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International Multidisciplinary E Conference on

India and the New World Order : Accelerating with
Innovative Development Strategies Amidst Global Turbulence

Date : 19 November 2022, Saturday



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**International Journal of
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on

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Amidst Global Turbulence

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Inter-Causal Relationships between the Indian Commodity Futures Market

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Abstract :- In the field of all assets class, from an investment point of view commodities are considered as separate assets. Usually, it is thought that commodity markets are unpredictable. Therefore, the price unpredictability drives the need for hedging the risk in the commodity market. Consumers and producers mostly look for the ways of hedging risk and trading risk. The present paper aim is to examine the relationship between the future contracts of metal index, energy index and agriculture index. The period that has been chosen for the present study is from 2006 to 2020. For the present research study, data has been gathered from the Multi commodity exchange of India. The period of study has taken for fifteen years to examine the relationship between the futures contracts of metal market, energy market and agriculture market. The analysis has been carried out with the help of granger causality test using views software. Only in case of future contracts of metal index and future contracts of agriculture index unilateral causality is found which means future contracts of metal market influence the future contracts of agriculture market but not vice versa. In case of other variables no causality is observed between them. Our results shows that future of metal market influences the future of agriculture market but other commodity markets are independent and they do no influence each other.

Keywords :- Commodity Market, Metal Index, Energy Index and Agriculture Index.

Introduction :- In the field of all assets class, from an investment point of view commodities are considered as separate assets. Usually, it is thought that commodity markets are unpredictable. Therefore, the price unpredictability drives the need for hedging the

risk in the commodity market. Consumers and producers mostly look for the ways of hedging risk and trading risk. In response to this requirement, derivative markets for commodity risks trading arose, and their exercise has turn out to be increasingly widespread. In these markets, instruments which are traded comprise financial instruments like forward and futures contracts, swaps, options and physical instruments like inventories. Among of these instruments future contracts are the most important, and offer substantial information about cash and storage markets. A futures contract is also a type of agreement in which specified quantity of commodity are to be delivered at a specified future date, at a predetermined future price to be paid at delivery time. Futures contracts are tend to be more liquid than the forward contract and generally traded on structured exchanges. Moreover, a futures contract differs from a forward contract merely in that the futures contract is "marked to market," which means that there is settlement and corresponding transfer of funds at the end of each trading day. Future market facilitates several financial functions that contain price discovery function, hedging function, liquidity function, financing function and price stabilization (Mahalik et al. 2014).

Since 1875, trading of commodity futures existed in India. However, the futures of commodity have been in the situation of hibernation for the last few decades owing to a plenty of restrictions imposed by government. In 2003-2004, in terms of commodity futures market major developments took place. A notification was issued by the government on April 1, 2003 withdrawing all earlier notifications which barred trading of future commodities in a large number in the country. This was followed by a declaration in May 2003 canceling restrictions on non-

transferable particular delivery forward contracts. The futures market was opened in expectation of sound market institutions and market design. In order to set up proper markets, Indian government on references of Forward Market Commission (FMC) decided acknowledgment to National Multi-Commodity Exchange, Ahmedabad (NMCE); Multi-Commodity Exchange, Mumbai (MCX); National Commodity and Derivative Exchange, Mumbai (NCDEX) as nationwide multi-commodity exchanges. In November 2003, trading was started at MCX and in December 2003 at NCDEX and also at the NMCE in November 2002.

In other words, futures trading are characterized by the functions of information dissemination, price discovery and hedging and price risk management. Both the contemporaneous futures and spot prices lead to price discovery and the futures market can supply information for existing spot prices and thus should help to decrease volatility in the spot prices of the related commodities and provide for efficient hedging of price risk. Therefore, modeling the causal relationship among the future contracts of Metal Index, Energy Index and Agriculture Index become an important area of study.

Literature Review :- The present section outlines both theoretical as well as empirical literature on price discovery and volatility spillovers in the futures markets in Indian context. The review of the earlier studies here is attempted chronologically in order to get a comprehensive picture.

Thomas and Karande (2001) analyzed India's castor seed market price discovery, Ahmedabad and Bombay by employing daily data on future and spot closing prices, which ranges from May 1985 to December 1999. Although, they have used seemingly unrelated regression approach and GS model, but the interpreted relationship remained the same between spot and future markets in both the estimation approaches. Moreover estimating GS return equation individually for the particular months like March, June, September and December, the study

eventually anticipated pooled data in merging four contracts. Out of four they found that, three seasonal contracts in Bombay future contract prices direct the Ahmedabad future contract prices whereas the March contract in Ahmedabad future prices directs the former one. In spite of having lesser volume, Bombay commands the prices of future over the Ahmedabad prices for all contracts apart from the contracts maturing at the harvest time. The reason is due to the fact that castor seeds prices are largely operated by the export demand. Since the traders or exporters expose to the port in Bombay, the markets have a lead in getting information that drives prices in the June, September and December contracts. This study shows that markets that trade exactly the same asset, in the same time zone, do react differently to information and also small market may lead the large market.

Moosa (2002) re-examined the Garbade and Silber (1983) model with the objectives of discovering out if the crude oil future market execute the function of price discovery and risk transfer. The study takes the data of spot and one-month future daily prices of WTI crude oil ranging from January 2, 1985 to July 1996. He unveiled that sixty percent of the price discovery function is done in future market. The result also showed a reasonably flexible supply of arbitrage service. Their study shows that Garbade and Silber model is more appropriate for explanation of intraday behavior of prices of spot and future.

Kumar and Sunil (2004) investigated the five commodities of six Indian commodity exchanges price discovery. They have used daily futures for their study and comparable ready price and also occupied the ratio of standard deviations of spot and future charge for empirical testing of capacity of futures markets to efficiently incorporate information. In addition, the study has empirically investigated the spot and future markets efficiency by using the Johansen cointegration technique. They discovered that lack of ability of future market to fully incorporate information and supported inadequacy of future market. On the other hand, the authors concluded

that the commodities futures of Indian agricultural markets are not so far grown-up and adequate.

Zhong et al. (2004) analyzed the hypotheses that Mexican stock index futures markets which is recently established effectively served the price discovery function, and that the introduction of trading of futures guide to unpredictability in the underlying spot market using a sum of 799 daily observations which covers the time April 15, 1900 to July 24, 2002. By employing EGARCH models and vector error correction mode (VECM), the empirical evidence unveiled that the index of futures price was a useful price discovery mean and trading of future had also been a cause of volatility for the spot market.

Zapata et al. (2005) examined the association between eleven future prices traded in New York and the World cash prices for exported sugar by bearing in mind the observation ranging from January 1990 to January 1995 in their study. They discovered that the sugar future market guides the cash market in price discovery. However, they also discovered unidirectional causality from future price to spot but not contrary. The finding of co integration between futures and cash prices suggests that contract of sugar future is a useful mechanism for dropping overall Market price risk faced by cash market participants selling at the world price. Besides this it was found through impulse reaction function that a one unit shock in the future price innovation generates a sudden (one month) and positive reaction in futures and cash prices, but not contrary.

Fu and Qing (2006) examined the price discovery process and volatility spillovers in spot-futures markets of Chinese through Johansen cointegration, VECM and bivariate EGARCH model. The experimental results showed that the models provided proof to hold the long-term equilibrium relationships and significant bidirectional information flows between China's spot and futures markets, with futures being foremost. Although innovations in one market could forecast

the futures unpredictability in another market, the volatility spillovers from futures to spot were more important than the other way round.

Gupta and Belwinder (2006) examined the mechanism of price discovery in the National Stock Exchange (NSE) spot and future market. The study employs the future index daily closing values of S&P CNX Nifty, ranging from June 2002 to February 2005. It was empirically found that there was two-sided relationship between the Nifty index and futures, by employing the techniques like Johansen and VECM. Moreover, it was also discovered that stronger casual relation from Nifty futures to Nifty index exists as compared to the vice versa. This might be the cause due to the lesser cost of transitory in the market of future and future market offers elasticity to investors, i.e. investors allow to speculate on the price variations of the underlying asset without the owning financial burden of asset themselves.

Praveen and Sudhakara (2006) attempted to learn an association of price discovery between stock market and the market of commodity future. They have used Nifty future traded on NSE and gold future on Indian MCX. The outcome empirically unveiled that the one month Nifty future did not have any effect on the spot Nifty, but affected by future Nifty itself. The casual association test in the commodity market unveiled that price of gold future affected the spot price of gold, but not the contrary. So this shows that information in the future market is disseminated first and later on reflected in the spot market. Their study on spot gold prices for the period of April 2002 to June 2005 unveiled that the India's prices of gold volatility is comparatively higher than global market and India's stock market has declined for the period of their study period. It was discovered that the stock market has well-developed spot market due to its existence of national wide stock exchange, which offers the stock market an exact platform for price discovery while the spot commodity market is far away from this stage because spot gold prices are not confined to one place.

Biswas & Rajib (2011) examined the character of price volume association in asset market. The reason of their paper was to study price volume associations in commodity futures market of India. They discovered that even if there exists contemporaneous relationship between volume and price change in some of the cases, but in common on the basis of the existence of Granger causality it results that SIH is supported.

Sekhar (2012) in his paper studied about the liberalization of agricultural trade in India. Their study made an organized effort to evaluate the degree and extent of association among select agricultural markets in India. He had used the common factor representation of the cointegrated series, called Gonzalo-Granger (G-G) model, to evaluate the degree of market association. Degree of market incorporation has been evaluated employing the persistence profile approach. Their results show that inter. state or inter-regional movement restrictions do not face by the commodity markets, like gram and edible oils, appear well-integrated. On the contrary maximum inter. state movement restrictions subjected to the rice market, had not shown integration at the national level. The extensive presumption of their study was that the markets can play a more effective role if supplemented with more open policy initiatives.

Jawadi et al. (2017) in their paper investigated the short and long term informational efficiency hypothesis from January 1997 to January 2016 of four major commodity markets (oil, gas, electricity, and coal). They used several econometric tests i.e. parametric and non-parametric. Two interesting findings were disclosed by their study. First, in the short term commodity markets were informationally inefficient. Their portfolio simulations highlighted that commodities might provided "good" investment opportunities, but those opportunities vary according to commodity class and regions. Second, commodity markets in the long term become informationally efficient, thus dropping investors' interest for the duration.

Prokopczuk et al. (2017) in their paper analyze the commodity markets variance risk. They constructed artificial variance swaps and discover realized variance swap payoffs in the majority markets was significantly negative. They found facts of commonalities among the realized payoffs of commodity variance swaps. They also accepted co- movements between the realized payoffs of commodity, equity and bond variance swaps. They showed that both realized and expected values of commodity variance swap payoffs are separate from the realized and expected values of commodity futures returns.

Yip et al. (2020) in their paper, "Dynamic volatility spillover effects between oil and agricultural products" proposed a comprehensive study of their dynamic implied volatility spillover effects after the Global Financial Crisis (GFC) 2008–2009, while considering the transition between oil volatility's regimes. By using implied volatility, their analysis emphasized on the forward-looking information that market traders usually suggest in making decisions. They employed the generalized spillover indices within a fractionally integrated VAR model to find the dynamic patterns of the volatility spillover effects alongside the Markov Switching Autoregressive model to extract the regimes of oil.

An et al. (2020) in their paper, "Windowed volatility spillover effects among crude oil prices" investigated the volatility spillover effects among various oil prices by examining a short term rolling window, named the windowed volatility spillover effects, and its dynamic evolution process. Their findings showed that the world oil market was 'one great pool' due to the development of the overall structure of a network.

Objectives Of The Study :- The present paper aim is to examine the relationship between the future contracts of agriculture index, energy index and metal index.

Research Hypothesis :-

H₀A: Metal market does not affect the agriculture market.

H₁A: Metal market affects the agriculture market.
H₀B: Agriculture market does not affect the metal market.
H₁B: Agriculture market affects the metal market.
H₀C: Metal market does not affect the energy market.
H₁C: Metal market affects the energy market.
H₀D: Energy market does not affect the metal market.
H₁D: Energy market affects the metal market.
H₀E: Agriculture market does not affect the energy market.
H₁E: Agriculture market affects the energy market.
H₀F: Energy market does not affect the agriculture market.
H₁F: Energy market affects the agriculture market.

Research Methodology And Data :- For the present study descriptive research cum analytical design is used. Agriculture futures index, Energy futures index, and Metal futures index are taken as a proxy of Commodity futures market. The study

describes the relationship between the futures contracts of metal market, energy market and agriculture market. The period that has been chosen for the present study is from 2006 to 2020. For the present research study, data has been gathered from the Multi commodity exchange of India. The period of study has taken for fifteen years to examine the relationship between the futures contracts of metal market, energy market and agriculture market, because the MCX data available from 2006. The analysis has been carried out with the help of granger causality test using eviews software.

Analysis And Interpretation :- In the present study, time series data is used to discover the causal relationship between the markets. Therefore it becomes necessary to check the stationary of the data before applying any econometric model. Stationarity of the data is checked by using Augmented Dicky Fuller test.

Table-1: Augmented Dickey Fuller Test

Variables	Level		1 st difference	
	T-Statistics	Prob. value	T-Statistics	Prob. Value
Agriculture	-1.5484215984	0.4272	-54.84102	0.0001*
Energy	-1.750288	0.5618	-55.46367	0.0000*
Metal	-1.213041	0.7566	-59.44526	0.0000*

Source: <https://www.mcxindia.com> (*Significant at 5 percent level of Significance)

It is clear from the Table 1 that at level AF test T statistics calculated values of all future indexes are found less than test critical value at 5% level of significance. Therefore the null hypothesis i.e. all the series have unit root, cannot be rejected at level. The null hypothesis of the unit root should not be rejected if the test statistic is larger than the critical value and should be rejected if the test statistic is smaller. Probability value of all the series at level were also found more than 0.05% which also confirm that null hypothesis of unit root in the series cannot be rejected at level. It means all the future indexes are non-stationary at the level.

Further unit root is checked at 1st difference of the series. ADF unit root test reject the null hypothesis at 5% level of significance. So it is confirmed that all the future indexes has no unit root at 1st difference. It means all the future indexes are stationary at 5% level.

Granger Causality Test :- Granger Causality Test has been used to check the relationship between the future contracts of metal market, energy market and agriculture market. By using Granger causality test stated hypothesis are tested for determining whether one market affect the other market or not.

Table 2: Granger Causality Test

Null Hypothesis	T-statistics	Prob. value
Metal market does not Granger Cause agriculture market	4.88793	0.0058*
Agriculture market does not Granger Cause metal market	0.57003	0.5951
Energy markets does not Granger Cause agriculture market	1.04409	0.4050
Agriculture market does not Granger Cause energy market	1.19989	0.3219
Energy market does not Granger Cause metal market	0.42658	0.6232
Metal market does not Granger Cause energy market	2.89356	0.0956

Source: <https://www.mcxindia.com> (*Significant at 5 percent level of Significance)

It is clear from the test results that null hypothesis future contracts of metal market does not Granger Cause future contracts of agriculture market is rejected because the P value in this cases is less than 0.05 and future contracts of agriculture market does not Granger Cause future contracts of metal market cannot be rejected at 5% level of significance as the P value is greater than 0.05. Therefore unidirectional causality was found in future contracts of metal market and future contracts of agriculture market.

However, other results show that all other hypothesis cannot be rejected because the value of P is greater than 0.05 in all other cases. Thereby, there is no Causality is found between the other variables. Our results show that all the other variables are independent except future contracts of metal market and future contracts of agriculture market.

Findings Of The Study :-

Table -3: Causality results of the indexes

Metal Energy Metal	Agriculture Agriculture Energy
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Future indexes of the commodity market are used in Table 3 for the empirical analysis Granger causality test is used to determine the relationships among the variables. Only in case of future contracts of metal index and future contracts of agriculture index unilateral causality is found which means future contracts of metal market influences the future contracts of agriculture market but not vice versa. In case of other variables no causality is observed between them. Thereby, all the variables are independent except future contracts of agriculture market and future contracts of metal market. Our results shows that future of metal market influences the future of agriculture market but other commodity markets are independent and they do no influence each other.

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A Reflection of Employment Situation of Urban Youth during COVID 19 Pandemic – A Case Study of Mumbai Region

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Abstract :- There is a direct link between economic wellbeing and employment. The rate of job creation has not kept pace with economic growth. The slow rate of job creation will have negative repercussions on the increasing youth population in India and thus affecting the social milieu. The study tried to assess the employment situation of urban youth in the Mumbai region based on primary data during the Covid-19 Pandemic. The Covid-19 pandemic deteriorated the employment situation of the marginal class. The study found that 45.00 percent of educated youth earn less than Rs 20,000 per month and 35.50 percent felt that they are underemployed in their existing occupations. The surveyed individuals feel that their current education system does not provide Industry-Specific skills and their existing occupation does not justify their educational qualification. The study found that the majority of the youth complained about mental stress and financial security issues in their current occupation. Further, the Covid-19 pandemic resulted in mental stress, job, and financial loss to many respondents. The binary logistic regression found that monthly income is significantly affected by professional courses done by an individual and their education level. Gender and employment status turn out to be insignificant variables in the model. Thus the analysis of the employment situation in the Mumbai region presents a gloomy picture for the employment situation of the urban youth during the Covid-19 Pandemic.

Keywords :- Employment, Employment Situation Covid-19 Pandemic and Employment, Urban Youth and Employment.

Introduction :- There is a direct link between economic wellbeing and employment. Further, employment and economic growth share causation in the long run. If the economic growth

is not able to generate employment then in turn inadequate employment growth will hamper the economic growth. Apart from the economic significance, it has a direct impact on the lives of young graduates and postgraduates who find it very difficult to find suitable job opportunities with shrinking employment scenarios. The rate of job creation has not kept pace with economic growth. The Indian economy witnessed jobless growth in the post-liberalization period. Decent employment ensures the aggregate demand in the economy. Therefore, it is important to study the employment situation of the youths in the post-liberalization period. In addition to this, it has been argued lack of quality education is one of the important determinants of unemployment of the youths. Thus, academic institutes are not producing employable youth as per industry demand. There are 11 million students who graduate from college every year but only 20.00 percent get jobs relevant to their skills set. (Gupte 2016)

India is experiencing demographic dividend at present and it is estimated that it will continue till 2040 (World Bank, 2012). However, what India does not have is a plan to ripe the demographic dividend. It should be accepted that Indian infrastructure to education, hospital and other social facilities is not adequate to meet the demand of the increasing youth population in India. With Median age of 25 years, India is one of the youngest countries in the world (Kumar, 2016). However, the rising youth population does not ensure economic growth unless they become productive. Further, the quality of education is a serious concern in our country. There was not a single Indian university that can secure its position in the top 100 QS World University Ranking in 2020 (Heeba, 2020).

Problems of Youth Employment :- The perusal of youth employment and unemployment issue is

very important for India. This is because we have demographic dividend and the rate of job creation of the economy is very slow. The slow rate of job creation will have negative repercussions on the increasing youth population in India and thus affecting the social milieu. The poor quality of the education system has taken a toll on many young graduates and postgraduates, now the institutes have been rated based on placement they can secure for their students. Therefore, many educational institutes are running fake placement scams and providing fraud offer letters (Padhi and Ganesh, 2018). Many young graduates are underemployed or unemployed. The situation of youth employment is so bad that for a post of peon, lakhs of graduates, postgraduates, M.B.A and engineering degree holders and even PhD. Holders also apply. Thus, large scale unemployment and underemployment will ultimately have an impact on aggregate demand through macroeconomic linkage and deter economic growth.

Urbanisation and Covid -19 Pandemic :- The migration of rural poor toward the Indian metro is a continuous process. The urban metropolitan cities are already overburdened with their existing population and migration of people is continuously increasing stress in urban infrastructure. The Indian labour market is characterised by a high degree of informality (Bandura and Sword, 2018). The urbanisation of the labour force brings a high degree of informalisation with it. The unskilled rural worker gets their shelter in the informal urban service sector. The high land prices and small room sizes is another peculiarity of large urban agglomerates like Mumbai. The small room size does not provide privacy in an urban set up which could also harm family members including young adults. Urban setup further put a burden on social services as many people demand the same service with limited supply-side availability. The overburdened government hospital in cities is an excellent example of the denial of social services appropriately to city dwellers.

