use anywhere

Table-7: Are you agree that cashless transactions are used anywhere?

S. No.	Cashless Transactions are Use Anywhere	No. of Respondents	Percentage
1	Yes	60	86
2	No	10	14
	Total	70	100



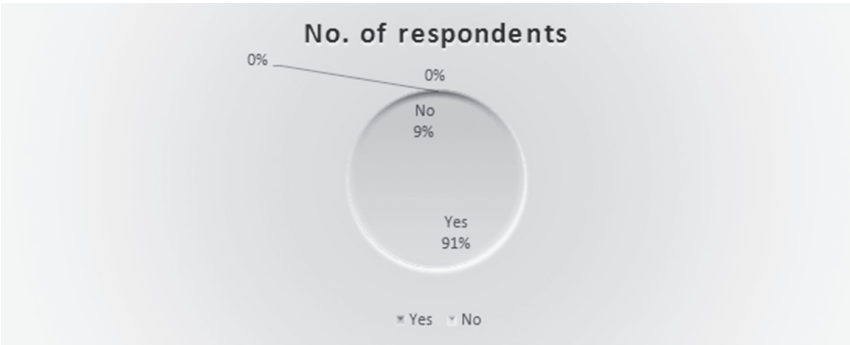
Interpretation

Figure-4.7 shows that 86% of respondents agree that cashless transactions can be used anywhere, and 14% of respondents do not agree that cashless transactions can be used anywhere. Most of the respondents agree that cashless transactions can be used anywhere.

Benefit from Cashless Transactions

Table-8: Get any benefit from cashless transactions

S. No.	Benefit from Cashless Transactions	No. of Respondents	Percentage
1	Yes	64	91
2	No	6	9
	Total	70	100



Interpretation

According to this figure, 91% respondents are agreeing that cashless transactions are benefit for him and 9% respondent are not agreeing that cashless transactions are benefit for him.

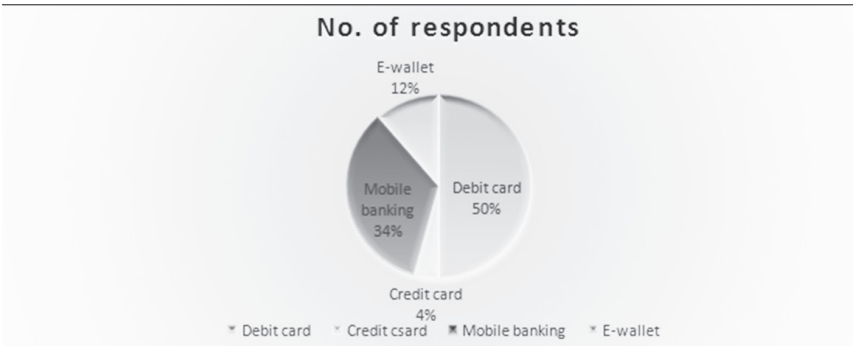
Payment Method

Table-9: Which of the following payment methods would you be most likely opt for?

S. No.	Payment Method is Most Likely Opting for	No. of Respondents	Percentage
1	Debit card	35	50
2	Credit card	3	4
3	Mobile banking	24	34
4	E-wallet	8	12
	Total	70	100

Interpretation

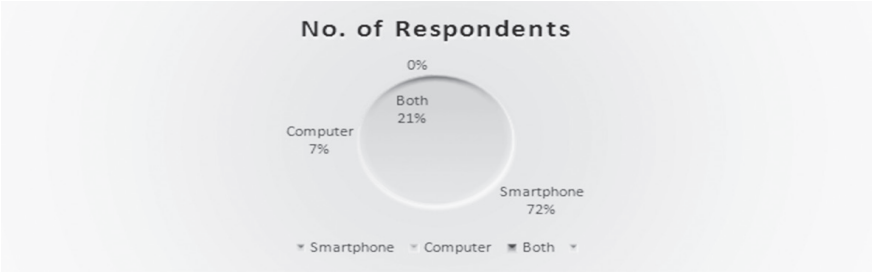
Figure-4.9 indicate that debit card is very popular and widely useable. Figure shows that there are 50% respondents who use Debit cards, 34% respondents who use mobile banking,12% respondents are use e-wallet, 4% respondents who use credit card.



Device for Making Cashless Payment

Table-10: Which device do you use for making the cashless payment?

S. No.	Device Do You Use for Making the Cashless Payment	No. of Respondents	Percentage
1	Smartphone	50	72
2	Computer	5	7
3	Both	15	21
	Total	70	100



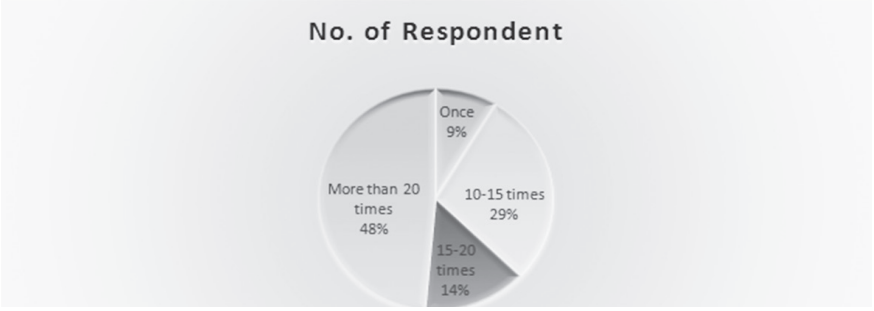
Interpretation

According to this figure, 72% respondents using smartphone to making the cashless payment, 7% respondents using computer to making cashless payment, 21% respondents using both to making cashless transactions. Most of the respondents use smartphone to making cashless transactions.