The covid-19 pandemic brought a lesson for unchecked urbanisation. The contagious

disease changed the way human life used to be. The covid-19 pandemic opened the unforeseen fragile linkage between urbanisation and informalisation. How the marginal workers survive in an informal economy in the large cosmopolitan city of Mumbai was seen by the world. There was a huge argument in the TV debate that how should have been lockdown planned and reporters were running behind the fare foot informal workers. However, Covid-19 showed the world that these marginalised communities dwell in the city in an unhygienic manner. Though the study was originally planned to cover the issue of youth employment in Mumbai and its adjacent region, the Covid-19 pandemic made it essential to study the impact of the pandemic on the lives of the people. Therefore, a few questions have been added at the end of the questionnaire of this study to assess the impact of a covid-19 pandemic.

Under this backdrop, our study is based on primary data collected mainly from Mumbai and its adjacent district. The study aims to understand the employment situation of youths in these districts. The impact of the Covid-19 pandemic in the life of respondents was briefly covered in the study.

Review of Literature :-

Arora et al (2017) commented that despite impressive improvement gross enrolment rate in schools, the illiteracy level is highest in India as compared to the world. The gross enrolment rate is very low in the highest education as compared to the primary and middle levels of education. Thus, a rise in literacy rate does not ensure social progress. The government expenditure is very low in the education sector. Therefore, there is a need to increase public expenditure in education and ensure higher enrolment in graduation and post-graduation courses.

Chaudhari (2014) criticised India's ability to create quality employment. He analysed that labour productivity in the labour-intensive industries declined from 2001 to 2010. Hence, certain skilling techniques were required to increase employment in the labour-intensive sector. In addition to this, he emphasised sector-specific skill training

requirements. The lower literacy level among workers was one of the reasons for low skill and productivity among lower-income groups. He found that acquiring skill also requires cost for skill-oriented industries. The skill shortage in the cognitive industries was a common problem as highly skilled workers were more mobile as compared to unskilled workers. Further, he raised a question on the Indian educational system. The skills supplied by the education system did not meet with demand by industries and educational infrastructure was highly skewed all over India. Therefore, on the job training was an essential part for large scale firms and equal distribution of quality educational institutes should be an integral element of skill training programs. He stressed the need to update the syllabus every three years by training institutions and the unorganised sector should be brought under the training regime of the government.

Gupte (2016) commented on the smart city project and the life of urban youth. The increasing urbanisation brought an identity crisis in front of urban youth. The complexity of urban life taking a toll on young adults in metro cities. He argued that it is not only the smart cities we need but also moral – behavioural up-gradation of youth are needed. He studied the behaviour of juvenile criminals in Mumbai city and corroborated that many young adults tried to take control over their life by getting frustrated from their family setup. Boys from lower-income groups tend to drop out of schools and deviate from normal social life. Therefore, he recommended vocational training can make them pro-social and bring them back to normal social life. He opined that smart cities are not just about internet connection, it is also about providing jobs desired by youth living in the cities.

Kawaguchi and Murao (2014) discussed that early youth unemployment leads to long term negative effects on employment and income in the later stage of life. In the absence of a good job, youth sometimes take shift jobs instead of career jobs.

Mitra and Verick (2013) focussed on youth employment in India. The authors argued that the

demand and supply-side factors in the labour market were responsible for the high unemployment rate amongst youth in India. On the demand side rate of job creation had remained extremely slow and youth were moving from farm to non-farm sector in search of jobs. On the supply side, the lower skill level of the youth disqualifies them for regular wage employment. Therefore, maximum youth employment had been concentrated in self-employment and casual work. According to the authors, if corrective measures were not taken to balance the demand and supply side of the labour market, India's demographic dividend can turn into a demographic disaster.

Nathan and Rodgers (2020) argued that the Indian economy was facing economic turmoil before the covid-19 pandemic period and lockdown only worsen the situation. The manufacturing and service sector was badly affected by the crisis. The informal sector workers were the worst hit because of unplanned lockdown. This was because they live on meagre income in the large urban agglomerates. The closure of their livelihood left them vulnerable for food and shelter as most of them live in rented houses. Once the savings of the informal workers were exhausted, they left for villages barefooted.

Sharma and Arora (2017) discussed the issues in the Indian labour market. They argued that India consists of a large number of working poor in the country. Working poor are engaged in low productivity jobs in the informal sectors without any social security. Further, they discussed that percentage of educated youth unemployment is very high in the country and numbers are going to increase in future. Indian workforce will surpass china in 2030 and large scale migration will take place towards the urban area. Therefore, they argued that appropriate urban development policies are needed to handle the new entrants from a distant land in the city labour market.

Unni and Sarkar (2012) argued in their study that the education level of the youth does not match with their current employment. Their study concludes that most of the youth were working in

underemployment.

Walter (2020) commented on the vulnerability of micro and small businesses, women and casual labour during a covid-19 pandemic. He discussed that the above-said class of people were the worst hit because of a pandemic. They do not have regular income and social security benefits. The pandemic threatens the survival of these people, especially in urban areas.

3.1 Sources of Data :- The study is based on primary data. The primary data is collected through online and offline modes. The online mode of data collection was needed because of

lockdown restrictions. However, offline data collection started once the restriction was removed offline data collection and interviews were taken. 200 respondents answered the questionnaire.

4.1 Characteristics Based on Primary Data :- Table 4.1 explains the gender distribution of the respondents. The primary data consist of 39.00 percent of females and 61.00 percent of male respondents. The study tried to capture Mumbai and the adjacent district. An effort has been made to cover maximum working people to understand the effect of a pandemic on the lives of working professionals.

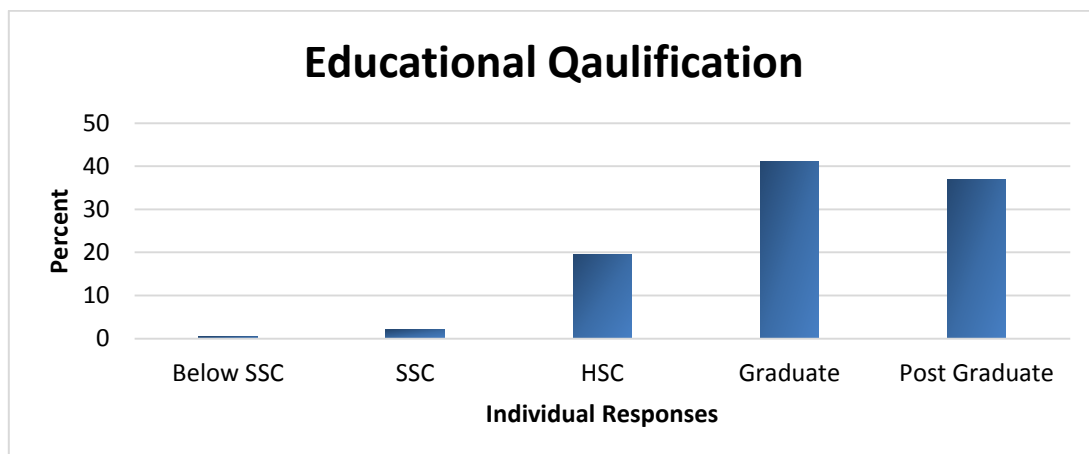
Table 4.1: Gender

Category	Frequency	Percent
Female	78	39.0
Male	122	61.0
Total	200	100.0

Source: Calculated by Author from Primary Data

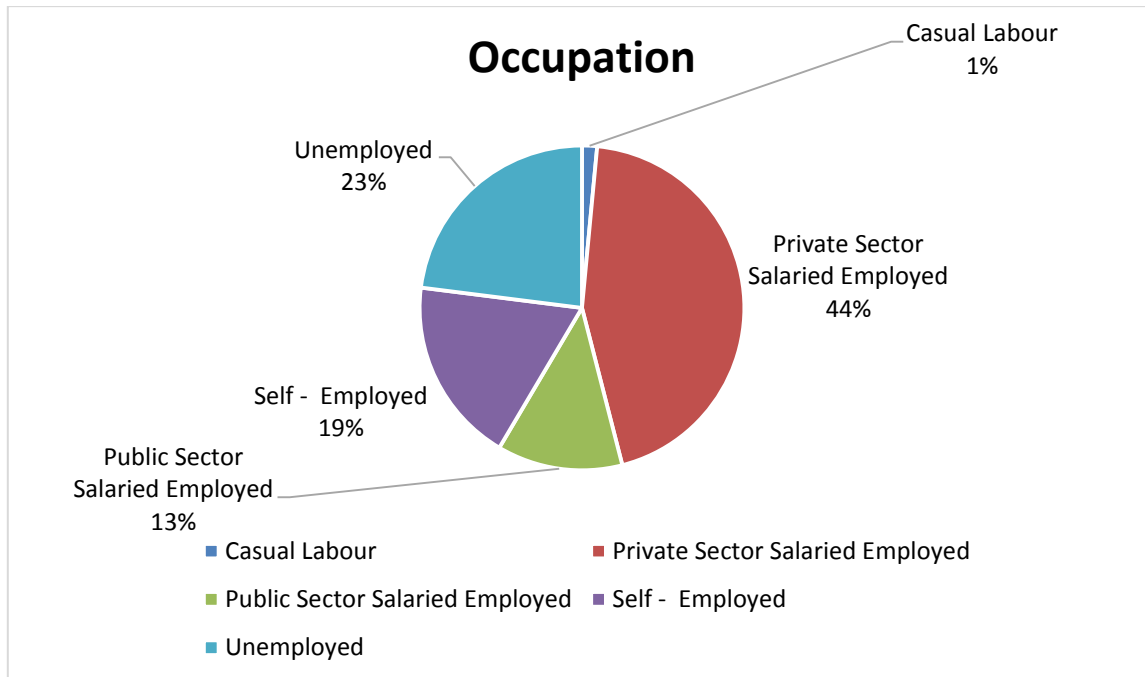
The research attempted to cover the problem of educated youth in Mumbai, Thane and adjacent districts. The study covered 41.00 percent of graduates and 37.00 percent of postgraduates in the survey. Only 19.50 percent of respondents have studied till higher secondary board (HSC). Further, the percentage of people who have studied up to Senior Secondary Board (SSC) or below it, is only 2.50 percent. Thus the survey covered fairly educated respondents. The study has been conducted in the metropolitan region and therefore it is expected that the educational qualification of people living in the metropolitan region is higher than the semi-urban or rural background areas due to better educational infrastructure available in this region.

Figure 4.1 :- Educational Qualification



Source :- Derived from Primary Data

Figure 4.2: Percentage Distribution of Individuals According to Occupation



Source: Derived from Primary Data

Figure 4.2 shows the occupational background of the respondents' Majority of the respondents were private sector salaried employees. If we look at the national level trend then we find that at the national level majority of the household belong to self - employed category. The data has been collected from urban areas so that number of private salary employees is higher compared to self-employed persons which are only 18.50 percent. Public sector employed is 13.00 percent in this survey. Public sector employment is most desirable but due to globalisation and neoliberal reforms, central and state governments are reducing public sector employment. It is to be noted that the percentage of unemployed youth is also very high in the surveyed respondents as 23.00 percent respondents said that they were unemployed. This confirms that the extent of unemployment is high in urban areas. This current pandemic situation is also responsible to some extent. Only 1.50 percent of respondents said that they were doing casual work. It is to be noted that the occupation status of the surveyed respondents who were self-employed and private sector salaried employed were tremendously affected by the covid-19 pandemic.

Table 4.2 shows the monthly income of the households from their salary and business. The concentration of surveyed people lies in the lower-income cohorts. The percent of people living in the less than Rs 10,000 income cohort is 22.00 percent. The next income bracket is between Rs 10,000 -20,000 which consist of 23.00 percent of respondents. People earning between Rs 20,000 to 30,000 consist of 20.50 percent of people. People earning between Rs 30,000 to 50,000 is 13.00 percent while there are 15.00 percent of people reported monthly income between Rs 50,000 – 1,00,000. The highest income cohorts of more than 1 lakh Rs income shows 6.50 percent respondents. The per capita income in Mumbai is higher than in the rest of India. Therefore, we find that people are decent monthly incomes. However, the cost of living in the selected region is also higher.

Table 4.2 :- Monthly Income

Category	Frequency	Percent
Below Rs 10,000	44	22.00
Rs 10000 to 20000	46	23.00
Rs 20000 to 30000	41	20.50

Rs 30000 to 50000	26	13.00
Rs 50000 to 100000	30	15.00
Above Rs 1 Lakh	13	6.5
Total	200	100.0

Source :- Calculated by Author from Primary Data

Table 4.3 explains respondents' views on their educational qualifications and existing employment satisfaction. When it was asked to them whether they feel that their educational qualification justify their current occupation, only 40.00 percent of the respondents firmly confirmed that their educational qualification justifies their existing occupation. On the other hand, 35.50 percent of surveyed respondents said that they felt that they are underemployed in their existing occupations. There is another category of 24.50 percent respondents who were not sure about their existing occupation justify their education or not. Thus, it has been found that there exists a great deal of underemployment as only 40 percent of respondents were firm that they were justifying their educational qualification in the current job.

Table 4.3 :- Occupation Justify Educational Qualification

Category	Frequency	Percent
May be	49	24.50
No	71	35.50
Yes	80	40.00
Total	200	100.0

Source :- Calculated by Author from Primary Data

Table 4.4 inquired about the career up-gradation plan of the individuals. In the constantly changing market environment, people are doing various professional courses to upgrade their position in the existing place of employment. However, the survey found that only 43.50 percent of individuals were doing some professional course to upgrade their current job profile. The rest of them were not eager to do any such course.

Table 4.4 :-Currently Pursuing Any Professional Course

Category	Frequency	Percent
No	113	56.50
Yes	87	43.50
Total	200	100.0

Source :- Calculated by Author from Primary Data

Table 4.5 explain the answer to excessive occupational stress faced by the individuals in their existing job profile. It was an open-ended question that had only two options of yes and no. The percentage of individuals who said that they face mental stress of existing job condition was 54.50 percent and 45.50 percent of respondents said that they did not have any mental pressure in their existing job.

Table 4.5: Excessive Occupational Stress

Category	Frequency	Percent
No	91	45.50
Yes	109	54.50
Total	200	100.0

Source :- Calculated by Author from Primary Data

There was a question about the financial security of the individuals. This question was asked to understand their perspective about their financial security in their existing occupation. The answer was very clear in the study as 62.00 percent of individuals said that they did not have any financial security in the current occupation while 11.00 percent were in a dilemma when asked about their financial security. Thus we

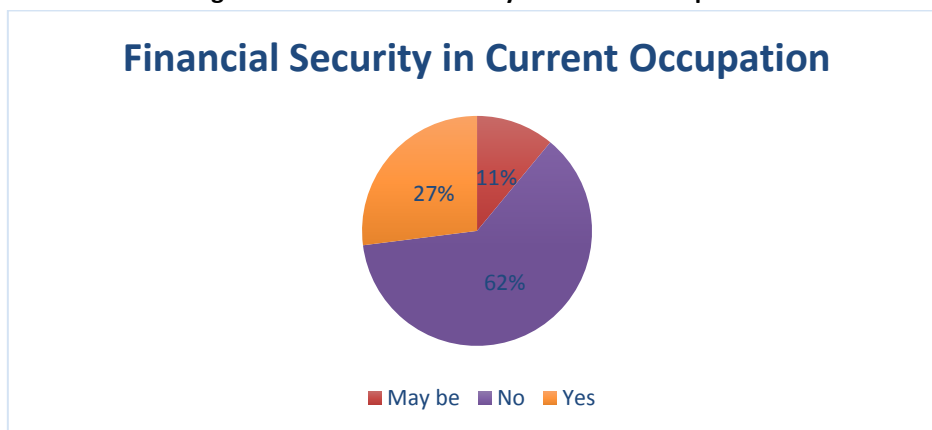
can surmise that 73.00 percent of people said they did not find any financial security in their current occupation. There was only 27.00 percent of people who said that they have financial security in their current occupation. Financial security, as well as social security, is a big worry in India. Majority of Indian survive on meagre wages without any financial security. Similar emotions were seen in Table 4.6 where the majority of the respondents said that they do not have any financial security in their current occupation. Therefore, it is important to bring certain social security reforms based on the public-private partnership model which should cover the vast majority of Indians.

Table 4.6: Financial Security

Category	Frequency	Percent
May be	22	11.00
No	124	62.00
Yes	54	27.00
Total	200	100.0

Source: Calculated by Author from Primary Data

Figure 4.3:- Financial Security in Current Occupation



Source :- Derived from Primary Data

**Table 4.7:- Current Educational Infrastructure
As per Industry Demand**

Category	Frequency	Percent
May be	39	19.50
No	103	51.50
Yes	58	29.00
Total	200	100.0

Source :- Calculated by Author from Primary Data

When it was asked to the respondent to share their view on college education and the skills required in the job market then they expressed their disdain for degree courses without any industry-specific skill orientation which can be seen in Table 4.7. 51.50 percent of individuals said that they did not feel that the current education system cater the needs of industry-oriented skills. There was 29.00 percent of people who agreed with our educational infrastructure and said that it served the purpose well. About 39.00 percent person said that they were not sure about it and maybe our current educational infrastructure provides industry-specific skills. The role of may be an option in our analysis is important because the study covers many young people. The mean age of the respondents was only 27 years. Therefore, the youngsters can remain uncertain about a few important aspects. This is a quite normal phenomenon for the young population. The people who have passed that age group are more experts on certain matters and they can make firm

choices. They express their opinion firmly while it might be a little difficult for youngsters.

Table 4.8: Lost Job / Financial Losses due to COVID-19 Lockdown

Category	Frequency	Percent
No	87	43.50
Yes	113	56.50
Total	200	100

Source :- Calculated by Author from Primary Data

Table 4.8 deals with the first question asked to the surveyed individuals which are related to the financial impact faced by the individuals. Since our sample population consist of both self-employed and private salaried employees, this question has been framed from both perspectives. This is because self-employed will have a loss of business income while private salaried employed might face job loss. In our analysis, 56.50 percent of individuals agreed that they face loss of income and loss of job as a consequence of the Covid-19 pandemic. On the other hand, 43.50 percent said that they did not face any such consequences. The second question was asked to individuals did they face salary cuts as a consequence of lockdown.

Table 4.9 shows that 66.00 percent of people agreed that they faced such issues of salary reduction and loss of business as a consequence of economic lockdown. It is to be noted that 56.50 percent of individuals said that they lost their job or lost business income in the previous question but the percentage increased to 66.00 percent when we asked about salary cuts. However, there was 34.00 percent of individuals said that they did not face salary deductions. It is to be noted that all the cognitive skill-oriented jobs started working online and work from home became new normal because of the Covid-19 pandemic. But it does not stand true for unskilled workers.

**Table 4.9: Salary/Business Income Reduction
Due to COVID-19 Lockdown**

Category	Frequency	Percent
No	68	34.00
Yes	132	66.00
Total	200	100.0

Source :- Calculated by Author from Primary Data

In Table 4.10 same question was asked to the surveyed individuals. 71.50 percent of individuals said that they faced mental stress due to pandemic situation while 28.50 percent of individuals said that they did not face any mental stress or behavioural changes due to the Covid-19 pandemic.

Table 4.10: Mental Stress or Behavioural Change due to Pandemic

Category	Frequency	Percent
No	57	28.50
Yes	143	71.50
Total	200	100.0

Source :- Calculated by Author from Primary Data

Table 4.11 shows the number of person who used the public distribution system which is popularly known as ration facility during the lockdown. There was only 47.00 percent of individuals who said that their family used ration facility during the lockdown period. It is to be noted that Central Government provided a free ration facility till November 2020 for all ration cardholders. This was the most welcomed step to help the poor during the pandemic by India Government. There was 53.00 percent of individuals who denied that their family did not use the ration facility during the lockdown period. It ration facility was widely used by the poor during the lockdown period and it was more used in the rural areas as rural distress increased due to economic lockdown.