Times

Table-11: How many times have you use cashless transactions?

S. No.	Times Have You Use Cashless Transactions	No. of Respondents	Percentage
1	Once	6	9
2	10-15 times	20	29
3	15-20 times	10	14
4	More than 20 times	34	48
	Total	70	100



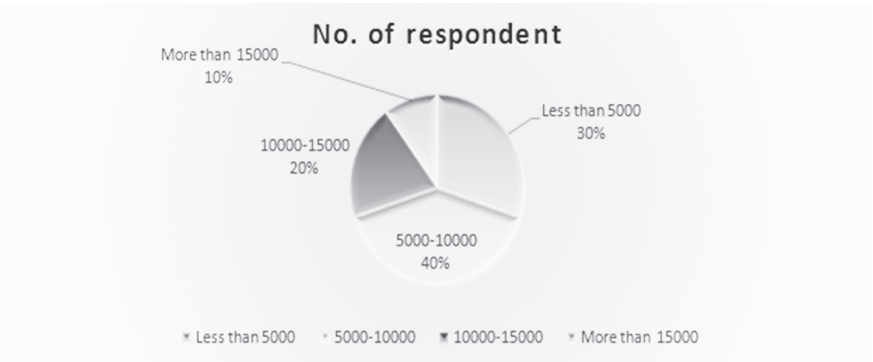
Interpretation

In the above pie chart, most of the respondents using cashless transactions in more than 20 times in a month. 6 respondents using cashless transactions in once in a month.

How much money you load

Table-12: How much money do you load in cashless transactions on a monthly basis?

S. No.	Money do you load	No. of Respondents	Percentage
1	Less than 5000	21	30
2	5000-10000	28	40
3	10000-15000	14	20
4	More than 15000	7	10
	Total	70	100



Interpretation

In the above figure there are 30% respondents load less than 5000 rupees for cashless transactions on a monthly basis, 40% respondents load 5000-10000 rupees on a monthly basis for cashless transactions, 20% respondents load 10000-15000 rupees and 10% respondents more than 15000 rupees.

Cashless Transaction

Table-13: Why do you prefer cashless transactions?

S. No.	Prefer Cashless Transactions	No. of Respondents	Percentage
1	Time saving	34	48
2	Easy to use	25	36
3	Security	11	16
	Total	70	100

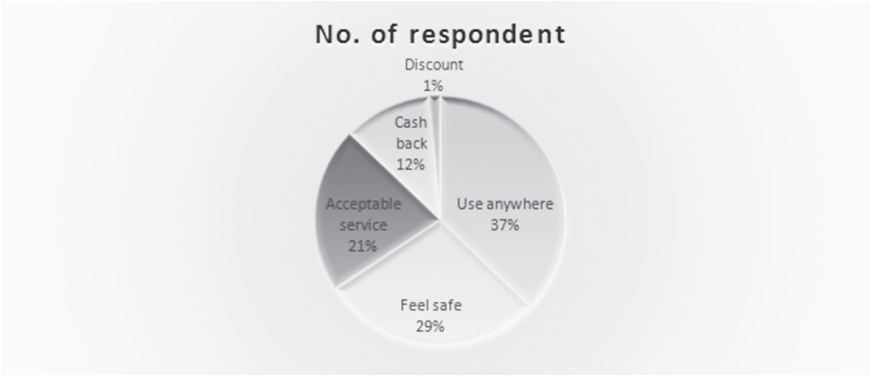
Interpretation

Figure-4.13 indicate that most of the respondents prefer cashless transactions to time saving. 48% respondents use cashless transactions to time saving,36% respondents use cashless transactions to easy to use, 16% respondents prefer cashless transactions to security issue.

Reason

Table-14: Reason for using cashless transactions service

S. No.	Reason For Using Cashless Transactions	No. of Respondents	Percentage
1	Use anywhere	26	37
2	Feel safe	20	29
3	Acceptable service	15	21
4	Cash back	8	12
5	Discount	1	1
	Total	70	100



Interpretation

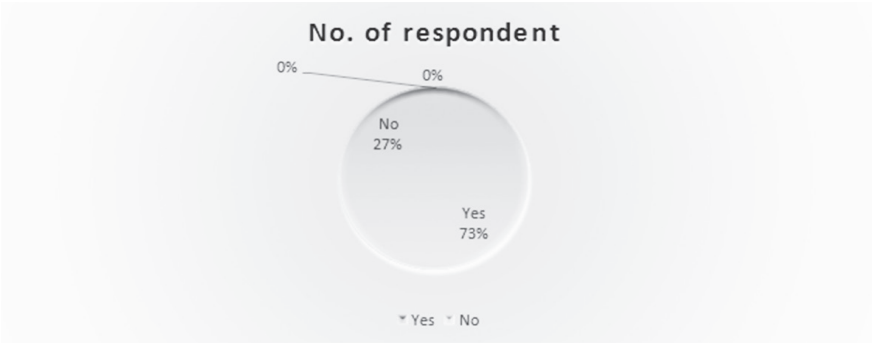
In the above pie chart, most of respondents are agree that cashless transaction is use anywhere. 37% respondents are agreeing to use cashless transactions use anywhere, 29% respondents feel safe, 21% respondents are agreeing

that cashless transactions service are acceptable, 12% respondents get cashback and 1% respondents get discount.