Table 4.11: Used Ration Facility during Pandemic

Category	Frequency	Percent
No	106	53.00
Yes	94	47.00
Total	200	100.0

Source :- Calculated by Author from Primary Data

5.1 Binary Logistic Regression Technique :- To analyse the impact of a socio-economic factor on the monthly income of an individual we have used the technique of binary logistic regression. Logistic regression does not make any assumptions of normality, linearity, and homogeneity of variance for the independent variables. In binary logistic regression, we have used the monthly income of an individual as a dependent variable. The dependent variable has been coded into a binary variable. If the monthly income of an individual is less than Rs 20,000 per month code 0 is given and if he is earning more than Rs 20,000 per month code 1 is given. The independent variable used to determine the monthly income of an individual is gender, education, whether he has done any professional course and employment status of individuals. For gender code 0 is given to females and code 1 is given to males. If the person has studied below graduation level code 0 is given and code 1 is given for graduates and postgraduates. Individual who has done professional course code 1 is given and code 0 is given to those individuals who have not done any professional course. Last for the employment status of an individual, if the person is employed code 1 is given and code 0 is given to unemployed individuals.

Table 5.1 explains the individual variables and their significance level in the model. The first column of the table explains the log odds β coefficients in the model. These β coefficients explain the positive or negative relationship of the variables with binary dependent variables. The second column presents the standard error in the estimation and if it is more than two percent then the model suffers from a multi-co linearity problem. The third column deals with the Wald Chi-Square statistic which explains the significance of each independent variable holding other independent variables constant. The fourth and fifth column represents the degree of freedom and P-values respectively. The last column shows the exponential of β coefficients and more specifically known as the odds ratio.

Table 5.1: Variables in Equation :-

Variables	B	S.E.	Wald	DF	Sig.	Exp(B)
Gender	.291	.315	.854	1	.355	1.337
Education	.881	.384	5.249	1	.022	2.412
Professional Course	.918	.303	9.170	1	.002	2.503
Employment Status	.598	.381	2.467	1	.116	1.818
Constant	-1.571	.447	12.348	1	.000	.208

Source :- Derived by the author from primary data with the help of SPSS Software

We can interpret the result of logistic regression as the model do not suffer multi-collinearity as the standard error is less than 2 in all cases. The first variable gender is not statistically significant as the p-value is more than 5.00 percent. Therefore impact of gender on the income level of does not remain valid in the case of our data. We can start the interpretation of the result from the second variable onwards. The result for education can be interpreted as 1 more individual belongs to graduation and above education level, he is 2.41 times more likely to belong to the category of people who are earning

more than Rs 20,000 per month holding all other independent variables constant. Thus we may deduce that education increases the income level of an individual. The second variable in our model is a professional course which is statistically significant in our model. The result can be interpreted as one more individual doing a professional course odd in the favour of him earning more than Rs 20,000 increases by 2.50 time holding all other independent variables constant. The fourth variable in our model is the employment status of an individual. The categorisation of employment level is done based on employed and unemployed. However, the employment status of an individual does not

significantly affect their monthly income. Thus the analysis of logistic regression found that monthly income is significantly affected by professional courses done by an individual and their education level. Gender and employment status turn out to be insignificant variables in the model.

We have tried to develop our models keeping individuals optimistic about career growth, their financial security etc as a dependent variable but the result for those models were not very convincing. Therefore, those models have been kept outside the purview of this research report.

Conclusion :- The economic growth has not remained inclusive. Though the poverty rate declined over some time, the inequality level increased. The gap between the haves and have nots widened especially in the cosmopolitan cities of Mumbai and Thane. The real estate prices in these cities do not allow a new migrant from a low-income group to buy a house in the city. The current educational infrastructure does not provide job oriented skills. There is a skill gap between job market skills and academic syllabus based skills. Therefore it is needed for the hour that vocational education should be a part of the school curriculum. The extent of underemployment and unemployment is very high among youth. The survey revealed that youth in Mumbai, Thane and nearby districts were underemployed and unemployed as well. The central government has many policies targeting rural unemployment which directly deals in labour market intervention. However, in the case of urban youth, there is no direct intervention of the Government in the labour market. The self-employment schemes are not very popular among urban youth. Therefore, specific urban youth-oriented policies ensure labour market intervention of the government and some minimum allowance for unemployed youths. Financial security is the biggest concern in the private sector and self-employed category individuals. Therefore, there is a need to bring a new financial product that ensures minimum income during the difficult time of an individual. The financial product should take care of the

essential needs of individuals.

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A Preliminary Study of Avifaunal Diversity along Gandhari River, Kalyan Taluka, Thane District, Maharashtra- India

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Abstract :- Ever increasing population is not only threat to environment but also lead to alteration in beauty of nature. With rampant concretization, transport and human interference for their livelihood in an around the eco sensitive zone is steadily losing green cover and posing threat to biodiversity. This area is home for many bird species- residential as well as winter visitors. Gandhari river area also has significant diversity of insects, butterflies. The above area is famous recognized spot for birding but during the recent survey it was observed that the diversity of winter birds is less as compare to earlier may be because of more human interference. From the conservation point of view, the above area which was undisturbed with rich diversity, now it has been impacted by urban pressure. This study aims to identify the possible impacts of urbanization on the biodiversity and help to establish baseline data for planning effective management and conservation strategies.

Keywords :- Biodiversity, Gandhari River, urbanization, birds in Kalyan

Introduction :- Birds are the indicator of the health of an ecosystem as they indicate its needs and diversity. Birds play various useful roles such as control of insects, pests of agricultural crops, predator of rodents, scavengers, seed dispersers and as pollinating agents. Birds provide ecological services that contribute to maintaining ecosystem processes and some of the necessary conditions on which human other organisms depend. This services ranges from food provisioning to modification of habitat and resources flows in biological communities.

To study any ecosystem the birds serve as important component as they have ability to fly away and avoid any obnoxious conditions. Hence, they are considered as important health indicators

of the ecological conditions and productivity of an ecosystem (Newton, 1995; Desai and Shanbag, 2007). Wetlands are important habitats for birds. Birds also play an important role in wetland ecosystem. They use wetlands for breeding, nesting and teaching young, as source of drinking water, for feeding, shelter and for social interaction. Wetlands provide food for birds in the form of plants, algae, vertebrates and invertebrates which provide the nutrients. Birds have daily and seasonal dependence on wetlands for food and other life supporting systems (Stewart, 2001). Many winter migratory birds therefore choose wetlands as their habitats. India with huge wetland area therefore is a preferred place for migratory birds.

The Gandhari river started indicating degradation in the recent era due to anthropogenic activities like religious rituals, construction activities, disposal of sewage. Therefore, the present survey was conducted to prepare a checklist of birds occurring in Gandhari River, Kalyan.

Study Area :- Kalyan city is a fast emerging residential township in the Thane district of Maharashtra state, India. It is a central suburban town and resides 54 kms north-east of Mumbai. Nowadays Kalyan city is developing at a fast rate due to unavailability of space in mainland of Mumbai and connection of widespread rail network to many parts in Maharashtra. The location of the study area is 19.14° N and 17.12° E.

The selected study area for the above research is famous as Gandhari river birding area. The river water meets the Kalyan creek forming a wetland belt. The bridge passes over the water body is located on the western outskirts of the Kalyan city and built over river Ulhas. The bridge connects Kalyan city to the Gandhari village. It is the only passage which connects Kalyan to the

Mumbai Agra national highway (NH3). The nearby area is known for its scenic beauty, fresh open air, flying birds and coolness in the early morning is making favorite jogging spot for Kalyan residents.

The water body is lined by vegetation. The open land along the river shows patches of open scrubland, forest, agriculture and small ponds inside. Due to this variety of habitats large numbers of birds are inhabited. The main wetland water attracts migratory birds in winter season due to availability of plenty of food.

Due to the over-crowding in the Kalyan city nowadays the megaprojects in the real estate

industry are developing in the city outskirts areas. One of the upcoming areas is Gandhari region. The area is giving a cityscape for tall construction around. Well known real estate company had established their projects near study area in past few years. Few of them are Godrej hill complex, Vasant valley, Wadhwa height, Oshodhara residency, Riverdale, Lodha Park, Ritu world, lifestyle city. The river water also carries pollutant streams which are released from nearby MIDC. As it connects Kalyan to national highway ever increasing load of heavy-duty transportation is also a common scene.

Material And Methods :- The study has been carried out by frequent survey, twice a month to the area. The area was surveyed for four months from October to January in winter season in 2016-17 and 2017-18. Identification of the bird species were done by referring field guides "Birds of the Indian Subcontinent" by Richard Grimmett and "The book of Indian Birds" by Salim Ali. For identification the binocular (Olympus and Celestron) and the digital camera (Canon SX 130) was used.

Observations :-

Table 1: Table showing list of birds observed during study period

Sr. No.	Family	Common Name	Scientific Name	Category	Status
1.	Accipitridae	Brahminy Kite	Haliasturindus	R	C
2.		Black shoulder Kite	Elanuscaeruleus	R	C
3.	Ardeidae	Little Egret	Egrettaarzetta	R	C
4.		Indian Pond-Heron	Ardeolagrayii	R	C
5.		Purple Heron	Ardeapurpurea	R	UC
6.		Grey heron	Ardeasineria	M	UC
7.		Cattle Egret	Bubulcus ibis	R	C
9.	Charadriidae	Red-wattled Lapwing	Vanellusindicus	R	C
10.		Little Ringed Plover	Charadriusdubus	R	C
11.	Psittacidae	Rose ringed Parakeet	Psittaculakrameri	R	C
12.		Alexenderine Parakeet	Psittaculaeupatria	R	C
13.	Megalaimidae	Coppersmith Barbet	Megalaimaharmacephala	R	C
14.	Picidae	Yellow-crowned woodpecker	Dendrocoposmahrattensis	LM	UC
15.	Oriolidae	Indian Golden Oriole	Orioluskundoo	R	C
16.	Bucerotidae	Indian Grey Hornbill	Ocyerosbirostris	R	C
17.	Upupidae	Common Hoopoe	Upupaepops	R	UC
18.	Alcedoatthis	Common Kingfisher	Alcedoatthis	R	C
19.		White Throated Kingfisher	Halcyon smyrnensis	R	C
20.	Meropidae	Green Bee eater	Meropsorientalis	R	C
21.	Cuculidae	Pied Cuckoo	ClamatorJacobinus	M	UC
22.		Indian Cuckoo	Cuculusmicropterus	R	C
23.		Greater Coucal	Centropus	R	C
24.	Culumbidae	Rock Pigeon	Columbia livia	R	C
25.		Spotted Dove	Streptopeliachinensis	R	C

26.		Laughing Dove	Streptopeliasenegalensis	R	C
27.		Yellow footed green pigeon	Treronphoenicoptera	R	UC
28.	Scolopacidae	Common sandpiper	Actitishypoleucos	M	UC
29.		Marsh sandpiper	Tringastagnatilis	M	C
30.		Wood sandpiper	Tringaglareola	M	C
31.		Green sandpiper	Tringaocropus	M	UC
30.	Recurvirostridae	Black winged stilt	Himantopushimantopus	R	C
31.	Phalacrocoracid ae	Little Cormorant	Phalacrocoraxniger	R	C
32.		Indian cormorant	Phalacrocoraxfuscicollis	R	C
33.	Ciconidae	Asian openbill stork	Anastomusoscitans	R	C
34.	Lanidae	Long tail shrike	Laniusschah	R	C
35.	Corvidae	House crow	Corvussplendens	R	C
36.		Large billed crow	Corvusmacrorhynchos	R	UC
37.	Rhipiduridae	White browed fantail	Rhipiduraaureola	R	C
38.	Dicruridae	Ashy Drongo	Dicrurusleucophaeus	R	C
39.	Aegithinidae	Common iora	Aegithinatiphia	R	UC
40.	Muscicapidae	Oriental magpie robin	Copsychussaularis	R	C
41.		Indian robin	Saxicoloidesfulicata	R	C
42.		Common stonechat	Saxicolatorquata	LM	C
43.		Pied bushchat	Saxicolacarpata	R	C
	Sturnidae	Asian pied starling	Sturnus contra	M	C
44.		Rosy starling	Sturnusroseus	M	UC
45.		Common myna	Acridotherestrictis	R	C
46.	Hirundinidae	Wired tail swallow	Hirundosmithii	R	C
47.		Barn Swallow	Hirundorustica	M	C
48.	Pycnonotidae	Red whiskered bulbul	Pycononotusjacusus	R	C
49.		Red vented bulbul	Pycononotuscafer	R	C
50.	Cisticolidae	Jungle prinia	Priniasylvatica	LM	UC
51.		Ashy prinia	Priniasocialis	R	C
52.		Common tailorbird	Orthotomussutorius	R	C
53.	Leiothrichidae	Jungle babbler	Turdoidesstriatus	R	UC
54.	Alacedidae	Indain bush lark	Mirafraerythroptera	R	C
55.		Malbar Crested lark	Ammonesphoenicurus	R	C
56.	Nectariniidae	Purple rumped sunbird	Nectariniazeylonica	R	C
57.	Passeridae	House sparrow	Passer domesticus	R	C
58.	Motacillidae	White browed wagtail	Motacilla	WM	C
59.		Citrine wagtail	Motacilla	WM	UC
60.		White wagtail	Motacilla alba	WM	UC
61.		Yellow wagtail	Motacillaflava	WM	UC
62.		Paddy field pipit	Anthusrufulus	R	C
63.	Estrildidae	Red avadavat	Amandavaamandava	R	UC
64.	Passeridae	Scaly brestedmunia	Lonchurapuntulata	R	C
65.		Black headed munia	Lonchuramalacca	R	UC
66.	Anatidae	Spot billed duck	Anaspoecilorhyncha	R	C

67.	Monarchidae	Asian paradise flycatcher	Terpsiphone paradise	M	UC
68.	Monarchidae	Black naped monarch	Hypothymis azurea	R	C
69.	Anatidae	Northern Shoveler	<i>Anas clypeata</i>	M	UC
70.		Northern pintail	<i>Anas acuta</i>	M	UC
71.		Common teal	<i>Anas crecca</i>	M	UC
72.		Garganey	<i>Anas querquedula</i>	M	UC
73.		Cotton pygmy goose	<i>nettion coromandelianus</i>	R	UC
74.	Accipitridae	Marsh harrier	<i>Circus aeruginosus</i>	M	UC
75.	Pandionidae	Osprey	Pandion haliaetus	M	UC

(M- Migrant, R- Resident, LM- Local Migrant, WM- Winter Migrant, C- Common, UC- Uncommon)

Table 2: Table showing comparison of bird species observed during 2016 to 2018.

Sr. No.	Family	Common Name	Scientific Name	Category	2016-17	2017-18	2018-19
1	Cisticolidae	Jungle prinia	Priniasylvatica	LM	Yes	No	No
2	Scolopacidae	Common sandpiper	Actitis hypoleucos	M	No	Yes	Yes but rare
3		Marsh sandpiper	Tringastagnatilis	M	Yes	Yes	No
4		Wood sandpiper	Tringaglareola	M	Yes	Yes	No
5		Green sandpiper	Tringa acropus	M	No	Yes	No
6		White wagtail	Motacilla alba	WM	Yes	No	No
7		Yellow wagtail	Motacilla flava	WM	No	Yes	No
8	Anatidae	Northern Shoveler	<i>Anas clypeata</i>	M	Yes	Yes	No
9		Northern pintail	<i>Anas acuta</i>	M	Yes	Yes	No
10		Common teal	<i>Anas crecca</i>	M	No	Yes	No
11		Garganey	<i>Anas querquedula</i>	M	No	Yes	No
12		Cotton pygmy goose	<i>nettion coromandelianus</i>	R	No	Yes	No
13	Accipitridae	Marsh harrier	<i>Circus aeruginosus</i>	M	No	Yes	No
14	Recurvirostridae	Black winged stilt	Himantopus himantopus	R	No	Yes	No
15	Ciconiidae	Asian openbill stork	Anastomus oscitans	R	Yes	Yes	Yes but rare
16	Pandionidae	Osprey	Pandion haliaetus	M	Yes	Yes	No
17	Cuculidae	Pied Cuckoo	Clamator jacobinus	M	No	Yes	No
18	Monarchidae	Asian paradise flycatcher	Terpsiphone paradise	M	Yes	Yes	Yes but rare
19	Ardidae	Grey heron	Ardea cinerea	M	Yes	Yes	No

(M-Migrant, R- Resident, LM- Local Migrant, WM- Winter Migrant)

From the above table it is observed that the bird biodiversity to the study area has reduced qualitatively and quantitatively. Many birds which were recorded in 2017 are lacking in 2018. Also the number of migratory visitors has markedly reduced to the area.

The study tries to find out the factors responsible for decrease in the bird species records through field observations. The major reasons found out were rapid real estate development, increase in pollution, changes in land use pattern, human interference within the surrounding area.

Conclusion :- The present study shows that the Gandhari river and surrounding area harbours rich bird diversity. Gandhari river area, though an aviary for a substantial number of resident and migratory birds, is facing threat in the form of releasing domestic sewage and industrial effluent, concretization and urbanization.

During the present survey it was observed that the area of scrubland along the river was burnt and concrete road was constructed by the villagers to carry out their livelihood activities. Also from forest patch villagers collect products like wood for their day to day activities. Apart from this, there are small ponds in the area. Birds use these ponds for their feeding, breeding, resting and nesting activities. During the survey it was noticed that from above ponds villagers are pumping water by diesel engine for construction activities. It creates pollution effects on air, water and noise.

Due to the above activity the local as well as migratory birds might have diverted their ways and therefore less number of species was recorded.

Hence there is need for taking measures to restrict the threats for the sustenance of birds and other faunal diversity of this area.

Suggestions :- From the above conclusion it was observed that necessary conservation actions should be taken in the given area which can be by few suggestion points:

- Government should control the development of urbanization in the area.
- Certain conservation practices should be implemented
- Development of the area as recreational Study Centre
- Conduct activities in the study Centre regarding awareness of biodiversity within the population.

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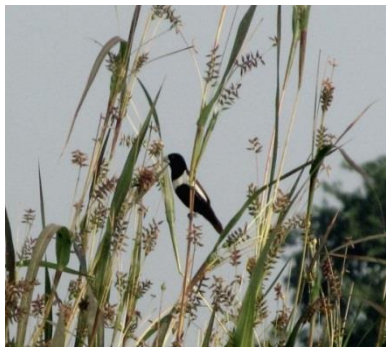
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A Study of Perception and Awareness of Cryptocurrency with Special Reference to Mumbai Retail Investors

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Abstract :- Many activities in our everyday lives have been combined online as a result of the rapid growth of information and communication technology, making them more flexible and effective. A massive increase in the number of online users has reactivated virtual word notions and spawned a new commercial phenomena known as cryptocurrencies, which is used to expedite financial transactions such as buying, selling, and trading. Cryptocurrencies are digital representations of valuable and intangible commodities that can be utilised in a variety of applications and networks, including online social networks, virtual worlds, and peer-to-peer networks. In recent years, virtual currency has become widely used in a variety of systems. This research looks into what users think about the future of cryptocurrencies. The paper implies correlation and chi square test to test association between investors perception and decision making relating to investing in this controversial currency, this is tested with 120 the sample size of retail investors belonging to Mumbai who have interest in cryptocurrency.

Keywords :- Retail investors, Cryptocurrency, perception, awareness

A Study of Perception and awareness of Cryptocurrency with special reference to Mumbai retail investors.

Introduction :- A cryptocurrency is a digital or virtual currency that is protected by encryption, making counterfeiting and double-spending practically impossible. Many cryptocurrencies are built on blockchain technology, which is a distributed ledger enforced by a distributed network of computers. Cryptocurrencies are

distinguished by the fact that they are not issued by any central authority, making them potentially impervious to government intervention or manipulation. Cryptocurrencies are digital or virtual currencies that rely on cryptography technologies to function. They make it possible to make safe online payments without the involvement of third-party payment processors. Various encryption methods and cryptographic approaches, such as elliptical curve encryption, public-private key pairs, and hashing functions, are referred to as "crypto."

Cryptocurrencies can either be mined or bought on cryptocurrency exchanges. Cryptocurrency purchases are not permitted on all ecommerce sites. In fact, even famous cryptocurrencies like Bitcoin are rarely used for retail purchases. (García-Monleón et al., 2021). Cryptocurrencies, on the other hand, have become popular as trading instruments because to their increasing value. They are also utilised for cross-border transfers to a limited extent.

Blockchain :- Blockchain technology is at the heart of Bitcoin's and other cryptocurrencies' attractiveness and usefulness as its peer to peer (Nakamoto S. Bitcoin: a peer-to-peer electronic cash system. 2008)

Blockchain is, as its name implies, a collection of interconnected blocks or an online ledger. Each block comprises a collection of transactions that each network member has independently validated. Every new block must be validated by each node before being confirmed, making forging transaction histories nearly impossible. The contents of an online ledger must be agreed upon by the whole network of a single node, or computer, that keeps a copy of the

ledger.

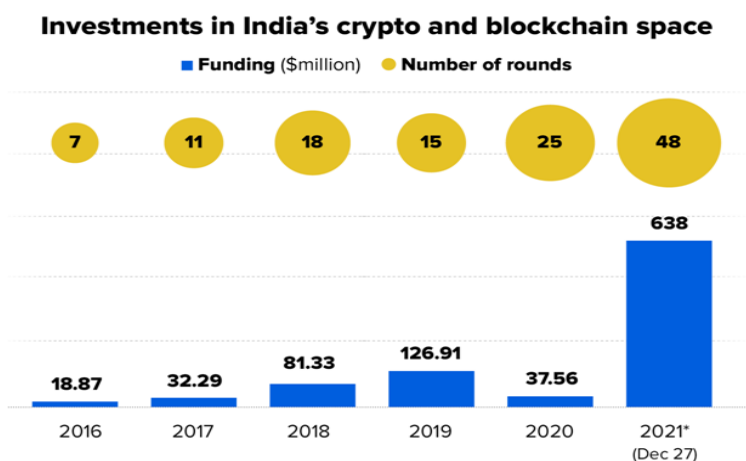
According to experts, blockchain technology can benefit a variety of sectors and activities, including supply chain management and online voting and crowdfunding. JPMorgan Chase & Co. (JPM) is one of these financial institutions.

Cryptocurrency Types :- The most well-known and valued cryptocurrency is Bitcoin. It was conceived and introduced to the public in 2008 by an unidentified individual named Satoshi Nakamoto through a white paper. Thousands of cryptocurrencies are currently available on the market.

Every cryptocurrency claims to have a unique purpose and specification. Ethereum's ether, for example, is marketed as gas for the underlying smart contract platform. Banks utilise Ripple's XRP to ease transfers between different locations.

The most commonly traded and covered cryptocurrency is Bitcoin, which was first made available to the public in 2009. There were around 18.8 million bitcoins in circulation as of November 2021, with a total market cap of around \$1.2 trillion. There will only be 21 million bitcoins ever created.

Trends in Investments in India's crypto and blockchain



Source: Traxcn

Review of Literature :- Exton & Doidge (2018) conducted a survey among 14,828 adult respondents, asking about cryptocurrency awareness and ownership in 15 countries, including several European countries, as well as Turkey, the USA and Australia. 66 percent of respondents in European countries have heard of cryptocurrencies. Awareness ranges from 38 percent in Belgium to 79 percent in Austria. In 11 of the 12 European countries, the majority of respondents have heard of cryptocurrencies. In the USA, the awareness rate is lower than in Europe for both men (69 percent) and women (45 percent). The study finds cryptocurrency ownership to be more prevalent in countries with lower per capita income.

Sas C, Khairuddin (2017), as per him the growth of decentralised digital currencies known as bitcoin and its online payment protocols built on a peer-to-peer network known as Blockchain is one of the most recent and most promising digital technologies in the financial scene.

Murphy EV, Murphy MM, Seitzinger MV(2015). These researchers suggested that Cryptocurrency is a digital currency designed to be used as an alternative to traditional fiat currency, allowing customers to make digital payments for products and services without the use of middlemen so retail investors can singlehandedly invest in these.

Significance and scope of the study :- Cryptocurrency is a new-age technology-based digital currency that is progressively gaining acceptance among the general public. However, the government and regulatory agencies remain sceptical of its use, and there are numerous legal and security risks associated with it. Cryptocurrencies are mostly utilised as an investment instrument, and they are quite volatile.

As a result, it's critical to research the effectiveness of bitcoin as an investing tool among Mumbai residents by determining their level of understanding and perception.

Materials and Methods :-

Objectives :-

- 1) To Highlight the growth and trends of cryptocurrency investment by retail investors.
- 2) To examine the relationship of demographic factors with investments of cryptocurrency
- 3) To study the perception and awareness of retail investors relating to cryptocurrency.

Hypothesis :-

- 1) There is no association of Age with awareness relating to cryptocurrency.
- 2) There is no correlation of positive perception and retail investors' decision for investing in cryptocurrency.

Methodology :- The research is empirical in character and is based on primary data. The study's geographical scope includes Mumbai. Retail Investors are chosen for the purpose of data collection. Data collection technique: Primary sources are mostly employed for data collection, with a structured interview schedule being used for primary data collection. Secondary data is also gathered from a variety of reports and periodicals. Size of the sample: There are 120 people in the sample. Convenience sampling is a sampling strategy. The percentage method, chi-square test, and weighted mean are used to examine the data.

Findings and results

Table 1: Demographic profile

Frequency Table for Nominal and Ordinal Variables

Variable	<i>n</i>	%
Age		
20-30 Years	22	18.33
30-40 Years	20	15.00
40-50 Years	46	38.33
50-60 Years	28	23.33
60 and above	04	3.33
Missing	0	0.00
Education		
H.S.C	20	16.67
Graduate	50	41.67
Post-Graduate	50	41.67
Missing	0	0.00
Occupation		
Private Sector Employee	30	25.00
Government Employee	9	7.50
Self employed / Own business	41	34.17
Professional	8	6.67
Others(Freelancing, Home makers)	12	10.00
AnnualIncome		
Upto 3 Lakhs	36	30.00

3 lakhs to 6 lakhs	14	11.67
6 lakhs to 12 lakhs	38	31.67
12 lakhs and above	32	26.67
Missing	0	0.00

Source: Primary Data compiled by the researcher

Table 2: Association of Age with Awareness level

	Not adequate	Little adequate	Average	Strong	V Strong	Chi Sq	Df	P Value
Age						101.264	16	0.000
20-30	4.9	20.6	4.9	11	58.6			
30-40	9.4	7.3	14	48.8	20.44			
40-50	0	0	21.6	28.4	50			
50-60	5	25	10	30	30			
60-above	20	8.7	6.9	55.9	8.6			

Source: Primary Data compiled by the researcher

While examining the relationship between Age and awareness, a positive relation has been found, and it is observed that the p value < 0.05 (see above table) resulted in the rejection of null hypothesis and shed light that there is association between the Age of the retail investors and the awareness of cryptocurrency.

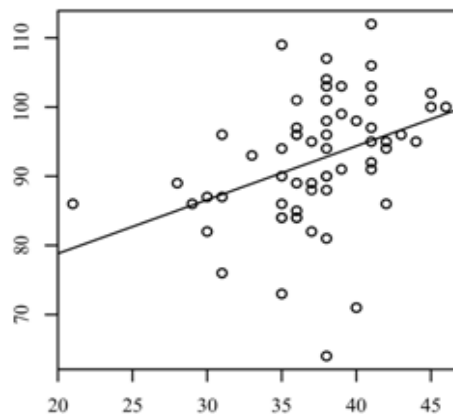
Pearson coefficient of correlation between Perception and decision making to invest

A Pearson correlation analysis was conducted between Perception of positive perception and investing decisions. Cohen's standard was used to evaluate the strength of the relationship, where coefficients between .10 and .29 represent a small effect size, coefficients between .30 and .49 represent a moderate effect size, and coefficients above .50 indicate a large effect size (Cohen, 1988).

Assumptions :- Linearity. A Pearson correlation requires that the relationship between each pair of variables is linear (Conover & Iman, 1981). This assumption is violated if there is curvature among the points on the scatterplot between any pair of variables. Figure 1 presents the scatterplot of the correlation. A regression line has been added to assist the interpretation.

Figure 1

Scatterplots with the regression line added for positive perception and investing decisions



Positive Perception X axis and Investing decisions Y axis

Results :- The result of the correlation was examined based on an alpha value of 0.05. A significant positive correlation was observed between perception about cryptocurrency and Adoption of investing ($r_p = 0.38, p < .001, 95\% \text{ CI } [0.21, 0.52]$). The correlation coefficient between perception and investing decisions was 0.38, indicating a moderate effect size. This correlation indicates that as positive perception increases, Adoption of technology tends to increase. Table 3 presents the results of the correlation.

Table 3
Pearson Correlation Results between Perception and Adoption

Combination	r_p	95% CI	P
Perception- Investing decisions	0.36	[0.21, 0.51]	< .001

Note.n = 120.

Discussion :- There is significant relationship between the Age and usage and perception and awareness for cryptocurrency. The results of perception shows that the majority of retail investors believe that cryptocurrencies are convenient and user-friendly, provide fast and rapid investment opportunities, provide a spending analysis, lower risks, and minimise the burden of managing cash. The fact that the applications may only be utilised for big investors was also disliked by 55 percent of the respondents. Furthermore, 89 percent of respondents disagreed that the bitcoins are exclusively useful for educated people, while only 11 percent believe that technology-based services are suited for educated business class people. Approximately 85% of those polled are familiar with cryptocurrency. Almost half of the people polled have heard of cryptocurrency. Only a small percentage of those polled have a thorough understanding of cryptocurrency. Cryptocurrency should be legalised as an investment tool, according to the majority of respondents. Half of the respondents are opposed to investing in cryptocurrency, while the remaining 35% are unsure. 40% of people are willing to invest in cryptocurrencies. The majority of people who are willing to invest in cryptocurrency would prefer to invest roughly 5% of their annual wage, according to the respondents. Those who have already invested in Cryptocurrency have received a majority of about 105 percent return, followed by more than 20% return on investment in Cryptocurrency.

Conclusions :- Furthermore, ease of use and utility have been identified as two of the most important variables influencing people's willingness to accept new technology. Furthermore, monetary instability, value construction, and government backing all contribute to a higher adoption rate among users. The perceived trustworthiness of cryptocurrencies is a crucial factor in purchasing decisions. However, determining a respondent's level of trust in a cryptocurrency is not easy. It might refer to the asset's technological resistance to manipulation, the investor's ideological mentality, the asset's price stability, or the capabilities of the team that created the coin. Based on the foregoing findings, it can be stated that the general public is aware of cryptocurrency and would like to include it in their financial portfolio because it offers a good return. However, they are hesitant to invest in cryptocurrency due to a lack of government and regulatory oversight. If the Government of India and its regulatory agencies take steps to control its use and transactions in the financial market, it has the potential to play a significant part in an investor's overall portfolio.

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Investor Perception towards Mutual Fund as Investments Option with Special Reference to Valsad City

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Abstract :- The purpose of this study is to investigate investor perception towards mutual funds. The Theory of Planned Conduct (TPB) is used to analyse investor perception, which includes attitude, subjective norm, and perceived behavior Control. This study expands on the TPB model. Structural equation modeling (SEM) with support of AMOS is used to test the research model. Through a survey, data was gathered from 355 investors in Valsad City. The findings of this study show that the TPB can be used to predict peoples' behavioural intentions to invest in mutual funds. According to this study, behaviour intentions are substantially correlated with attitude, subjective norms, and perceived behavioural control. The findings validate our model and the TPB-based theories that it is founded on, making it a valuable tool for guiding future study. We conclude with recommendations for mutual fund companies as well as implications for future research directions.

Keywords :- Investor Perception, Mutual fund, Theory of Planned Behavior.

Introduction :- Mutual funds have grown slowly since their establishment, and it has taken many years to evolve the modern-day mutual funds. Mutual funds first appeared in the Netherlands in the 18th century, and were later introduced to Switzerland, Scotland, and, finally, the United States in the 19th century. The primary goal of mutual fund investing is to provide a diverse investment option. The concept evolved over time, and investors were given more and more options for diversified investment portfolios via mutual funds. The mutual fund concept first appeared in India in 1960. The first mutual fund in India was introduced by UTI. Mutual funds have greatly helped monetary funds. Previously, investors

would invest directly in the stock market and would frequently lose money owing to incorrect speculation. However, with the introduction of mutual funds managed by skilled fund managers, investment risks were significantly reduced. Mutual funds' diversified investment structure and diversified risk contributed significantly to their growth. Many new mutual funds have arisen over time. Not only that, but the strategies and methods of marketing these funds have evolved over time.

However, mutual fund development really hasn't stopped. It is evolving toward a brighter future in which investors will have more chances. In this age of globalization and competitiveness, an industry's success is defined by the market performance of its stock. Investors, too, prefer to invest exclusively in the stocks of companies that will provide them with the greatest returns. During the early years of the mutual fund industry's development, investors had only a few investment options to choose from. However, as time passes, more chances for investors to put their money in various investment channels become accessible. Investing in mutual funds in conjunction with smart financial management is one such avenue. With the growth of mutual funds, there are also an increasing number of investors, so there is a need to observe their perceptions towards mutual funds.

Investor "expectations" have a critical influence in financial markets. They have an impact on the price of securities, the volume traded, and a variety of other factors in practice. These investors' "expectations" are influenced by their "perception," and humans typically associate perception with action. However, many studies on individual investor perception have been published in recent years, finding that different types of investors have different forms of biases.

That is, researchers have understood the need of accounting for investors' irrationality when analyzing individual investor perception. According to Walia & Kiran Because of the dynamics of investors' perceptions of mutual funds, the mutual funds business is a growing sector, and understanding and analyzing investors' perceptions and expectations is a critical issue in the financial market. (Walia & Kiran,2009).

Within the literature, researches in the financial market are moving towards the behavioural aspects of investment rather than adhering to the fundamental or traditional approaches (Listyarti & Suryani,2014) therefore, We developed a research model based on the Theory of Planned Behavior (TPB), a substantially studied and commonly used framework for measuring intentions, to investigate the predictors of perception and intention to invest in mutual funds. The TPB framework is based on the Theory of Reasoned Action, which states that behavioural intentions exist because individuals have their own reasons and purposes (Fishbein 1980 and Ajzen 1975). According to TRA, an individual's behaviour or action is most closely related to his intention to participate in that behaviour. As a result, intention is seen as the immediate cause of behaviour. In contrast, intention is believed to be a result of three factors: attitude, subjective norm, and perceived behavioural control.

To summaries, research approaches within the stock market participation typically focus on direct or indirect stock holdings. There is a scarcity of research on mutual fund investments in general, and as a platform independent of investment market. Thus, the primary question remains what is perception of individuals to invest in mutual fund? The reason behind this is still unknown. Challa, Burra, Patnaik (2022) stated that," Such a detailed study can reveal interesting facts about investor's behaviour towards mutual funds in specific".

Review of literature :- Dr. Pooja Srivastava (2022) noted that, investors' behaviour while investing in a mutual fund is influenced by their attitude, and investors with different attitudes will have varied objectives and variables of investment behaviour

for different reasons when making future investment decisions.

Vishva Gangani, Taral Patel (2022) found that Investors examine several aspects while choosing between mutual funds and traditional investment plans. When it comes to mutual funds and classic plans, you value safety, large returns, tax benefits, and little risk.

Safira Amalia Hapsari (2020) discovers that the attitude had a positive influence and was the most powerful predictor of the intention to invest in mutual funds products. Other factors such as subjective norm, perceived control behaviour, and financial knowledge have little bearing on mutual fund investment intentions.

Rahadjeng, Erna Retna, Fiandari, Yulist Rima (2020) found that attitudes, subjective norms, and behavioural control all have a positive impact on the intention to invest in researcher shares.

SK Abbas, M Usman, M Aftab(2020) stated that more return can change investor public and private sector response to mutual funds. Factors like liquidity, return, transaction cost, social security,ease of investment, and tax consideration are significant to investor behavior. It also conclude that increase in dishonesty could lead to the narrower base of investors in M-Funds and vice-versa

Rajdeep Raut, Rohit Kumar (2018) found that the TPB's usefulness in forecasting people's behavioural intentions to invest in the stock market According to this study, behavioural goals are highly connected with attitude toward behaviour, subjective norms, and perceived behavioural control.

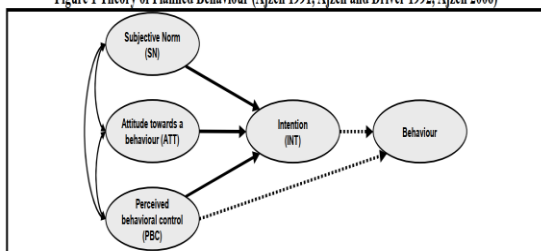
Mery Citra Sondari, Rahmat Sudarsono (2015) conclude that the theory of planned behavior's usefulness in forecasting investment intention The results of partial least square (PLS) data analysis revealed that attitudes toward investing and subjective norms had a strong influence on investment intention, whereas data on the other predictor, self-efficacy, had no significant influence.

Theoretical framework :- The research hypothesis for the theoretical concept is also given, together

with justification and reasons for their selection.

Icek Ajzen initially proposed the Theory of Planned Behavior (TPB) in order to forecast people's behaviour. The idea was first proposed in 1985, and it has since become a popular model for predicting human behaviour (Ajzen, 2011; Armitage & Conner, 2001). The key assumption is that a person's intention to engage in a particular behaviour is the most accurate predictor of that behaviour. As a result, behaviour is thought to be driven by intention (Ajzen 1991). This indicates that an action will be carried out if the individual has a strong desire to do so. The attitude toward behaviour, the subjective norm reflecting a person's perception of social pressure about the behaviour, and the perceived behavioural control are all factors that influence intention. The major relationships in the Theory of Planned Behaviour are displayed in Figure 1.

Figure 1 Theory of Planned Behaviour (Ajzen 1991, Ajzen and Driver 1992, Ajzen 2006)



Attitude (ATT) :- The individual's positively or negatively attitude toward a certain subject is measured by attitude (ATT). It can indicate a person's position in relation to an action, an event, or an object (Fishbein & Ajzen, 1975). The individual's opinion of favorability or unfavorability to invest in mutual funds is described as ATT in this study. In the context of perception of investor the relationship between ATT towards perception and INT need further investigation Therefore, the following hypothesis is proposed

- H1: Attitude towards investing in mutual funds (ATT) will influence investor perception (PR).
H2: Attitude towards investing in mutual funds (ATT) will influence investor intention (INT).

Subjective norm (SN) :- In some instances, one's behaviour is influenced not only by one's own attitude, but also by the expectations of others, such as family and friends. The perceived impact of

these significant others on a person's intentions and behaviour are referred to as the subjective norm (Ajzen and Driver 1992). It represents a person's opinion of whether the majority of important people in his life believe he should or should not engage in the behaviour in issue (Fishbein and Ajzen 1975). If a mutual fund investor's peer group or family also favours and invests in mutual funds, this influences their opinion. As a result, we develop the following hypotheses to be tested:

- H3: Subjective norms (SN) will influence investor perception (PR) toward mutual fund
H4: Subjective norms (SN) will influence investor intention (INT) towards mutual fund.