Obstacles

Table-15: Are there any obstacles when you use cashless transactions?

S. No.	Any obstacles when you use cashless transactions	No. of Respondents	Percentage
1	Yes	51	73
2	No	19	27
	Total	70	100

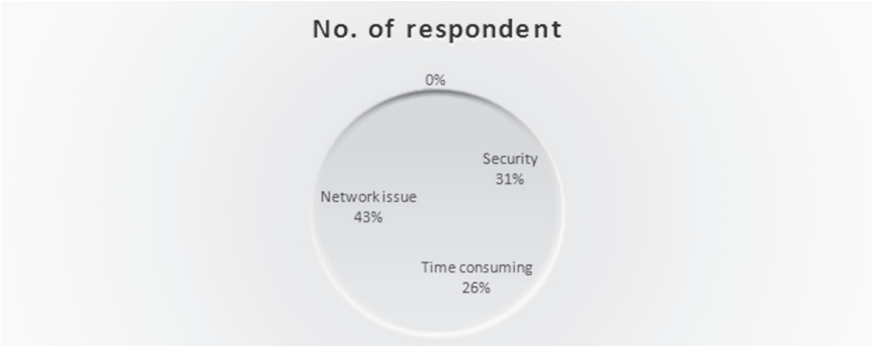


Interpretation

Figure-4.15 shows that 73% respondents are agree to face many obstacles and 27% respondents did not face any problem.

Table-16: What are the obstacles you face while using cashless transactions?

S. No.	What are the Obstacles	No. of Respondents	Percentage
1	Security	22	31
2	Time consuming	18	26
3	Network issue	30	43
	Total	70	100

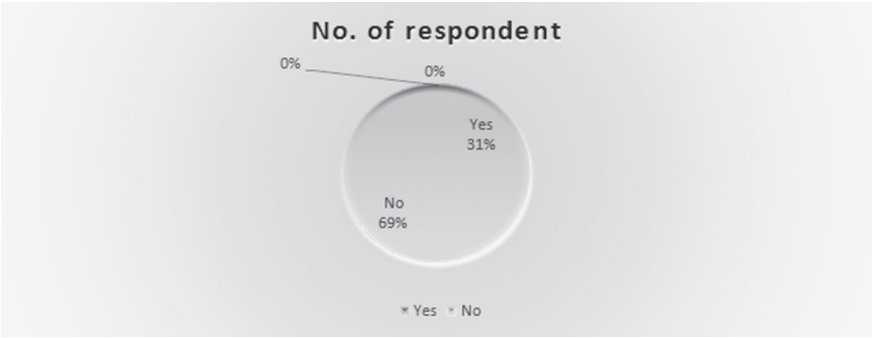


Interpretation

In the above figure 43% respondents facing network problem,31% respondents facing security issue and 26% respondents are agree that cashless transaction is time consuming.

Table-17: Do you feel safe carrying large amount of cash in public areas?

S. No.	Feel safe	No. of Respondents	Percentage
1	Yes	22	31
2	No	48	69
	Total	70	100

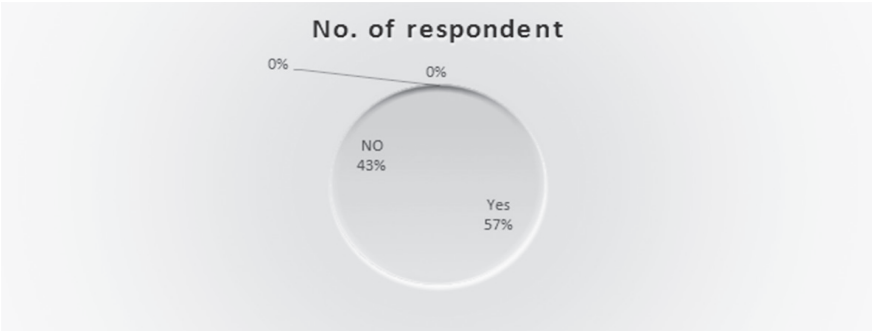


Interpretation

Most of the respondents are not feel safe carrying large amount of cash in public area. 31% respondents are feeling safe to carrying large amount of cash in public area.

Table-18: Are you facing digital infrastructure problem?

S. No.	Facing any Digital Infrastructure Problem	No. of Respondents	Percentage
1	Yes	40	57
2	No	30	43
	Total	70	100

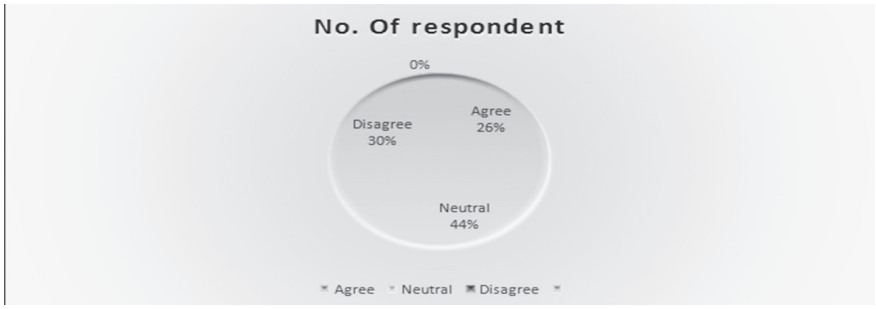


Interpretation

In the above figure 57% respondent facing digital infrastructure problem and 43% respondent are not facing any digital infrastructure problem.

Table-19: Do you believe that digital transactions in not secure?

S. No.	Digital Transactions are Not Secure	No. of Respondents	Percentage
1	Agree	18	26
2	Neutral	31	44
3	Disagree	21	30
	Total	70	100

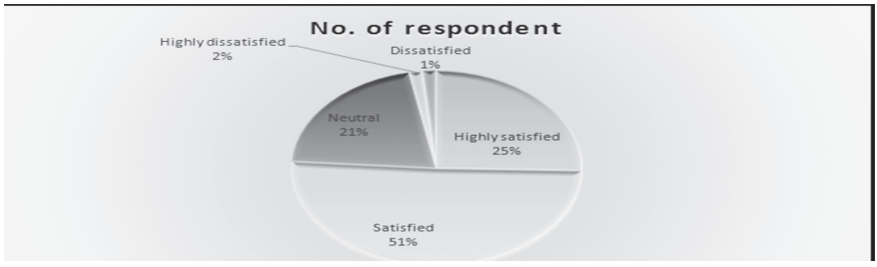


Interpretation

Figure-4.19 indicate that 44% respondents are neutral about digital transactions security and 26% respondents are agree that digital transactions are secure and 30% respondents are disagreed about digital transactions is not secure.

Table-20: How do you rate the cashless transactions service that you have use?

S. No.	Rate the Cashless Transactions Service	No. of Respondents	Percentage
1	Highly satisfied	17	24.2
2	Satisfied	34	52.8
3	Neutral	14	20
4	Highly dissatisfied	1	1.4
5	Dissatisfied	1	1.4
	Total	70	100

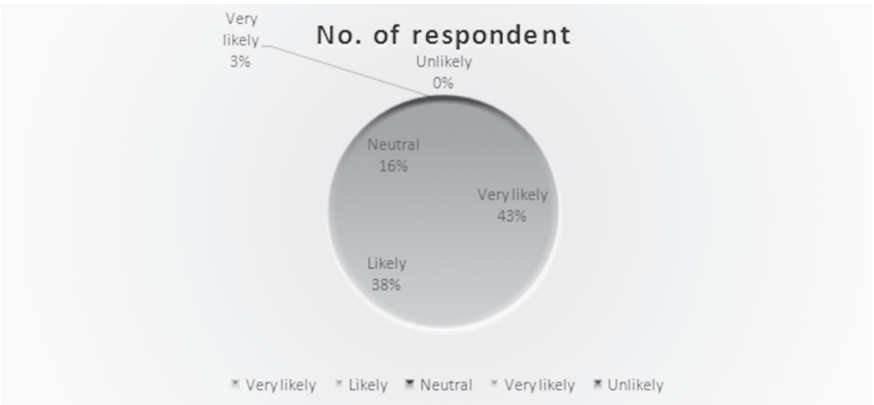


Interpretation

The above pie chart shows the satisfaction level of the respondents and their rates are- 5 rate to highly satisfied, 4 rate to satisfied, 3 rate to neutral, 2 rate to highly dissatisfied and 1 rate to dissatisfied.

Table-21: Would you want to continue using cashless transactions?

S. No.	Continue Using Cashless Transactions	No. of Respondents	Percentage
1	Very likely	30	43
2	Likely	27	38
3	Neutral	11	16
4	Very likely	2	3
5	Unlikely	0	0
	Total	70	100



Interpretation

In the above figure 43% respondents are very likely to use cashless transactions and 0% respondents are unlikely to use cashless transactions.

Findings

- Day by day, the cashless transaction system is reaching new heights. People living in rural areas are moving from cash to cashless transactions. 97% of rural people are aware of cashless transactions.
- Rural people are using cashless transactions. 91% of people get benefits from cashless transactions because they provide benefits like cashback, discounts, and time savings.
- Rural people cannot carry cash all the time because it is not safe. 86% of respondents agree that cashless transactions can be used anywhere.
- Rural people are using many payment methods like debit cards, credit cards, mobile banking, and e-wallets. Debit cards are the most

popular among rural people. There should be zero charges on cashless transactions. The government charges for many benefits.

- The main reason for using cashless transactions is because they can be used anywhere. 37% of people agree that cashless transactions can be used anywhere.
- Rural people are not literate and face many challenges. Cashless transactions are not only a requirement but also a need for rural people and society. On the other hand, the risk to security is very high because cashless transactions are done over the internet. 31% of respondents face security issues.
- 71% of respondents make payments through smartphones.
- Rural people do not feel secure, so they load only 15,000 rupees or more than 15,000 rupees for cashless transactions. 40% of people load only 5,000-10,000 rupees.
- Rural people are satisfied with cashless payments because they can be used anywhere and provide benefits. 52% of respondents are satisfied with cashless transactions.
- Rural people are satisfied and will continue using cashless transactions in the future. 43% of respondents are very likely to use cashless transactions in the future because it is a need for society and rural people.

Limitations of the Study

- Due to time constraints, it was not possible to collect a larger sample size.
- This study is conducted in India, but due to time constraints, it was conducted in only four districts.
- The study focuses only on rural people.

Scope of the Study

The central government focuses on cashless transactions. Carrying cash everywhere is not safe, so the government focuses on cashless transactions. The future of a cashless India is very bright. People using digital transactions everywhere increases credibility. The step towards cashless transactions is a great success. This study is conducted on cashless transactions in rural areas of the Mahendargarh district.

Conclusion

The present study attempted to understand cashless transactions in rural areas. A cashless transaction is where all economic transactions take place digitally.