Perceived behavioural control (PBC) :- People's perceptions of the ease or difficulty of completing the behaviour of interest are referred to as perceived behavioural control (PBC) one must also have access to the necessary means and opportunities to carry out the action (Ajzen, 1991). Furthermore, PBC has been shown to have a direct impact on an individual's real behaviour. As a result, we develop the following hypotheses to be tested:

- H5: investor ability to control investment in mutual funds (PBC) will influence their perception (PR) towards mutual funds
H6: investor ability to control investment in mutual funds (PBC) will influence their intention (INT) towards mutual funds

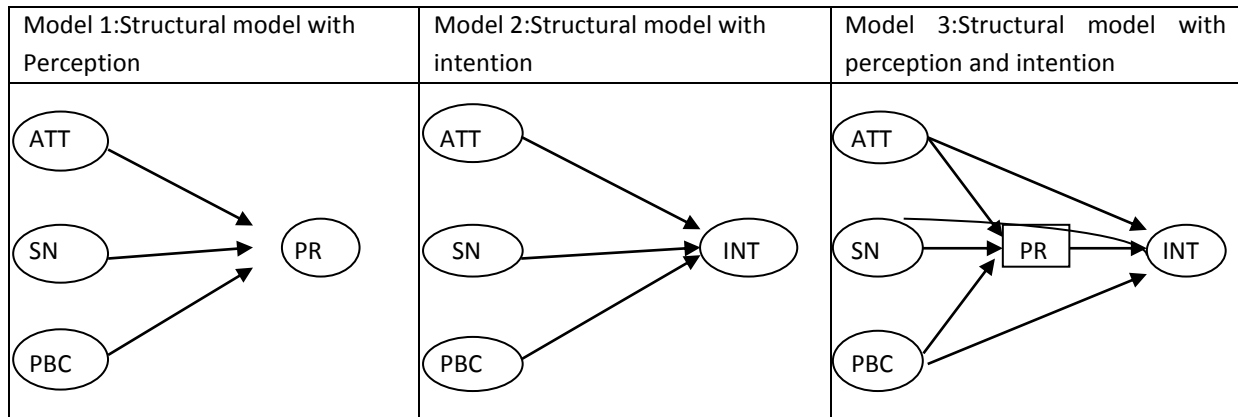
We also include a test on the relationship between perception and intention, first we know the difference between perception and intention. Perception means Conscious understanding of something and intention means a course of action that a person intends to follow. Which extends the TPB-induced research hypothesis. Individuals who have a favorable perception of mutual funds are more likely to want to invest in them; hence the following hypothesis will be tested:

- H7: perception (PR) towards mutual funds will influence concrete intention (INT) to invest in mutual funds (INT)

Three research models are built for this study and represented in Figure 2 based on the

above explanatory notes on TPB and stated hypotheses.

Figure 2: Research models



Research methodology :-

4.1 Procedure :- The main goal is to investigate the drivers of perception and intention in order to acquire a better understanding of mutual fund investor buying decisions. We employ Theory of Planned Behavior, a conceptual framework for attitudes and behavioural intentions that has been widely employed in numerous domains of social scientific research. Though there is a large amount of literature on TPB, its application in the context of mutual fund purchase is a novel technique that needed a mix of theoretical literature review with exploratory methods and qualitative pre-tests.

First, we developed research hypotheses and questionnaires based on suggestions made by Ajzen (2006) and earlier TPB investigations. To match the scope of our research and the conclusions of our earlier work, we made a number of modifications and adjustments. Where possible, we changed already-existing measures to better fit our research concerns.

We gathered the data in a later phase. We employed a self-administered offline questionnaire to prevent presentational biases and socially acceptable responses. In addition, several safety measures were implemented. The questionnaire also included personal socioeconomic questions, so it was made clear that the information was just being gathered for

study and that the findings wouldn't be shared with a third party.

The research models were calculated and assessed at the third step of analysis. To establish a well-fitting measurement model and to do Cronbach's alpha, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), we first validated the measures once again using the entire final dataset. Second, we conducted a common covariance-based structural equation modelling analysis on the data.

4.2 Data collection :- Individuals are the element of analysis in this study. The participants in this study were experienced individual investors who worked in eleven financial institutions in Valsad city. 385 questionnaires were distributed in total. 360 questionnaires were returned at the ending of the data collection. 355 useful surveys remained after sorting uncompleted questionnaires with missing data.

Table 1 Description of dataset

Variable	Characteristics	Sample Percentage
1.Gender	Male	46 %
	Female	54%
2.Merital Status	Married	48%
	Unmarried	52%
3. Education	Graduate	64%
	Post- Graduate	14%
	Doctorate	6%
	Other	16%
4.Age(in years)	21-30	28%
	31-40	34%
	41-50	30%
	51-60	8%
5. Occupation	Govt. Employee	40%
	Pvt. Firm Employee	40%
	Business Person	18%
	Professionals	2%
6.Annual Income	Upto 2,00,000	42%
	2,00,001-5,00,000	26%
	5,00,001-10,00,000	20%
	Above 10,00,001	12%
7. Your annual savings(Rs):	Below Rs 25,000	30%
	25,001 to 50,000	22%
	50,001 to 75,000	20%
	75,001 to 1,00,000	8%
	Above 1,00,000	20%

5. Analysis and Findings :- The analysis of moments structures (AMOS) version 24 was used for SEM analysis and for building the model based on the theoretical framework and hypothesis used for the investigation. The SEM method was employed because it makes it easier to measure an unobserved variable using some observed variables. Data analysis involved two procedures.

First, the measuring model was validated in order to ensure the validity and reliability of the constructs (Table 2). The structural model method was then used to conduct a hypothesis test. An exploratory factor analysis (EFA) was carried out using SPSS version 24 to look at values of factor loadings greater than 0.5. The findings showed that the indices agreed with the expected values. This validates the suggested study model enough. Additionally, the findings of confirmatory factor analysis (CFA) were applied to the validity and reliability tests of the measurement model. After then, factor loadings were discovered to be greater than 0.7. SEM was carried out based on these respectable outcomes. Cronbach alpha values, which show reliability tests, were determined to be higher than .7, which is sufficient evidence of a reliable reliability scale. Convergent validity was tested using composite reliability (CR) and average variance extracted (AVE) measurements. All of the composite dependability scores were determined to be greater than 0.7. AVE values above 0.5 show strong convergent validity for the research instrument, (Hair et al., 2013) which is an indication of the sufficiency and representativeness of the study constructs.

Table 2: Overview of latent measures SN, ATT and PBC :-

construct	ITTC (Item to Total Correlation)	Factor loading (EFA)	AVE (average variance extracted)	CR (composite reliability)	Cronbachs Alpha
ATTITUDE (ATT)					
AAT1	.809	.829	0.593661	0.852	.840
AAT2	.809	.886			
AAT3	.639	.718			
AAT4	.504	.622			
SUBJECTIVE NORM(SN)					
SN1	.765	.804	0.748192	0.922	.908
SN2	.807	.898			
SN3	.805	.918			
SN4	.770	.835			
PERCEIVED BEHAVIOUR CONTROL(PBC)					
PBC1	.752	.825	0.765267	0.929	.931
PBC2	.893	.901			
PBC3	.906	.929			
PBC4	.774	.840			
INTENTION(INT)					
INT1	.817	.741	0.560142	0.836	.907
INT2	.825	.810			
INT3	.729	.723			
INT4	.763	.716			
PERCEPTION(PR)					
PR1	.835	.719	0.545052	0.825	.893
PR2	.878	.825			
PR3	.598	.811			
PR4	.748	.570			

Table 3 provides an overview of the measurement model including unstandardized and standardized factor loadings for each TPB measure.

Table 3: Measurement model :-

PREDICTOR	Item	Factor loading	(standard error)	t-value	Standardized factor loading
Intention	INT4	1.000			.785
	INT3	.937	.150	6.229	.811
	INT2	1.125	.156	7.197	.908
	INT1	1.167	.172	6.794	.867
Attitude	AT1	1.000			.852
	AT2	1.072	.114	9.377	.982
	AT3	.732	.142	5.156	.645
	AT4	.655	.178	3.684	.493
Subjective norms	SN1	1.000			.825
	SN2	.973	.137	7.080	.858
	SN3	.927	.129	7.188	.867

	SN4	1.038	.152	6.820	.835
Perceived behavioural control	PBC1	1.000			.800
	PBC2	1.148	.135	8.521	.967
	PBC3	1.146	.138	8.336	.950
	PBC4	.929	.146	6.373	.791
Perception	PR1	1.000			.939
	PR2	.959	.083	11.561	.931
	PR3	.678	.129	5.267	.632
	PR4	.716	.091	7.890	.796

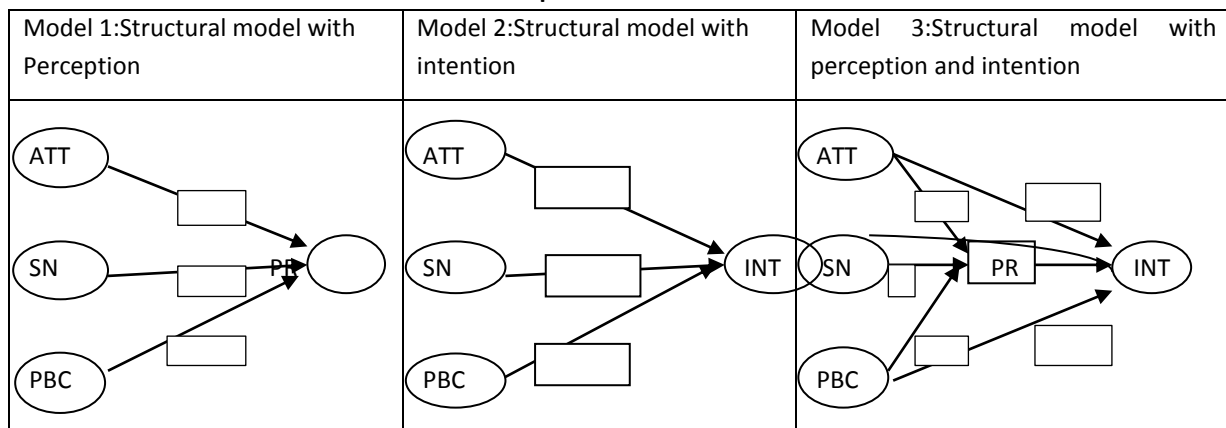
Table 4: Model fit indices :-

	χ^2	p-Value	df	χ^2 / df	CFI	NNFI	RMSEA
Measurement model CFA	326.990	.000	160	2.044	.934	.991	0.046
Model 1: Structural model with perception	287.194	.000	102	2.816	0.93	0.964	0.092
Model 2: Structural model with intention (INT)	244.447	.000	102	2.397	0.917	0.993	0.064
Model 3: Structural model with willingness (WNG) and intention (INT)	331.398	.000	163	2.033	.945	0.996	0.045

We also evaluate model fit using the chi-square (χ^2/df) comparative fit index (CFI), the normed fit index (NFI), and the root mean square error of approximation (RMSEA). Selected fit indices for the measurement model and the structural models are listed in Table 4

According to Kline (2011), a relative chi-square test with a value lower than 3 is regarded as an acceptable match. Both the measurement model and the initial structural models display values up to 2.816 and hence strong matches. Steiger and Lind (quoted in Steiger 1990 and Hooper et al. 2008) provide cut-off values for root mean square error of approximation (RMSEA) that are close to 0.06 or 0.08. Values for CFI and NFI should be greater than 0.95. All of the examined models have extremely good fits because their values fall within the suggested ranges.

Figure 3 Path models for the structural model (standardized coefficients) for the 3 tested models: 1) Structural model with perception; 2) Structural model with intention; 3) complete model with both dependent variables



Both the measuring model and the structural model show strong relationships between the three TPB components. This is consistent with findings of TPB applications in other sectors and is easily explained. Individuals may have a more positive attitude toward investing in mutual funds. Family and friends appear to have an impact on how people perceive themselves, as well as the other way around. Also, once an individual thinks that he has a solid understanding and control over mutual fund investment, he may have a more positive attitude toward mutual fund investing.

Table 5: Tests of Hypotheses

Path Specification	Standardized path coefficient	S.E.(unstandardized)	Hp Support
H1: Attitude towards investing in mutual funds (ATT) will influence investor perception (PR).	.621	.108	Support / not reject
H2: Attitude towards investing in mutual funds (ATT) will influence investor intention (INT).	.815	.149	Support / not reject
H3: Subjective norms (SN) will influence investor perception (PR) toward mutual fund	.131	.089	Support / not reject
H4: Subjective norms (SN) will influence investor intention (INT) towards mutual fund	.210	.086	Support / not reject
H5: investor ability to control investment in mutual funds (PBC) will influence their perception (PR) towards mutual funds	.402	.074	Support / not reject
H6: investor ability to control investment in mutual funds (PBC) will influence their intention (INT) towards mutual funds	.032	.039	Support / not reject
H7: perception (PR) towards mutual funds will influence concrete intention (INT) to invest in mutual funds (INT)	.149	.094	Support / not reject

With significant and positive path coefficients, all three structural models yielded a solid data fit. To a significant extent, variation in dependent variables may be explained. TPB can thus be proven in this context and used as a foundation model for future study in this subject.

Furthermore, based on the findings, support was established for all hypotheses examined. Positive coefficients exist for the three TPB variables attitude, subjective norm, and perceived behavioural control, and they are statistically related to perception and concrete intention. However, the absolute influential weights of perception and intention differ. To summarise, we present a summary of the outcomes on tested hypotheses in table 5.

6. Discussion and Conclusions :- The aim of this study was to build a baseline model for future research in this area and to identify significant drivers of perception and intention to invest in

mutual funds. We employ the Theory of Planned Behaviour, an complex and well-known framework to measure intents, to look at the factors that influence perception and intention to invest in mutual funds. According to our findings, the perception of mutual funds is positively and significantly influenced by the three fundamental TPB components of subjective norm (SN), attitude (ATT), and perceived behavioural control (PBC).

Each of these three results is easy to comprehend. An individual will be more willing to invest in mutual funds generally if he has a favorable attitude toward doing so. The same holds true for his social environment, particularly for his family and friends, who have an influence on his attitudes and actions. The individual will likely become more critical and may change his perception or intention to invest in mutual funds if family and friends pass down and express a rather unfavorable or critical view toward mutual funds.

The third finding addresses the perception that investing in mutual funds is among the difficult financial issues with which most consumers are not familiar or knowledgeable enough. When compared to people who completely believe in their ability to make the correct financial decisions and choose the proper mutual funds, people with low conviction and self-efficacy will be less likely to be generally willing and more likely to have plans to invest in mutual funds. Again, the connection between attitude and behaviour is clear: after feeling in control of his finances and able to choose the correct mutual funds, an individual will probably feel more at ease with investing and have a more positive attitude toward this activity.

These findings provide insight into the complicated decision-making process of potential mutual fund investors and, as a result, present some implications for practice, as mutual fund purchases are critical for the growth and profitability of asset managers around the world. In general, it is vital to create a favorable perception of mutual funds among the target audience. This need becomes even more important when combined with social contact of possible target group, because good views are communicated with classmates, friends, or family, and these have an impact on purchase behaviors. Campaigns aimed at improving attitudes and creating positive connections can serve as a starting point.

Limitations and outlook for further research :-

This study, like previous studies, has limitations. First and foremost, we cannot make any inferences based on actual mutual fund purchases and hence have no measurement of the direct link between the intention to invest in mutual funds and actual behaviour. It is still open, Theory of Planned Behavior is a low-complexity model based on three key predictors. Other variables or factors impacting intention may exist, such as trust, personal experience, or risk awareness. Because the study used a small sample size, the findings cannot be generalized to the entire population. The study employed a survey questionnaire, which required respondents to reply to particular questions. The research approach used would not

have allowed respondents to express their beliefs, ideas, and points of view on the subject of investment.

This study only looks at a tiny portion of the psychological elements that influence investor behaviour when buying and selling stocks on the market. It is recommended that future studies look at aspects other than psychological issues as a type of investment behaviour.

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Post-Pandemic Recovery of Indian Economy: Some Sustainability Challenges

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Abstract :- The Indian economy was going through a crisis even before the Covid-19 pandemic. The pandemic was the worst shock for economic activity. India registered -22.29% growth. But gradually, the economy started picking up and recorded 20.21% growth in the first quarter of 21-22. The growth surpassed pre-pandemic growth. On the background of the slow rate of growth of the developed economies and that of some of the developing economies, the performance of the Indian economy is quite impressive. Financial Institutions expected sustained higher growth in the Indian economy. But gradually, the situation changed. A war between Ukraine and Russia disrupted the supply of crude oil. Rising crude oil prices and supply shortages impacted the growth of economies across the globe. Surging global crude oil prices further Pushed the prices up in India, creating inflationary pressure.

Against this background, this paper analyzes the growth trends of the Indian economy and examines the possible threats to sustained economic growth.

By analyzing the data collected from secondary sources like World Bank, The Reserve Bank Bulletin, and press release by the government of India for macroeconomic indicators, it has been observed that 1) Unemployment 2) A Slow rate of growth of Industrial Production 3) Decline in demand for exports 4) Growing external borrowings and 5) Decrease in private consumption are the major threats to the growth of Indian economy.

The study suggests 1) Stimulations to increase internal demand 2) Increase in public expenditure for employment generation 3) Reduce unproductive expenditure 4) Support Industrial growth. 5) Increase investment in social sectors 6) Make environmental laws stricter to reduce carbon emissions. To make the process of growth sustainable.

Keywords :- Growth, India, Growth Rate, Economic growth, Recovery.

Introduction :- Even before covid19 pandemic Indian economy was going through a crisis. GDP growth fell continuously from 2017-18. Private consumption and investment had completely collapsed (Hindustan Times first September 2020) when the COVID-19 pandemic attacked India, India was facing the problem of falling investment and savings, following gross capital formation, and as a result, falling GDP growth rate. In India, consumption demand had already fallen, and COVID-19 disrupted supply chains. Like many other countries in the world, the Indian economy experienced the adverse impact of the COVID-19 pandemic. It suffered from the supply side as well as demand side shocks. On the supply side and there was a decrease in production severe unemployment and supply chain disruptions.

But gradually and slowly Indian economy is recovering from the continuous slowdown since 2017-18. The government packages and spendings along with accommodative fiscal and monetary policies have their contributions to the recovery of the Indian economy. India registered 8.7% growth in GDP in FY 2022. It has surpassed the GDP growth at a pre-pandemic level. In the financial year 2022 almost, all sectors experienced steady growth. Especially the industrial sector is expected to grow at the rate of 9.9% in 2022. The service sector is expected to grow at 8.2%. (NABRD annual report 2021-22)

In the year 2022, India has become one of the fastest-growing economies in the world. India's economy surpassed the United Kingdom and France in 2019 in terms of GDP and it became the 5th largest economy in the world at \$ 2.88 T. Different financial institutions rated Indian GDP growth between 7% to 8% for the year 2023.

There was a remarkable increase in demand in the economy. All components of

aggregate demand surpassed the pre-pandemic levels in 2021-22. Along with the demand within the country, there was a demand for exports. Indian economy denoted strong export performance that far surpassed its pre-pandemic level. On the background of a slow rate of growth of the developed economies and some of the developing economies performance of the Indian economy was quite good.

The growth of national income was attributed to the optimistic business environment, achievements in digitization, robust industrial output, and foreign direct investment receipts. Indian economy also gained from lower prices of crude oil in the year 2018 -19.

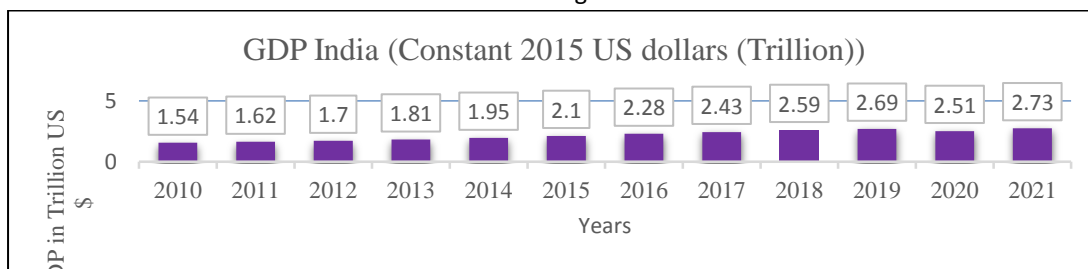
But gradually, the situation changed. The war between Ukraine and Russia disrupted the supply of crude oil. Rising crude oil prices and supply shortages impacted the growth of economies across the globe. Surging global crude oil prices further Pushed the prices up in India, creating inflationary pressure.