Many rural people accept cashless transactions. Cashless transactions provide many benefits like discounts and cashback.

But rural people face many difficulties like security issues and network issues. Cashless transactions help develop the economy and reduce illegal or unethical activities. The government needs more methods to increase financial literacy among rural people so they can be aware of the benefits of electronic payments. It can be done by campaigning in the villages and by making apps more user-friendly. The government should also focus on providing proper digital infrastructure facilities to rural people.

Hence, by these measures, cashless transactions can become part of the daily transactions of rural people.

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Appendices

Questionnaire

1. Name*

   ……..……..……..

2. E-mail ID*

   ……..……..……..

3. Age

   • 15-20 • 21-25

   • 26-30 • More than 30

4. Gender

   • Male • Female

5. Education qualification
   - 10+2
   - Graduation
   - Post gradation
   - Other

6. Are you aware regarding the cashless payment?
   - Yes
   - No

7. Where did you get information about cashless transactions?
   - Friends
   - Internet
   - Newspaper
   - T.V.

8. Cashless transactions are beneficial for you?
   - Yes
   - No

9. Are you agree that cashless transactions are use anywhere?
   - Yes
   - No

10. Get any benefit from cashless transactions?
    - Yes
    - No

11. Which of the following payment method would you be most likely opt?
    - Debit card
    - Credit card
    - Mobile banking
    - E-wallet

12. Which device do you use for making the cashless payment?
    - Smartphone
    - Computer
    - Both

13. How many times have you use cashless transactions?
    - Once
    - 10 to 15 times
    - 15 to 20 times
    - More than 20 times

14. How much money do you load in cashless transactions on a monthly basic?
    - Less than 5000
    - 5000-10000
    - 10000-15000
    - More than 15000

15. Why do you prefer cashless transactions?
    - Time saving
    - Easy to use
    - Security

16. Reason for using cashless transactions?
    - Use anywhere
    - Feel safe
    - Acceptable services
    - Cashback
    - Discount

17. Are there any obstacles when you use cashless transactions?
    - Yes
    - No

18. What are the obstacles you face while using cashless transactions?
    - Security
    - Time consuming
    - Network

19. Do you believe that cashless transactions are secure?
    - Yes
    - No

20. Do you feel safe carrying large amount of cash in public areas?
    - Yes
    - No

21. Are you facing digital infrastructure problem?
    - Yes
    - No

22. How do you rate the cashless transactions service that you have used?
    - Highly satisfied
    - Satisfies
    - Natural
    - Highly dissatisfied
    - Dissatisfied

23. Would you want to continue using cashless transactions?
    - Very likely
    - Likely
    - Natural
    - Very unlikely
    - Unlikely

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Paytm's Crisis Management: Regulatory Compliance and Market Impact

Ujjal Mukherjee*

Abstract

The case study explores the regulatory challenges Paytm, a leading Indian fintech company, encountered due to actions by the Reserve Bank of India (RBI). These regulatory measures aimed to address concerns about compliance with Know Your Customer (KYC) norms and other standards. Consequently, Paytm faced significant operational disruptions and a loss of market confidence. Despite these challenges, Paytm promptly reassured its users about the continuity of essential services like UPI transactions and offline merchant offerings. Additionally, the company-initiated plans to transition users away from affected services such as Paytm Payments Bank (PPBL) to alternative banking solutions.

From this case, participants can glean valuable insights into the critical importance of regulatory compliance in the fintech sector. It underscores the potential repercussions of non-compliance on market stability and customer trust. The case study also highlights effective crisis management strategies, including proactive stakeholder communication and agile operational adjustments to mitigate the impact of regulatory actions. Students are encouraged to analyze the broader implications for fintech firms operating in regulated environments, considering the necessity of robust compliance frameworks and strategic resilience to navigate regulatory scrutiny and market dynamics effectively.

Introduction

On the morning of February 9, 2024, Vijay Shekhar Sharma (Vijay) picked up his first glass of lukewarm water and glanced at the headline in "The Economic Times" newspaper on the table. It read, "Paytm Crisis: Action Taken After Persistent Non-Compliance, Says Reserve Bank of India (RBI) Deputy Governor Swaminathan."

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On February 8, 2024, RBI Deputy Governor Swaminathan J. addressed the ongoing issues with Paytm, citing persistent non-compliance that led to regulatory action. He underscored that while specifics about actions on PPBL were not disclosed, such measures followed extensive engagements spanning months or years, during which the RBI identified deficiencies and allowed time for corrections, with consumer protection as a priority. The RBI had imposed significant restrictions on Paytm Payments Bank Ltd (PPBL) effective February 29, 2024, halting deposits and top-ups across customer accounts, wallets, FASTags, and other instruments due to major KYC irregularities posing risks to customers. Swaminathan J. stressed that these actions were part of a prolonged engagement strategy ensuring consumer protection and financial stability.

Governor Shaktikanta Das of the RBI reaffirmed the regulator's role as responsible, assuring that the Paytm issue did not reflect broader systemic concerns. He explained the RBI's approach of bilateral engagement with regulated entities, urging corrective actions and enhancing supervisory methods to uphold regulatory standards. Governor Das clarified that the Paytm situation resulted from compliance lapses rather than regulatory deficiencies, affirming the robustness of existing regulations without elaborating further.

PAYTM

Paytm, derived from "pay through mobile," is an Indian multinational fintech company headquartered in Noida. Founded in 2010 by Vijay Shekhar Sharma under One97 Communications, the company specializes in digital payments and financial services. Paytm facilitates mobile payments for consumers and provides merchants with QR codes, Payment Soundbox, Android-based terminals, and online gateways for payment acceptance. Collaborating with financial institutions, it offers microcredit and "buy now, pay later" options. Paytm also handles bill payments, money transfers, ticketing, retail brokerage products, and online gaming. One97 Communications conducted India's largest IPO on November 18, 2021, raising ₹18,300 crore (US$2.2 billion) and reaching a valuation of US$20 billion. For the fiscal year 2022-23, Paytm reported a gross merchandise value (GMV) of ₹13.2 lakh crore (US$160 billion).

Several pivotal events have influenced Paytm's trajectory since 2020. During the COVID-19 pandemic in July 2020, Tata Starbucks collaborated with Paytm to enable online food orders. On September 18, 2020, Paytm's app faced a temporary removal from Google Play due to alleged violations of the Play Store's gambling policy. Paytm contested this, pointing out similar cashback promotions on Google Pay that faced no sanctions. In July 2021, One97 Communications filed for an IPO, which debuted in

November 2021, raising ₹18,300 crore (US$2.2 billion) and valuing the company at US$20 billion, although the stock experienced a significant drop of over 27% on its first trading day.

In December 2021, Paytm launched the Paytm Wealth Academy. Regulatory challenges emerged in March 2022 when the RBI prohibited Paytm Payments Bank from acquiring new customers due to data breaches involving China-linked entities with indirect stakes in the bank. On January 31, 2024, the RBI mandated Paytm Payments Bank to cease most activities starting February 29, 2024, citing inadequate background checks on fund sources during client onboarding.

PAYTM and RBI

The Background

The RBI responded decisively to address issues with KYC norms, compliance, and transactions involving related parties, citing concerns over potential money laundering and substantial financial transactions. Instances of non-compliance with KYC regulations and the use of single PANs for multiple accounts raised significant concerns. Reports indicated that PPBL came under RBI scrutiny for opening numerous accounts without proper identification, prompting the RBI to alert enforcement agencies like the Enforcement Directorate (ED) about these irregularities. Further concerns emerged when transactions in PPBL accounts exceeded regulatory limits for minimum KYC pre-paid instruments, increasing suspicions of money laundering. Additionally, The Economic Times highlighted a case where a single PAN was linked to over 1,000 wallets, revealing significant lapses in KYC procedures that exposed customers, depositors, and wallet holders to substantial risks.

In response, the RBI directed Paytm Payments Bank to cease accepting deposits or top-ups across various instruments after February 29, marking a significant regulatory move. Following this directive, Revenue Secretary Sanjay Malhotra stated that the ED would investigate PPBL if evidence of illegal activities surfaced. "If the RBI were to level new accusations of money laundering against Paytm, the ED would conduct an investigation in accordance with national laws," clarified Malhotra. He later confirmed that no law enforcement actions had been initiated against Paytm to date.

Paytm's Initial Response

Paytm's founder-CEO responded to recent developments by assuring users of the app's continued functionality beyond February 29 in a statement on February 2nd. He expressed gratitude for the unwavering support and loyalty of Paytm users, emphasizing the company's dedication to national service while strictly adhering to regulatory standards and focusing on

advancing payment innovation and promoting financial inclusion. The company reiterated its ongoing dialogue with the RBI to comply with regulatory directives.

Regarding the ED investigation, Paytm affirmed its commitment to stringent ethical standards and maintained that it had not been subject to any investigation related to money laundering. On February 5, the company categorically rejected reports of any investigation or violation of foreign exchange regulations by itself or its affiliate PPBL, dismissing recent media coverage as entirely baseless and harmful.

In an official filing, the company clarified, "We have vehemently denied any ED investigation into OCL, our affiliates, or our management. Subsequent media reports have continued to unwarrantedly speculate about investigations into the Company or PPBL for alleged breaches of foreign exchange regulations." The company emphasized, "Neither the Company nor its affiliate, Paytm Payments Bank Limited, has been under investigation. Such media reports were entirely misleading, groundless, and detrimental to the interests of all stakeholders."

The Impact

On February 6, Paytm's stock staged a significant recovery, bouncing back more than 5 percent on the BSE after an initial 9 percent decline in early trading, supported by robust trading volumes. Earlier in the day, the stock had hit a record low of ₹395.50 on the BSE, marking a drop of 9.77 percent, but swiftly rebounded, surging over 19 percent from its lowest point and entering positive territory. Reports indicated that over 68 lakh equity shares of One 97 Communications, Paytm's parent company, were traded at an average price of ₹394 per share that day, accounting for 0.1 percent of total equity. Paytm's stock had suffered a substantial 39 percent decline over the course of a single week, primarily due to regulatory actions by the RBI.

Within just two days, One 97 Communications Ltd saw its shares plummet by 36 percent from January 31 to February 2, 2024, resulting in a significant reduction in market capitalization amounting to ₹17,378.41 crore. Paytm had anticipated an annual operational profit impact ranging from ₹300 to ₹500 crore due to these developments. Adding to the downturn, One 97 Communications (Paytm) shares continued their decline for the third consecutive session, triggering a lower circuit of 10 percent on February 5 at ₹438.35, marking another record low on the BSE following a previous drop of 36 percent over the preceding two sessions. As of February 5, the stock had plummeted by 56 percent from its peak in the past 52 weeks and was nearly 80 percent below its IPO price of ₹2,150.