Against this background, this paper analyzes the growth trends of the Indian economy and examines the possible threats to sustained economic growth to answer the question of whether the growth of the Indian Economy is sustainable.

Rest the rest of the paper is organized as section II describes the growth trends of the Indian economy. RECESSION after COVID-19. Section III deals with possible threats to the growth of the Indian economy. Section IV compares the Indian economy with the world economy. and Section 5 concludes.

Growth of the Indian Economy :- Since 2010, the Indian economy is growing steadily. Its GDP grew from 1.5 trillion US dollars in 2010 to 2.73 Dollars in 2021 except for a fall of 2.69 trillion dollars in 2019 to 2.51 trillion dollars in 2020. But further, it picked up every time higher since 2010, in 2021 and it became 2.73 trillion.

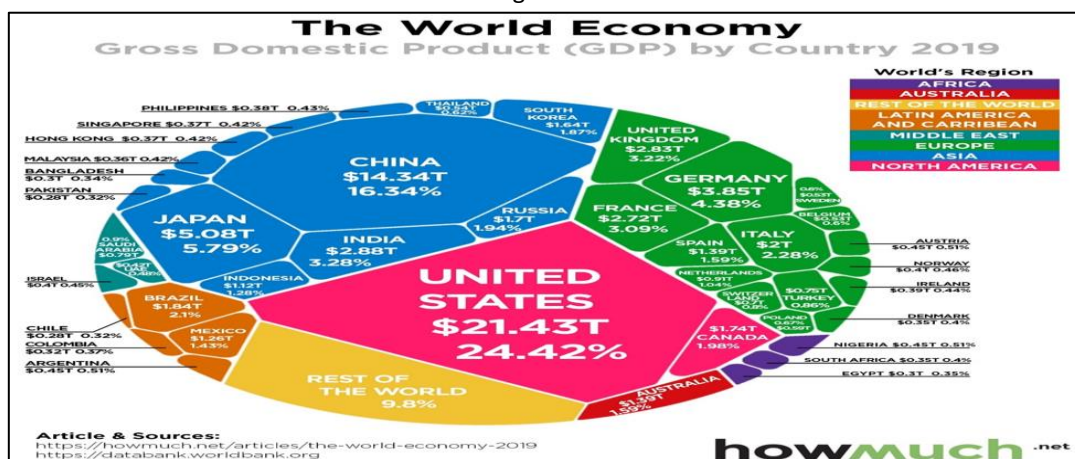
Figure 2.1



Source :- World Economy National Accounts Data

The Indian economy has overtaken the United Kingdom in terms of size, and it has become the fifth-largest economy in the world. IMF has forecasted the Indian economy to maintain a steady pace of economic growth. The World Economic Outlook published in October 2022(Mint,16th October 2022)

Figure 2.2



As specified in figure 2.2, India is the 5th largest economy in the world by GDP in 2019, measured in U.S. dollars. Its GDP is \$2.88 Trillion, and it is 3.28% of the total world GDP.

From a comparative perspective, India was expected to grow in the future on the same lines. Therefore, many financial institutions projected better growth in the financial year 2023.

According to the estimates of IMF India would grow at the rate of 8.2% in 2023. RBI projected growth for the year 2023 as 7.2%. Asian Development Bank has forecasted India's growth at 7.5% in 2023. Estimates by different financial institutions for the year 2023 are denoted in table 2.1.

Table 2.1- India's GDP Growth Forecasts FY23 by various Financial Organizations

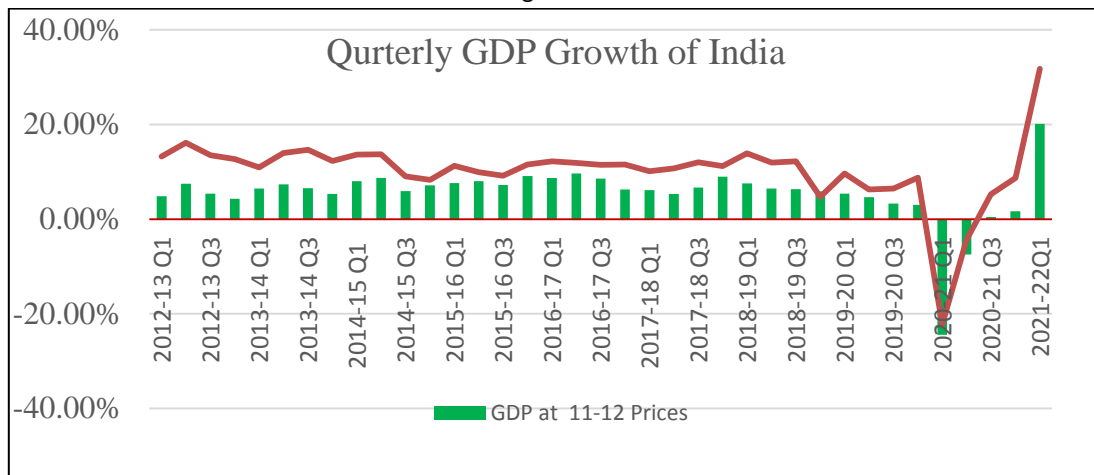
Institutions	Estimates for 2023
World Bank	6.5%
IMF	6.8%
S&P Global Ratings	7.3%
ADB	7%
Fitch	7%
SBI	6.8%
Citi Bank	6.7%
Goldman Sachs	7%
Moody's	5.2%
RBI	7%
FICCI	7%
OECD	6.9%
CRISIL	7.3%
UN	6.4%
ICERA	7.2%
Morgan Stanley	7.2%

Source :- BW Business World

But the quarterly analysis suggests that the growth story of the Indian economy is not smooth. Since 2012 -13, India achieved growth above 9% at current prices. The growth estimates at 2011-12 base year prices indicate continuous fluctuations. In the First quarter of 2012 -13, the rate of growth of the Indian economy was 4.87%. It reached up to 9.09% in the fourth quarter of 2015-16. Further, in the second quarter of 2016-17 Indian economy grew at the rate of 9.67%. Since then, till the second quarter of 2017-18, there was a continuous decrease in the quarterly rate of growth of the Indian economy. In the first quarter of 2020-21, the growth rate of the Indian economy at 2011-12 prices became -24.43%. It was -22.29% at current prices. Consecutively in the second quarter, the growth rate remained negative. It was -7.44% at 2011-12 prices. Further, in the third quarter of 2020-21 the growth rate at 2011-12 prices was 0.46%. Indian economy achieved the highest rate of growth ever in the first quarter of 2021-22. It was 20.13% at 2011-12 prices. This has been indicated in figure 3.

As per the estimates of GDP for the first quarter of 2022-23 The nominal GDP is estimated at rupees 64.95 lakh crores. As against rupees 51.27 lakh crore in the first quarter of 2021-22. It shows a growth of 26.7%. The real GDP at 2011-12 prices in quarter 1 of 2022-23 is estimated to be Rs. 36.85 lakh crores as against Rs. 32.46 lakh in quarter 1 of 2021-22. It shows a growth of 13.5% as compared to 20.1% in quarter 1 of 2021-22. (MoSPI GOI 2022)

Figure 2.3

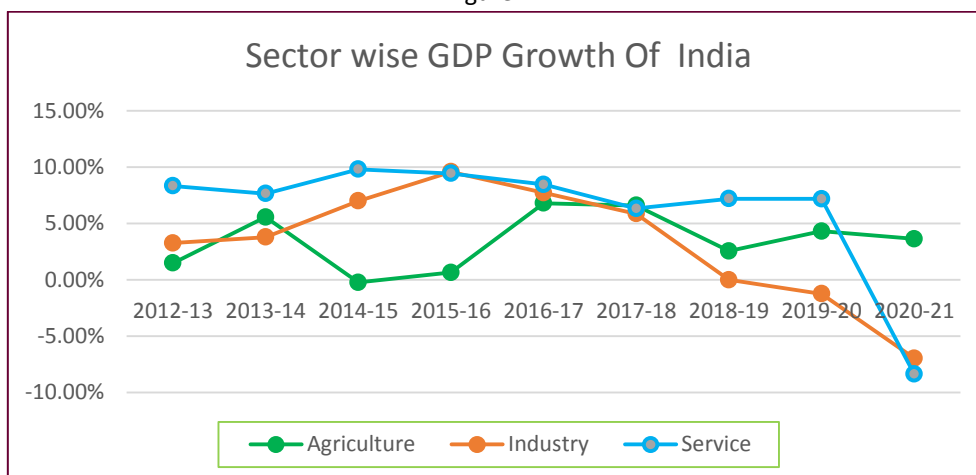


Source :- MoSPI Press release 2021- 2122, 2022-23

As mentioned in figure 2.3, the Indian economy picked up from the third quarter of 2020-21, GDP at current prices had reached more than 30%, while GDP act constant prices indicated growth of 21%.

One of the strong components of the growth of the Indian economy has been the service sector. Not only its contribution to national income is growing steadily, but its rate of growth has remained remarkable. Since 2012-13, the service sector has been the fastest-growing sector in the economy. It registered an Average 6.23% rate of growth over the period of 2012-13 to 2020-21. India's sector-wise GDP growth at constant prices (2011-12) is denoted in figure 2.4.

Figure 2.4



Source:- Statistics Times

In the year 2019-20, the rate of growth of the service sector was 7.1%. the rate of growth of the agricultural sector was 4.31%, while the rate of growth of the industrial sector was -1.23%. Further, in the year 2020-21, the growth of the service sector and the industrial sector became negative. But the performance of the agricultural sector remained notable. Its growth was 3.63%.

But on the background of the war between Russia and Ukraine and the possibility of slowing global demand, the international financial institutions reduced the growth forecast of the Indian economy for the year 2023.

Table 2.2
India's GDP Growth Forecasts FY23 by various Financial Organizations previous and revised

Agencies	Previous Estimates	Revised Estimates for 2023
World Bank	7.5%	6.5%
ADB	7.2%	7%
RBI	7.2%	7%
Fitch	7.8%	7%
SBI	7.5%	6.8%
Citi Bank	8%	6.7%
Goldman Sachs	7.2%	7%
Moody's	7.7%	5.2%

Source :- Times of India 2/9/2022, Mint 6/10/2022

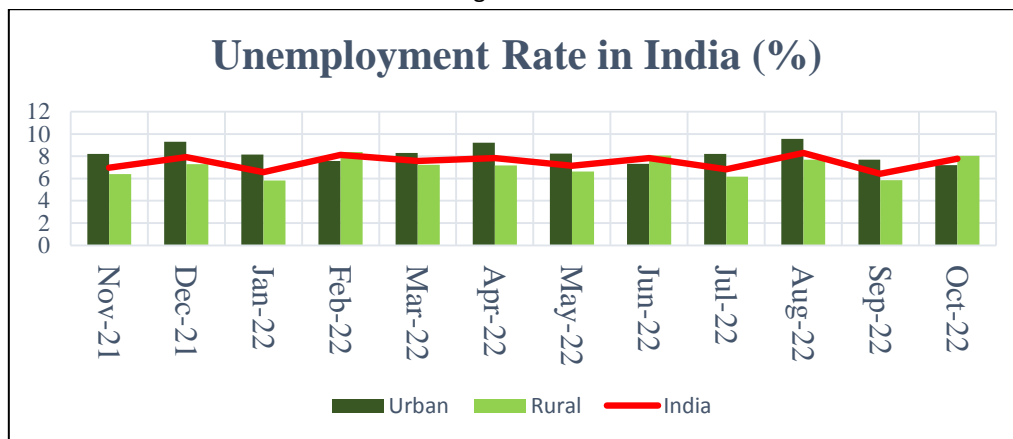
Table 2.2 suggests that financial institutions cut India's GDP growth forecast by 1% to 2%. It is expected that on average Indian economy will grow by 5.2% to 6.8% in 2022-23.

3 Challenges for growth :- This section deals with the challenges faced by the Indian economy to maintain a higher rate of economic growth.

3.1 Rising Unemployment

A rising rate of unemployment is one of the biggest problems that the Indian economy is facing. India's unemployment rate increased to 7.8% in October 2022. In the previous month, the unemployment rate was 6.43%. There was a slight decline in the unemployment rate from 7.7% to 7.2% in urban areas. But in the rural areas unemployment rate increased from 5.84% to 8.04%. In November 2021, the Rural unemployment rate was 6.41%, currently, it is 8.04%. The overall unemployment rate has increased from 6.97% to 7.77%. Changes in the monthly unemployment rate in India from November 2021 to October 2022 are denoted in figure 3.1.1

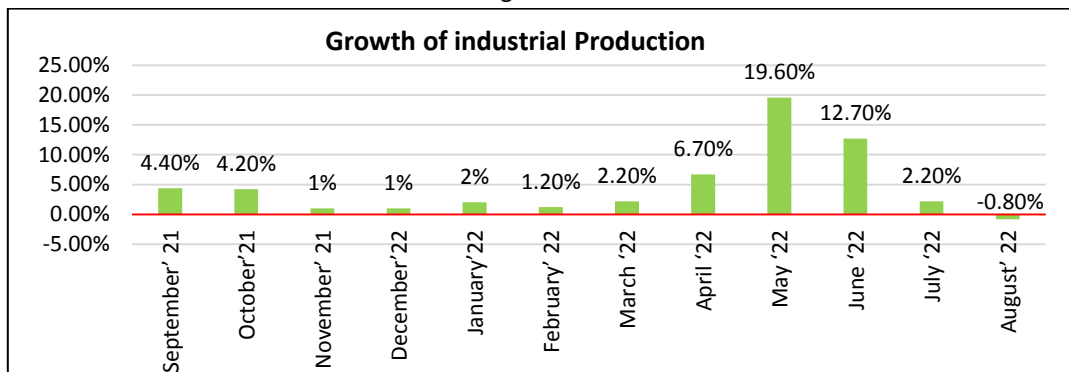
Figure 3.1.1



Source :- CMIE

3.2 Decline in the growth of Industrial Production :- Although the Indian economy is a diversified economy and the national income comes from the three sectors, agriculture, industry, and service sector, a low-level growth rate in one sector affects the growth performance of the economy. Since September 2021 there has been a continuous decrease in the growth of the industrial sector. It was just 1% in November and December 2021. Further in January 2022, it marginally increased up to 2%. Growth of industrial production peaked at 19.60% in the month of May 2022. But since then, there is a continuous decrease in industrial production. In August 2022 the growth of industrial production became negative. The growth of the industrial sector was just 0.80%. This is denoted in diagram 3.2.1

Figure 3.2.1



Source :- Trading Economies

figure 3.2 denotes the growth of industrial production from September 2021 to August 2022. Over the period industrial production declined from 4.40% to -0.8%.

3.3 Slow Growth of Exports :- India's merchandise exports measured in US billion dollars declined in August 2022. In August 2021, India's exports were 33.38 billion U.S. dollars. They declined to 33 billion U.S. dollars. The growth of merchandise exports between August 21 to August 22 was -1.15%

Figure 3.3.1

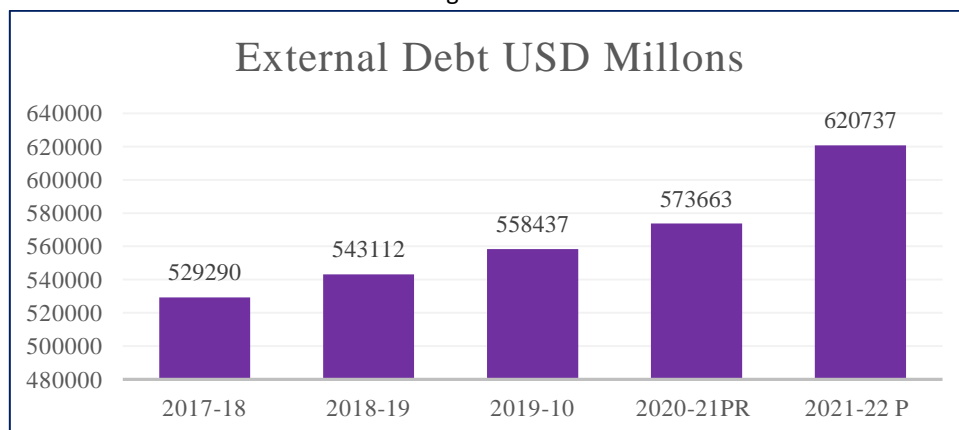


Source :- MoSPI

Such a decrease in exports, especially merchandise exports may affect economic growth. In the financial year, 2022 India's exports contributed to economic growth. More than half of the growth came from exports. But as the global economy is slowing there has been a fall in the volume of exports which may affect India's economic growth.

3.4 Growing External Borrowings :- There has been a continuous increase in external debt in India. According to a status report published by the Government of India in August 2022, India's provisional external debt was 620737 million U.S. dollars. as denoted in figure 3.4.1

Figure 3.4.1

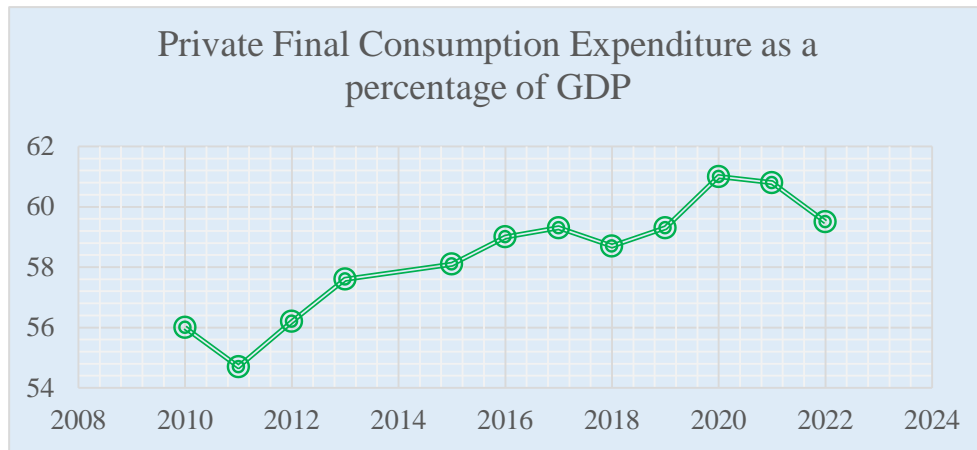


Source :- Government of India

It grew by 8.2% over the external debt in 2020-21.

3.5 Private Consumption Expenditure :- Consumption demand or expenditure is one of the important components of overall GDP. There has been a continuous fall in private consumption since 2020. Consumption level has not yet picked up. This has been denoted in figure 3.5.1

Figure 3.5.1



Source :- CEIC Bank of Baroda Research

In the year 2020, the share of private consumption in GDP was 61%. In the year 2021, it became 60.8%. Further in the financial year 2022, it declined to 59.5%. According to a report by the Bank of Baroda, consumption and GDP move together. When consumption increases there is positive momentum to overall growth. Therefore, a fall in consumption may affect economic growth. (Bank of Baroda, Economic Research Department 2022)

4 India in Comparison with the Big Four :- India is one of the fastest-growing economies in the world. It was 5th largest economy in the world by GDP. The countries with higher ranks than India in terms of GDP were the USA, China, Japan, and Germany. This section compares India with these countries based on certain indicators. The indicators are – 1) Per capita income 2) Extreme Poverty 3) Mortality under the age of five. 4) CO2 Emission. 5) the Percentage of Military Expenditure to the GDP and 6) the Proportion of seats held by the women candidates in the parliament. These indicators are selected to compare India’s economic progress along with social environmental and geopolitical improvement. The data referred to is world bank data sourced from data published by the World Bank for various indicators. The data denoted in table 4.1 suggests that among the big five countries by GDP, India has the lowest per capita income measured in US dollars. It has the highest number of people in extreme poverty. Both these indicators suggest high-income inequality within the country.