In February alone, the stock shed more than 42 percent of its value following a nearly 20 percent rise in January, contributing to an overall decline of over 7 percent in the past year. Warren Buffett's Berkshire

Hathaway had divested its remaining stake in One 97 Communications just two months before the RBI's regulatory actions, selling its final 2.46 percent stake for ₹1,371 crore in November 2023 to Ghisallo Master Fund and Copthall Mauritius Investment. Ghisallo acquired 4,275,000 shares, while Copthall purchased 7,575,529 shares at ₹877.2 per share, facilitated by JP Morgan. During One97's IPO, Berkshire Hathaway had sold a portion of its stake for ₹301.70 crore at ₹2,150 per share. Overall, Berkshire Hathaway realized ₹1,672.7 crore from its investments in Paytm, incurring an estimated loss of about ₹507 crore. Other major backers of Paytm, including SoftBank and Ant Group, had also recently divested their holdings.

Challenges for Customers

Users were given the option to transition to alternative digital wallets, with essential services like loan distribution, insurance, and equity broking remaining unaffected by recent developments. Paytm reassured its users that offline merchant services would continue without interruption and guaranteed seamless operation of its UPI service without disruptions. Collaborating with partner banks, Paytm implemented necessary backend adjustments to ensure uninterrupted service, emphasizing that users did not need to take additional actions despite regulatory constraints. Paytm clarified that the RBI's directive did not impact user deposits in savings accounts, wallets, FASTags, or NCMC accounts, allowing existing balances to be used without interruption. However, during an earnings call, Paytm's leadership indicated plans to facilitate the migration of PPBL, wallet, FASTag, and other users to alternative banking services.

Post February 29, 2023, users could continue using their Paytm Wallet balances until depleted, but could no longer add funds, with the same restriction applying to PPBL accounts, FASTags, and associated services. Withdrawals and transactions remained unaffected. With options including Mobikwik, PhonePe, SBI, ICICI Bank, HDFC, and Amazon Pay among others, users explored alternative wallet services offered by over 20 banks and non-banking entities, while 37 banks provided FASTag services, including major institutions like SBI, HDFC, ICICI, and Airtel Payments Bank.

Dilemma

During his press briefing, RBI Governor Das highlighted several key points. He noted that in recent years, the RBI had significantly enhanced its supervisory methods, emphasizing bilateral engagement with regulated entities to encourage corrective actions, allowing ample time for compliance. However, when these efforts proved ineffective or entities failed to comply, the RBI imposed appropriate supervisory or operational

restrictions proportionate to the severity of the issues. Governor Das underscored that all regulatory actions were aimed at safeguarding systemic stability and customer interests, reiterating the RBI's commitment to fostering innovation and supporting technological advancements.

As Vijay perused the newspaper from his seat on the sofa, he contemplated the imminent decisions ahead. He deliberated on the appropriate course of action for himself and the company. How should they respond to the current situation? Should they convene a press conference? If so, what should be the primary focus when addressing inquiries from the press? These thoughts weighed heavily on Vijay as he strategized the best approach to navigate the challenges facing the organization.

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LIST OF **TRAINING PROGRAMMES 2024-25**

S No	Title of Programme	Programme Date	Programme Director(s)
1	Supervisory Development Programme [for the Executives of MSN Labs]	Apr 15-16, 2024	Dr Sinju Sankar
2	Leadership Excellence Accelerator Programme (LEAP) [for the Executives of Ramky Estates]	Apr 22-24, 2024	Dr Sinju Sankar & Dr Swati Mathur
3	Supervisory Development Programme [for the Executives of MSN Labs]	May 6-7, 2024	Dr Sinju Sankar
4	ESG Reporting and Sustainability	May 8-10, 2024	Prof Ch Lakshmi Kumari
5	Workshop on "Customer Acquisition and Retention"	May 17-18, 2024	Prof Padmaker Jadhav
6	Supervisory Development Programme [for the Executives of MSN Labs]	June 10-11, 2024	Dr Sinju Sankar
7	Happiness and Wellbeing for Managers	June 10-12, 2024	Prof Ujjal Mukherjee & Dr K Bhavana Raj
8	Leadership and Change Management	June 25-27, 2024	Prof A Sridhar Raj & Dr Anupama Dubey Mohanty
9	CSR for High Impact Corporate Performance	July 8-9, 2024	Ms J Kiranmai
10	Supervisory Development Programme [for the Executives of MSN Labs]	July 8-9, 2024	Dr Sinju Sankar
11	Financial Models for Sustainable Excellence	July 9-11, 2024	Dr M Chandra Sekhar
12	New Labour Codes and Industrial Relations	July 24-26, 2024	Dr Vasanti & Dr Anuradha
13	Operations and Supply Chain Analytics for Competitive Advantage	July 24-26, 2024	Dr Abhay Srivastava & Prof S Satish Kumar
14	Supervisory Development Programme [for the Executives of MSN Labs]	Aug 5-6, 2024	Dr Sinju Sankar
15	Project Appraisal, Financing and Management	Aug 7-9, 2024	Prof S Sreenivasa Murthy, Dr M Chandra Shekhar & Dr P Kalyani
16	Analytics for Industry 4.0: Insights of Disruptive Technologies	Aug 12-14, 2024	Dr Shaheen & Dr Rajkumar Pillay
17	Finance for Non-Finance Executives	Aug 20-22, 2024	Dr K V Ramesh & Dr Maschender Goud
18	Emotional Intelligence: The Language of Leadership	Aug 28-30, 2024	Dr Swati Mathur & Prof Y Rama Krishna

S No	Title of Programme	Programme Date	Programme Director(s)
19	Strategic Marketing for Achieving Organization Goals	Sept 4-6, 2024	Dr V Srikanth
20	Supervisory Development Programme [for the Executives of MSN Labs]	Sept 9-10, 2024	Dr Sinju Sankar
21	Employee Engagement and Wellbeing	Sept 11-13, 2024	Dr Vasanthi Donthi & Dr Mohsin Khan
22	The Prevention of Sexual Harassment (PoSH) Act 2013 at Workplace	Sept 17-18, 2024	Ms J Kiranmai
23	Cyber Crime and Safety Measures	Sept 18-20, 2024	Dr A S Kalyana Kumar
24	Restructuring and Turnaround of Public Enterprises for Sustainable Business	Sept 24-26, 2024	Prof S Sreenivasa Murthy & Prof Ch Lakshmi Kumari
25	Diversity Inclusion and PoSH	Oct 3-4, 2024	Prof A Sridhar Raj & Dr Sinju Sankar
26	Supervisory Development Programme [for the Executives of MSN Labs]	Oct 7-8, 2024	Dr Sinju Sankar
27	Digital & Social Media Marketing – A Hands-on Approach	Oct 8-10, 2024	Mr M J Rama Krishna & Dr A Rakesh Phanindra
28	Business Analytics for Decision Making	Oct 8-10, 2024	Dr Rajkumar Pillay & Dr Shaheen
29	Financial Models for Sustainable Excellence	Oct 15-17, 2024	Dr M Chandra Sekhar
30	Women in Public Sector [for middle level management executives]	Oct 21-25, 2024	Ms J Kiranmai & Prof A Sridhar Raj
31	MoUs for Performance Management in Central PSUs	Oct 28-30, 2024	Prof S Sreenivasa Murthy & Dr P Geeta
32	Supervisory Development Programme [for the Executives of MSN Labs]	Nov 4-5, 2024	Dr Sinju Sankar
33	Communication for Managerial Effectiveness	Nov 5-7, 2024	Dr Anand Akundy
34	Digital & Social Media Marketing – A Hands-on Approach	Nov 6-8, 2024	Mr M J Rama Krishna & Dr A Rakesh Phanindra
35	Happiness and Wellbeing for Managers	Nov 11-14, 2024	Dr Ujjal Mukherjee Dr K Bhavana Raj
36	Transformational Leadership	Nov 12-14, 2024	Prof Y Rama Krishna & Dr Swati Mathur
37	Valuation of Central Public Sector Enterprises	Nov 19-21, 2024	Prof Pawan Kumar Avadhanam
38	Managing Foreign Currencies Risk and Understanding Global Finance	Nov 19-21, 2024	Dr M Karthik & Dr G Rajesh
39	Consumer Behaviour in Digital Age	Nov 19-21, 2024	Dr Syed Azhar & Dr Swati Mathur

S No	Title of Programme	Programme Date	Programme Director(s)
40	Customer Acquisition and Retention	Nov 26-28, 2024	Dr Padmakar Jadhav
41	Supervisory Development Programme [for the Executives of MSN Labs]	Dec 2-3, 2024	Dr Sinju Sankar
42	Data Visualisation Using Power BI	Dec 2-4, 2024	Mr K Srinivas
43	Digital Content Creation	Dec 4-5, 2024	Dr P V Vijay Kumar Reddy & Dr Muzamil Ahmad Baba
44	Cyber Attacks and Cyber Security	Dec 4-6, 2024	Dr Rakesh Phanindra
45	Finance Capsule for Non-Finance Executives	Dec 10-12, 2024	Dr P Kalyani & Dr Swati Mathur
46	Public Private Partnership	Dec 11-13, 2024	Prof S Sreenivasa Murthy Dr Meher Karuna & Dr Swati Mathur
47	Cyber Crime and Safety Measures	Dec 17-19, 2024	Dr A S Kalyana Kumar
48	Block Chain Technology	Dec 18-20, 2024	Mr K Srinivas
49	Project Management	Dec 18-20, 2024	Dr Abhay Srivastava
50	Finance for Non-Finance Executives	Jan 8-10, 2025	Dr K V Ramesh & Dr Maschander Goud
51	CSR for High Impact Corporate Performance	Jan 22-24, 2025	Ms J Kiranmai
52	Personal Branding and Content Creation	Jan 24-25, 2025	Dr P V Vijay Kumar Reddy & Dr Muzamil Ahmad Baba
53	Sustainable Financial Management	Jan 24-25, 2025	Dr Shweta Mehrotra
54	Financial Planning and Wealth Management	Jan 24-25, 2025	Dr Mousumi Singha Mahapatra & Dr Harishankar Vidyarthi
55	Strategic Finance for Leaders in Public Sector Enterprises	Jan 28-30, 2025	Prof Y Rama Krishna
56	Diversity Inclusion and PoSH	Jan 30-31, 2025	Prof A Sridhar Raj & Dr Swati Mathur
57	ESG Reporting and Sustainability	Feb 11-13, 2025	Prof Ch Lakshmi Kumari
58	Sustainable Finance and Risk Management	Feb 21-22, 2025	Dr Shweta Mehrotra
59	Economic Freedom and Happiness	Feb 25-27, 2025	Dr Samarendra Kumar Mohanty & Dr Usha Nori
60	Leadership in VUCA Plus Times	Feb 25-27, 2025	Dr Vasanthi Donthi & Prof A Sridhar Raj

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