Table 4.1 India’s Comparison with other countries

Country	Per capita Income (Current USD) 2021	Extreme Poverty (Poverty line ≤1.90\$)	Mortality rate Under-5 (Per live Birth) 2020	CO2 Emission (kt) 2020	Military Expenditure as a percentage of GDP (2020)	Proportion of seats held by Women in the Parliament 2021
USA	69,287.5	1.3 million	6	4,817,720	3.7	28
China	12,556.3	2.1 million	7	10,707,220	1.7	25
Germany	50,801.8	19Thousands	4	657,400	1.4	35
Japan	39,285.2	50Thousands	3	1,081,570	1.0	10
India	2,277.4	103 million	33	2,456,300	2.9	14

Source 1 World Bank National Income accounts data.2 How much.net3

India's social sector is largely underdeveloped. India's military expenditure as a percentage of GDP is the second largest. It must be putting pressure on the government treasury and taking away its capacity to spend on social sectors. It has the highest mortality rate under the age of five. India is the third largest country among the big five, in terms of carbon emission. It shows the possibility of high environmental pollution. Also, the proportion of seats held in the parliament is a proxy for women's empowerment. India has only 14% women representation in the Parliament.

5 Discussion and Conclusion :- Indian economy is recovering from the covid19 shock. In the last quarter of 2022, it grew more rapidly. The National income growth was quite impressive, on the background of the slow rate of growth of many developed and developing economies. Its national income growth was 7.77% in October 2022. Very few economies showed such remarkable progress. Various financial institutions estimated that India's economy will maintain a higher rate of economic growth even in the financial year 2023. For example, the World Bank estimated that the Indian economy would grow at the rate of 7.2% while Fitch expected a 7.8% rate of growth

The Indian economy is estimated to be the fifth-largest economy in the world in terms of GDP. Its GDP in 2019 was 2.28 trillion dollars and it surpassed the United Kingdom. Although India achieved a higher rate of growth, certain areas need attention. Uncertainties at the world level, like Russia and Ukraine war, high inflation rate, and geopolitical and environmental threats created challenges to the growth process.

Financial institutions slashed the estimated growth of the Indian economy. The analysis of certain factors suggested that 1) Unemployment 2) a Slow rate of growth of Industrial Production 3) a Decline in demand for exports 4) Growing external borrowings and 5) a decrease in private consumption are the major threats to the growth of the Indian economy. Although India is one of the biggest countries in terms of GDP, a comparison with the other biggest

countries suggests that India needs to concentrate on its social sector.

The study recommends 1) Stimulations to increase internal demand 2) Increase in public expenditure for employment generation 3) Reduce unproductive expenditure 4) Support Industrial growth.5) Increase investment in social sectors 6) Make environmental laws stricter to reduce carbon emissions. This will help to maintain the sustained growth of the economy.

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Retooling Sales Promotion Strategies Post COVID 19

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Abstract :- This article is designed to assist the upcoming entrepreneurs about the changes they need to bring into the sales promotion strategies. As customers buying behaviour is changed in post pandemic. The entrepreneurs need to rethink and retool their communication activities. The researcher discusses the different sales promotion activities which need to bring into practise for the better returns and the inducements behind restructuring the same. The researcher gives further scope of amendments and augmentation of tools for the imminent research scholars holding the similar interest.

Keywords :- Customer buying behaviour, Post-Pandemic, Retooling, Sales promotion strategies

Introduction :- As the world tussle to cope up with Covid-19 so as the businesses. The businesses endured most were hospitality, retail & aviation. If we need to discuss it in length, the disrupting issues faced by the business were: Shortage of labour- the labour forces like any other were asked or forced to stay back at home, no travelling, people suffered unemployment on the other hand the businesses came down to halts and shut downs; Shortage of demand- risk of unemployment, uncertainty about the future, in short the need to fulfil the necessities was the prime motive of any consumer indeed leaving aside the need and greed for luxury items; Implications of Government rules and regulations- Every business needs to follow the rules laid down by the government such as implication of sanitizing stations, temperature check machine, limited number of employees in the premises, wearing of masks, floor markings for social distancing and so on; Contraction in trade: With the increasing regulations on movements, boundary restrictions, lockdowns many countries undergone reduction of supply as their business operations came to a halt. This makes quite simple to understand that businesses were over coerced in

regards to labour, demand, supply and frequent changes seen in government policies as per the ongoing situations.

Review of Literature :- Coronavirus have not only impacted on public health, but has also caused a serious economic shock. Several weeks after the outbreak, small businesses had already been disrupted by the Covid-19 pandemic, with approximately 25% of businesses closing for the disease (Bartik et al., 2020). Entrepreneurs had been astonished with their businesses challenges which includes irregular running of businesses, operations and possible financial restrictions on companies with undetermined of the future (Stephen, 2020). All other businesses such as hotels, aviation, transportation, construction faced major drops in their businesses during COVID- 19, the only exceptional being is the agriculture (Fairlie, 2020). If companies focus properly on their post COVID potential consumers behaviour than it will be helpful to them to find out, how can they bring their attention back to their products (Muehlemann et al., 2020). The pandemic COVID-19 had cause low businesses or bankruptcy for many well-known brands in many industries as consumers stay at home and economies are shut down (McKee & Tucker, 2020). Countries were badly impacted by the COVID-19 pandemic in regards to their economies and businesses. Due to unparalleled trade interruption other short term hurdles like working capital, distribution network, insufficient marketing many businesses impelled to shut down. Pandemic changed customers purchasing behaviour it was more towards essential items rather than non-essential items (Wang, 2015).

roducts(Muehlemann et al., 2020)

If companies focus properly on their post covid potential consumers behaviour

than it will be helpful to them to find out, how can they bring their attention back to their products (Muehlemann et al., 2020)

Research Methodology :- The study is to bring changes in the marketing strategies that will be beneficial for most of the businesses. The analysis and interpretation is on the qualitative data, wherein the strategies to be opted for the betterment of the businesses is discussed and explained in length.

1. Discussion:-

1.1. Contemplate customers last experience :-

Competitive marketing is not with other brands or sellers, it's all about customers last experience with the respective brand. It is very much needed for the business and brands to consider the customers last experiences; indeed, the businesses need to keep and contemplate the data of customers personalised journey. Making brand scoring a key factor for real time analytics.

1.2. Communicate in local and precise terms :-

Targeting customers on their state of affairs with the most relevant product. Companies need to comprehend customers' needs and requirements on geographical as well as demographical features. The messages and advertisements should be communicated with human and personal connection in local and precise terms.

1.3. Digital marketing to allure workday consumers :-

Myriad consumers' life and work is around PC's. Customers blend their work with their personal life, switches consumer mode during their working hours. As they spend maximum time online, advertisements with variety of discounts and offers will attract them as they are earning and salaried targets holds a great purchasing power.

1.4. Shifting to PPC advertisements :-

It is one of the most cost effective method of advertisement for any business. The advertiser only needs to pay on per click by the customer on the ad at the stipulated price decided in advance. The business owner needs to know where he can target his

customers and can place ppc advertisement for instance Facebook advertisement, Google advertisement, LinkedIn advertisement and so on.

1.5. **Resilience Approach in Business** :- Perplexity is very common in business environment. One needs to know how the organisation would function after uncertain events. C-suite of every organisation should create a resilience centre to diagnose and overcome such situations. For instance, if an organisation encounters perplexity in traditional or regular marketing, the resilience centre along with the approval of C-suite should change the marketing to modern marketing as per the need and desire of their target customers.

2. **Conclusion** :- We all can witness the most drastic and uncertain event was COVID 19 pandemic. Wherein everything went to a toss and hustle. In this research paper the researcher has tried to discuss few strategies which can be retool and put into operation as every business embraces the recovery and long term success. The new world has encountered automation, the marketers must achieve a perfect balance between customers and automation to unlock the AI scale. Businesses need to adopt customer oriented promotional strategies to compel in competitive scenario. The conclusion is, the focus of marketing and sales promotion has shifted from product to customers.

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Comparative Analysis of in Electricity Consumption Konkan and Nashik Division of Maharashtra

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Abstract :- The Paper analyses the trend in consumption of electricity for domestic, commercial, industrial, agricultural and other uses during 2010-11 to 2020-21 between the Konkan and the Nashik division of Maharashtra. The study also investigates if there is presence of disparity in pattern of electricity uses for different purposes during the study period between the Konkan and Nashik region.

The research outcome revealed that the mean consumption of electricity was 8794489.54 thousand kWh for domestic, 7504985.41 thousand kWh for commercial, 7504985.41 thousand kWh for industrial, 275955.58 thousand kWh for agricultural and 1394827.65 thousand kWh for other uses in Konkan region during the study period.

Talking about the Nashik division, mean consumption of electricity was 2076432.765 thousand kWh for domestic, 678111.7182 thousand kWh for commercial, 1907064.209 thousand kWh for industrial, 5242188.487 thousand kWh for agricultural and 864987.5645thousand kWh for other uses during the study period. The study reveals that Konkan division dominated in all forms of electricity consumption except for the uses of electricity for agricultural purposes in the region during the study period.

Key Words :- Electricity consumption, Domestic use, Commercial uses, Industrial uses, Agricultural uses, Mean, Disparity.

Introduction :- Maharashtra is divided into six administrative divisions out of which, Konkan and Nashik are the two important divisions. The Konkan division comprise of six districts namely Mumbai city, Mumbai, Suburban, Thane, Raigad, Ratnagiri and Sindhudurg while Nashik division is formed by five districts namely Ahmednagar,

Nashik, Dhule, Nandurbar and Jalgaon. The Konkan and Nashik division according to census 2011 contributed to 4.7 crs. in state's population which is about 42 percent of total state's population. Talking about the total land area of both the divisions, it comprised of 88.2 thousand square km which is about 28 percent of the total land area of the state. The Konkan is the second highest literate division in the state while Nashik observed the least according to census 2011.

Electricity is one of the key economic infrastructures. It not only affects the national and per capita income in the country, but is also an important determinant of various activities that societies undertake. Many studies (Ujjayant C. et al. 2012, Santosh Kumar Sahu-2008)) carried out in the past have revealed the importance of electricity in the country's perspective. Electricity contributes directly to the agricultural and industrial production and thereby affecting the country's national income. But the consumption of electricity is subject to variation. Pragyana Das (2013), E. Mohammed Shereef and C. Ganesh (2016), Kristen Gram Hanssen (2011) in their studies revealed the various factors affecting electricity consumption. Simultaneously, the emphasis is also on discovering the sources of energy which are less harmful to man and their environment Shahrouz A. et al. (2014).

1.1 Objectives :-

1. To study the trends in electricity consumption in Konkan division of Maharashtra between 2010-11 to 2020-21.
2. To study the trends in electricity consumption in Nashik division of Maharashtra between 20 10-11 to 2020-21.
3. To analyse the disparity in patterns of electricity consumption between Konkan and Nashik Division of Maharashtra between 2010-11 to 2020-21.

1.2 Data Source and Methodology :- The present study analyses the trends in electricity consumption and disparities present in electricity consumption in Konkan and Nashik division which are the two important divisions of Maharashtra between 2010-11 to 2020-21 using descriptive methodology. The data for the present study has been collected using various available published sources of state and local governments, research papers, reports of various institutions and organisations etc. The mean and range have been computed to compare and compute the outcome of the research.

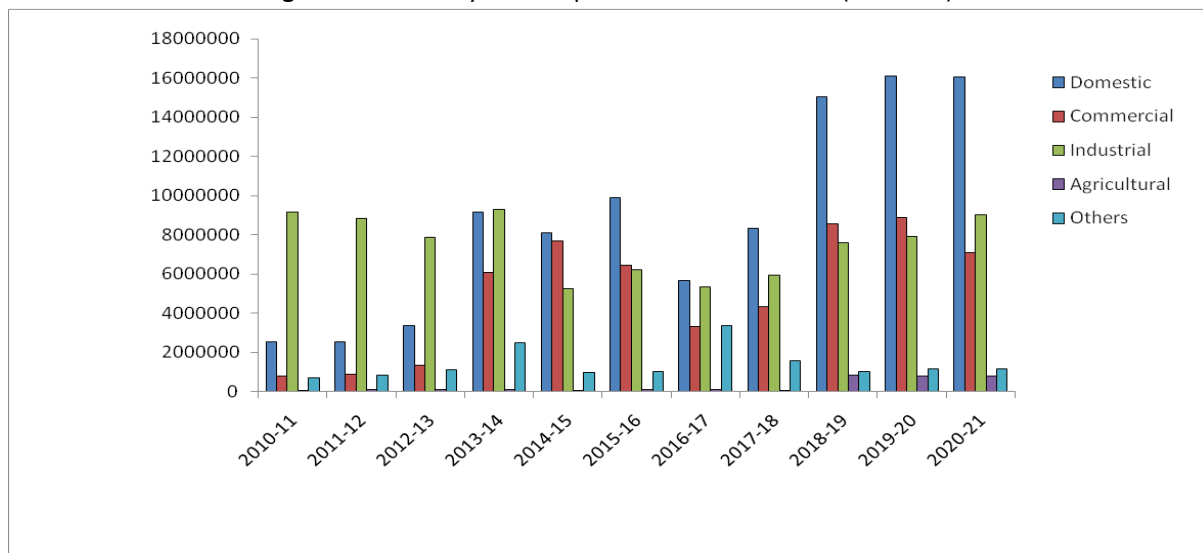
It is to be further noted that due to unavailability of data for Mumbai city and Mumbai Suburban form 2010-11 to 2013 to 2012-13 and further in year 2016-17 for Mumbai Suburban and 2017-18 for Mumbai City which are being by and large the urban districts and falling under Konkan division. The only available data of these districts have been taken into account.

1.3 The Consumption of Electricity in Konkan and Nashik Division :- Total consumption of the

electricity in the state in 2010-11 was 58296000 thousand Kilowatt hour while the total consumption of electricity during the same period in Konkan and Nashik division were found to be 13198993 and 7802496.12 thousand kilowatt hours respectively. The consumption of the electricity in the state in 2020-21 increased to 75772000 thousand Kilowatt hour while the total consumption of electricity during the said period in Konkan and Nashik division increased to 34072532 thousand kilowatt hours.

1.3.1 The consumption of Electricity in Konkan Division :- Total consumption of the electricity in the state in 2010-11 was 58296000 thousand Kilowatt hour out of which Konkan division constituted 22.6% of electricity consumption in the state. The consumption of the electricity in Maharashtra increased to 75772000 in 2020-21 while the consumption of electricity in Konkan rose to 34072532 thousand megawatt hours, accounting for nearly 45 percent of total state's electricity consumption.

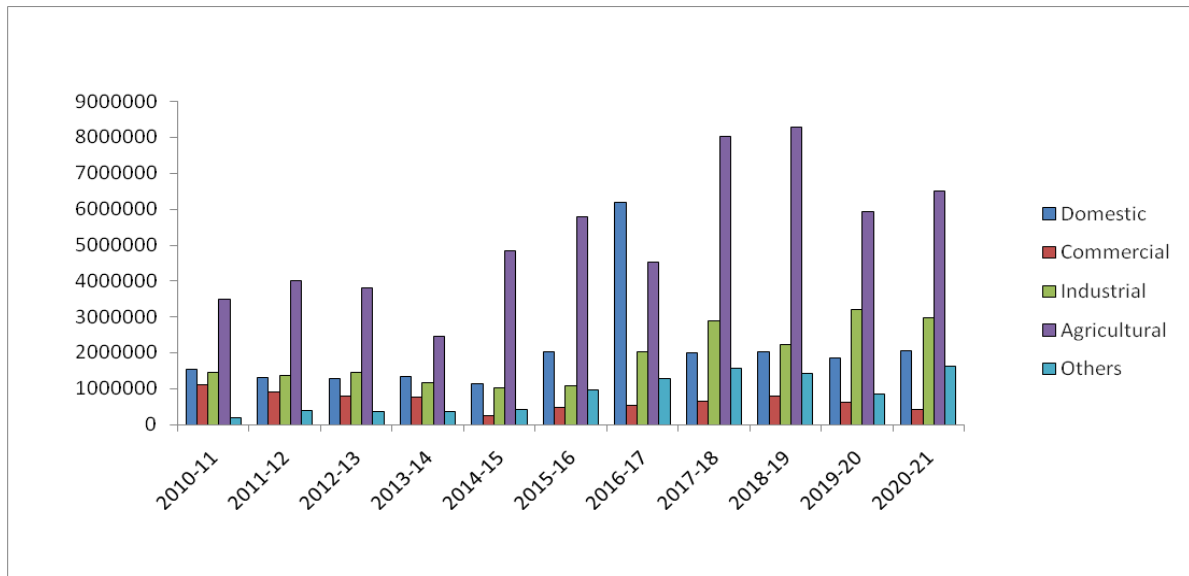
Figure 1:- Electricity Consumption in Konkan Division (000 kWh)



Source :- D.S.E.R ,Konkan & Nashik Div.

1.3.2 The consumption of Electricity in Nashik Division :- The Nashik Division of Maharashtra accounted for 13% of electricity consumption in the state in 2010-11. The consumption of the electricity in Maharashtra increased to 75772000 in 2020-21 while the consumption of electricity in Nashik division rose to 10768785 thousand megawatt hours accounting for nearly 13 percent of total state's electricity consumption.

Figure 2 :- Electricity Consumption in Nashik Division (000 kWh)

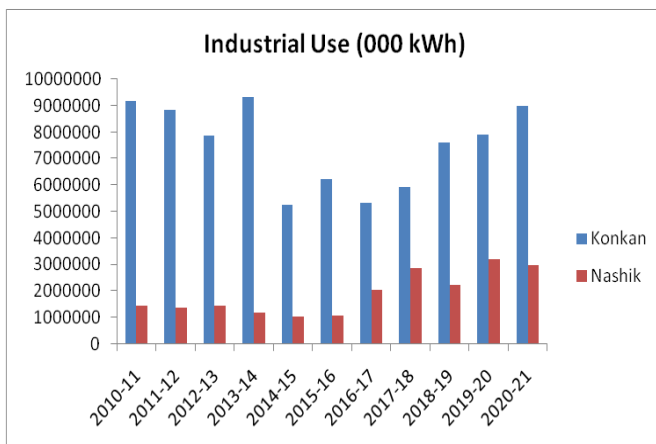


Source :- D.S.E.R ,Konkan & Nashik Div.

1.4 The Trends in Electricity Consumption in Konkan and Nashik Division of Maharashtra :- The electricity consumption for the convenience of the study has been classified into Domestic, Industrial, Commercial, Agricultural and Other uses. The figure given below portrays a better picture of consumption of electricity in the Konkan and Nashik division selected under the study.

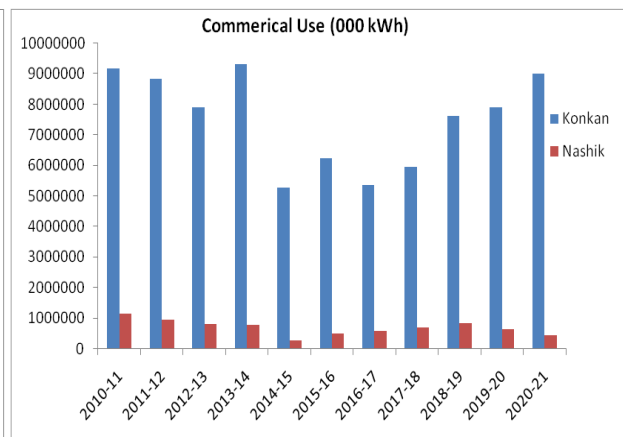
Figure 3 shows the pattern of electricity consumption for industrial uses in Konkan and Nashik division. The electricity consumption for industrial uses decreased from 91.7 lakh thousand kilowatt hours to 90.7 lakh thousand kWh hours in 2020-21 (The reduction was on account of non availability of data for Mumbai City and Mumbai Suburban) and the total consumption of electricity for industrial purpose in Nashik division increased from 14.5 lakh to 29.9 lakh thousand kWh during the study period. The average consumption of electricity in Konkan region between 2010-11 to 2020-21 was 75 lakh thousand kilowatt hours while consumption of electricity in Nashik division during the study period was 19 lakh thousand kilowatt hours. The use of electricity for industrial purposes in Konkan was found to be much higher than in Nashik division. The mean difference between the two divisions was found to be nearly 55 lakh thousand kilowatt hours during the study period.

Figure 3: Industrial use (000kWh)



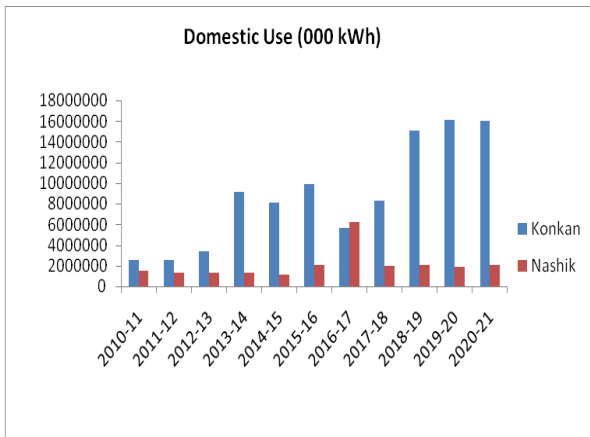
Source: D.S.E.R ,Konkan & Nashik Div.

Figure 4: Commercial use (000kWh)



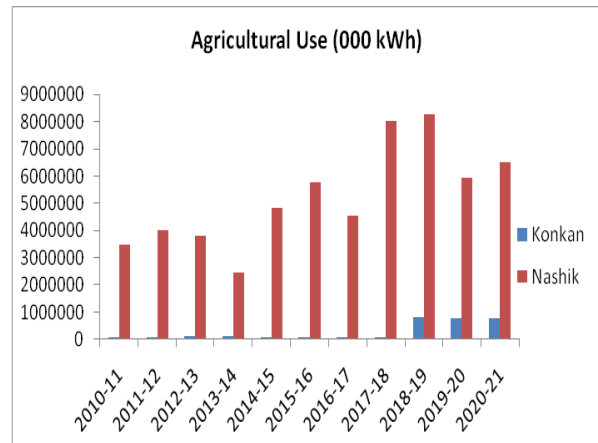
Source: D.S.E.R ,Konkan & Nashik Div.

Figure 5: Domestic use(000kWh)



Source: D.S.E.R ,Konkan & Nashik Div.

Figure 6: Agricultural use(000kWh)



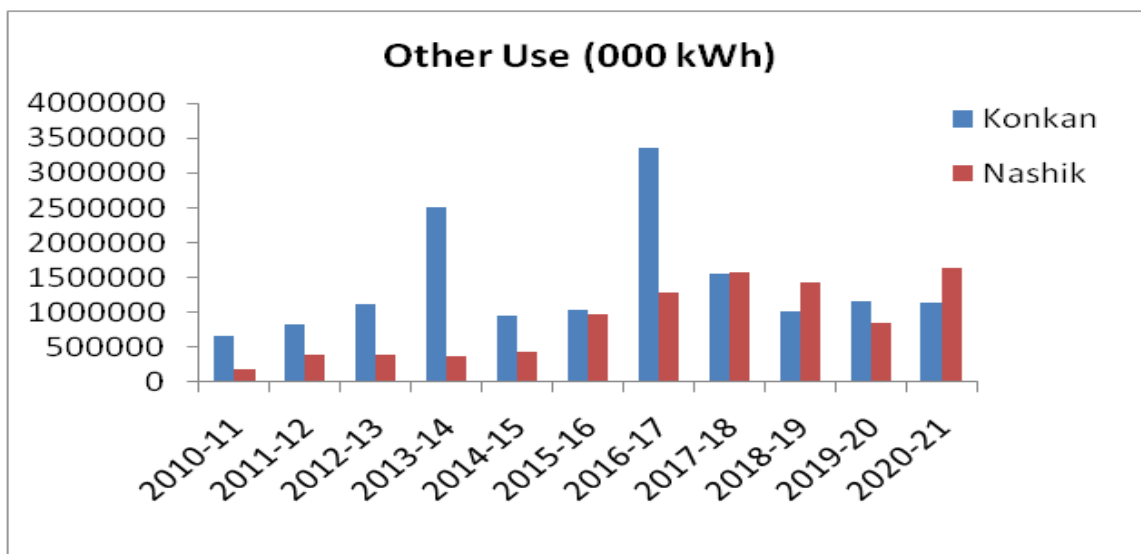
Source: D.S.E.R ,Konkan & Nashik Div.

Figure 4 shows the pattern of electricity consumption for commercial uses in Konkan and Nashik division. The electricity consumption for commercial uses increased from 7.7 lakh thousand kilowatt hours to 70.8 lakh thousand kWh hours in 2020-21 and the total consumption of electricity for commercial purposes in Nashik division decreased from 11.2 lakh to 6.7 lakh thousand kWh during the study period. The average consumption of electricity in Konkan region between 2010-11 to 2020-21 was 50 lakh thousand kilowatt hours while consumption of electricity in Nashik division during the study period was 6.7 lakh thousand kilowatt hours. The use of electricity for commercial purposes in Konkan was found to be much higher than in Nashik division. The mean difference between the two divisions was found to be nearly 44 lakh thousand kilowatt hours during the study period.

Figure 5 shows the pattern of electricity consumption for domestic uses in Konkan and Nashik division. The electricity consumption for the domestic uses increased from 25.1 lakh thousand kilowatt hours to 1.6 crs thousand kWh hours in 2020-21 while the total consumption of electricity for domestic purposes in Nashik division increased from 15.4 lakh to 20.6 lakh thousand kWh during the study period. The average consumption of electricity in Konkan region between 2010-11 to 2020-21 was 88 lakh thousand kilowatt hours while consumption of electricity in Nashik division during the study period was 20.7 lakh thousand kilowatt hours. The use of electricity for domestic purposes in Konkan was again found to be much higher than in Nashik division. The mean difference between the two divisions was found to be nearly 68 lakh thousand kilowatt hours during the study period.

Figure 6 shows the electricity consumption for agricultural uses in Konkan and Nashik division of Maharashtra. The electricity consumption for the agricultural uses increased from 0.62 lakh thousand kilowatt hours to 7.8 lakh thousand kWh hours in 2020-21 while the total consumption of electricity for agricultural purposes in Nashik division increased from 34.8 lakh to 65 lakh thousand kWh during the study period. The average consumption of electricity in Konkan region between 2010-11 to 2020-21 was 27.5 lakh thousand kilowatt hours while consumption of electricity in Nashik division during the study period was 52.4 lakh thousand kilowatt hours. The use of electricity for agricultural purposes in Konkan was found to be much lower than that of Nashik division. The mean difference between the two divisions was found to be nearly 25 lakh thousand kilowatt hours during the study period.

Figure 7: Other uses (000kWh)



Source: D.S.E.R ,Konkan & Nashik Div.

Figure 7 shows the electricity consumption for other purposes in Konkan and Nashik division of Maharashtra. The electricity consumption for the other uses increased from 6.7 lakh thousand kilowatt hours to 11.3 lakh thousand kWh hours in 2020-21 while the total consumption of electricity for other purposes in Nashik division increased from 2.0 lakh to 16.4 lakh thousand kWh during the study period. The average consumption of electricity in Konkan region between 2010-11 to 2020-21 was 14.0 lakh thousand kilowatt hours while the average consumption of electricity in Nashik division during the study period was 8.6 lakh thousand kilowatt hours. The use of electricity for commercial purposes in Konkan was found to be much higher than in Nashik division. The mean difference between the two divisions was found to be nearly 4.5 lakh thousand kilowatt hours during the study period.

Conclusion :- Study revealed that Konkan division dominated almost in every segment of electricity consumption except for agricultural uses during the study period over Nashik. The Nashik division witnessed higher electricity uses for agricultural purposes on the account rural background and presence of higher agricultural activities in the region. Study also reveals presence disparities in terms of electricity consumption in both the divisions. The konkan region is witnessing more electricity consumption than Nashik due to presence of more economic and commercial activities and higher urbanisation rate.

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Commuters' Satisfaction towards Mumbai Suburban Railway Amenities - With Special Reference to Central Line

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Abstract :- Consumer satisfaction is immensely vital to the success of any business. It's crucial to understand how customers feel about a product or service in order to gauge their happiness. The degree of customer satisfaction with the services they have offered is significant information for service marketers to gather. As a result, the marketer can improve the quality of their products and services by analysing the level of satisfaction towards its services. To ensure customer loyalty and support, this is very much needed. Most services are intangible because compared to actual items, thus it is critical to comprehend how they see the quality of the services they receive from the service provider. Consumer perceptions are being influenced by a number of reasons. Favourable consumer perceptions can be seen as their satisfaction and vice versa. Always marketer interested in surging positive consumer impressions towards his/her products and services.

Mumbai's Suburban Railway System, is metropolitan city's lifeline and is carrying 4lakh passengers daily. Thus, it's playing a key role in suburban traffic of the city.

The researcher intended to throw light on commuters' satisfaction towards the quality of services of MSRS with special reference to Central line in this paper.

Keywords :- Consumer satisfaction, Mumbai Suburban Railway System, service quality, Lifeline of Mumbai, MSRS, positive perception

Introduction :- Strong national infrastructure gives the country the right to a well-developed transportation system. Even the poorest and most disadvantaged citizens should be able to afford the system of public transportation. It should be efficient and efficient at the same time. Railways

have become part and parcel of people's life as they are the most affordable and convenient mode of transport. It is the most pocket friendly mode of the transport.

Mumbai is the commercial, financial and entertainment hub in the state of Maharashtra in India. It is the largest economy in India as well as the richest city in India. It houses the headquarters of Indian financial institutions such as Reserve banks of India, Bombay Stock Exchange and National Stock Exchange. Several Indian business houses are located in Mumbai i.e. Tata Group, Reliance Group and Aditya Birla Group. Thus, Mumbai is regarded as nerve Centre of Indian economy. Mumbai contributes 40 percent of total income to the whole Maharashtra state. Mumbai is a transport hub which connected to major cities of industrial and commercial significance. Mumbai's tourism sector is also flourishing as tourists are increasing continuously. Mumbai is housing several chemical, petrochemical and pharmaceutical industries. The city is also home for small business houses. The population of Mumbai is growing steadily. During the period 1991 to 2001 Mumbai's population increased from 9.92 million to 11.97 million registering the growth of 20.6 percent. In the year 2001 it was 16, 368, 084. In the year 2005, it was increased to 18, 366, 089. Then in the year 2011 it was 18, 410, 000. In the year 2020, it was 20, 411, 274. Thus, Mumbai's population in the last twenty years has shown a growth.

The history of Indian railways traced back to pre-independence era initiated by British rulers.it had fragmented network prior to India's independence. In 1951 the fragmented rail network was regrouped into six zones namely Central zone, Eastern zone, Northern zone, Northeast Frontier zone, Southern zone, and Western zone" (Mattoo, 2000).

Mumbai suburban railways system is an oldest railways system in Asia. It is divided into two zonal railways networks operated by divisions of Indian Railways. One is Western Railways, and another is Central Railways. Central railways operate Central line, Harbour line and Trans-harbour lines. Western railway runs and manages Western line. The suburban rail network is well developed and has a total length of 390 km and include 129 stations, 115 stations excluding stations common to two lines.

Review of Literature :-

Collier, D. (1994) explained that service creating processes are different from the product manufacturing processes. The author emphasized that the service is not a product but a performance. Therefore, training plays important role in empowering service employees and service staff to deliver effective service. The innovative terms like service strategy, service innovation, CBT i.e. Consumer Benefit Packages, service quality process maps were stated by the author with the help of suitable examples.

Agarwal, V. (2004) studied the Indian railways as an institution in Indian perspective. The author examined the volume of passenger traffic and key statistics on Indian Railways over the past years. The author drew the attention towards the fact that passenger needs should be given appropriate concentration. The author advocated that employee and customer relationship management must be given due recognition. The author explained significant aspects of human resource management and ethos required for sustainable development.

Vasconcellos E. (2005) discussed loopholes in traditional policies of public transport and traffic related problems in developing countries. It was observed by the author that there is need to have wise planning for urban transport to have equal and sustainable urban transport. The States make and implement transport policies. Commuters are getting affected by available modes of transport and their travel patterns. Daily passenger's experience forms the base for formation of their

perception towards modes of public transport.

Shajahan S. (2005) explained that the customer retention and customer delight results in customer satisfaction. The customer creation is very expensive affair as compared to customer retention. It is always better to please customers than only fulfilling their minimum expectations. The author recognized the fact that customers can be delighted with no additional costs to service providers through proper employee training. Latest sophisticated technologies have made today's customers more educated and more informed.

Study Objectives :-

1. To study the commuters' satisfaction towards the services offered by Mumbai Suburban Railways on Central Lines of Mumbai division.
2. To explore the commuters' demographic background on Central lines of Mumbai division.
3. To examine the relationship between the commuters' age and their satisfaction on Central lines of Mumbai division.

Hypothesis of the Study :- H1: There is no significant difference between the age and commuter satisfaction on Central lines in Suburban Railway in Mumbai.

Research Methodology :- The present study is descriptive in nature. The information was gathered by the researcher from both primary and secondary sources. A structured questionnaire based on Five Point Likert Scale was used to gather the primary data from 143 respondents. 27 service factors are taken into consideration. Secondary data was also acquired by the researcher from the Railway's official website, business magazines, reference books, newspapers, journals, and published reports as well as unpublished studies. The descriptive statistics and inferential statistics were used under the research. Demographic analysis comprises the analysis of respondent's variables such as gender, age, educational qualification and occupations. Demographic characteristics affect the travel pattern and travel needs of the respondents. Hence it is important to

study and analyze under the study to find the relations hip with their perception and satisfaction level.

Table 1.1
Selection of Sample Respondents

SR. NO.	RAILWAY ROUTES	NO. OF RESPONDENTS
1	CSMT TO KALYAN	43
2	CSMT TO KASARA	50
3	CSMT TO KHOPOLI	50
TOTAL		143

Source :- (Compiled by the researcher)

Data Analysis & Interpretation :- The data collected from the respondents were coded in Microsoft excel sheets. Then SPSS software was used for data analysis. Factor Analysis, Kruskal Wallis tests were applied to test the hypotheses under the study.

Results

Table 1.2
Demographic details of the respondents

Sr. No.	Particulars	No. of Respondents	Percentage of Respondents
1	Gender	Male	50%
		Female	50%
2	Age	15-30yrs	56%
		31-45yrs	32%
		46-60 yrs.	12%
3	Education	Up to HSC	9%
		Under- Graduate	30%
		Graduate	18%
		Post Graduate and above	43%
4	Income	Below Rs. 50,000	23%
		Rs. 50,000-1 lakh	17%
		Rs. 1 – 2 Lakhs	23%
		Rs. 2 lakh – RS. 5 lakhs	17%
		Rs.5 lakh – RS.10 lakhs	15%
		Above Rs.10 lakhs	5%
		5	Occupation
		Non-working	35%

Source: (Compiled by the researcher)

Table 1.3
Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.938
Bartlett's Test of Sphericity	Approx. Chi-Square	2215.877
	Df	351
	p-value	.000

Source: (Compiled by the researcher by using SPSS)

Since the p-value for the KMO is greater than that of 0.05 indicates that the sample is adequate for factor analysis and p-value for Bartlett's indicates is less than that of 0.05 indicates that the assumption of Sphericity is satisfied.

27 variables can be represented by 4 components. The satisfaction level in each of the component can be compared further for understanding the satisfaction in different category.

According to factor analysis, researcher made following component structure.

Table 1.4
Component Structure

F1	F2	F3	F4
Availability of emergency helpline no.	Availability and affordability of fresh food/refreshment	Announcement of arrival and departure of trains	Availability of Wi-Fi
Cost of service usage	CCTV facility	Frequency and Clarity of announcements	Availability/presence of security force / personnel in early morning or late-night hrs.
Courtesy of the staff	Conditions of escalators/lift	Frequency of trains	Display of train schedule on indicators/electronic display, sign boards
Punctuality (Maintaining train arrival timing and Maintaining departure timing)	Proper light, fans etc.	Quick disposal (redressal) of passengers' complaints	Easy accessibility to other platforms
Service by railway doctors	Provision of first aid and medical facility	Safety and security of self and belongings	Height of platform in comparison with footboard
Service by railway police force	Sanitation /toilet facility/Spittoons/Availability of dustbins	Ticketing facility/ATVM Machine/UTS mobile ticketing APP	Platform shed
Service delivery as per promised schedule	Seating arrangements on platforms		Underground ways/ FOB bridge/ Width of bridge

Source: (Compiled by the researcher by using SPSS)

Hypothesis Testing

Table 1.5
Kruskal-Wallis test Results

Service Parameters	Chi-Square	df	p-value	Interpretation
Seating arrangements on platforms	.327	2	.849	Non-Significant
Proper light, fans etc.	3.468	2	.177	Non-Significant
CCTV facility	1.190	2	.552	Non-Significant
Sanitation /toilet facility/Spittoons/Availability of dustbins	5.856	2	.053	Non-Significant

Availability and affordability of fresh food/refreshment	2.006	2	.367	Non-Significant
Provision of first aid and medical facility	1.491	2	.474	Non-Significant
Availability of emergency helpline no.	.550	2	.760	Non-Significant
Ticketing facility/ATVM Machine/UTS mobile ticketing APP	.719	2	.698	Non-Significant
Underground ways/ FOB bridge/ Width of bridge	.647	2	.724	Non-Significant
Availability/presence of security force / personnel in early morning or late-night hrs.	1.215	2	.545	Non-Significant
Conditions of escalators/lift	2.226	2	.329	Non-Significant
Height of platform in comparison with footboard	2.378	2	.305	Non-Significant
Platform shed	1.734	2	.420	Non-Significant
Display of train schedule on indicators/electronic display, sign boards	.086	2	.958	Non-Significant
Easy accessibility to other platforms	.075	2	.963	Non-Significant
Availability of Wi-Fi	.287	2	.866	Non-Significant
Service by railway police force	6.044	2	.049	Significant
Service by railway doctors	2.657	2	.265	Non-Significant
Cost of service usage	3.082	2	.214	Non-Significant
Courtesy of the staff	.403	2	.817	Non-Significant
Service delivery as per promised schedule	.386	2	.825	Non-Significant
Punctuality (Maintaining train arrival timing and Maintaining departure timing)	.002	2	.999	Non-Significant
Announcement of arrival and departure of trains	.470	2	.791	Non-Significant
Frequency and Clarity of announcements	1.521	2	.468	Non-Significant
Quick disposal (redressal) of passengers' complaints	2.089	2	.352	Non-Significant
Frequency of trains	.232	2	.891	Non-Significant
Safety and security of self and belongings	.453	2	.797	Non-Significant

Source :- (Compiled by the researcher by using SPSS)

Since p-value for the Kruskal-Wallis test is greater than that of 0.05 indicates almost same level of satisfaction of all the age passengers for all the service aspects. The higher mean rank indicates more satisfaction except Service by railway police force for which people with lower age group are more satisfied.

Hence, researcher fails to reject hypothesis "There is no significant difference between the age and commuter satisfaction on Central lines of Mumbai Suburban Railway" except for one of the service parameters i.e. 'Service of railway police force' for which p-value is less than 0.05 i.e. 0.049 which is significant.

Table 1.6
Age Wise Overall Satisfaction

PARTICULARS		Age					
		15 to 30 yrs.		31 to 45 yrs.		46 to 60 yrs.	
		No. of respondents	Percentage	No. of respondents	Percentage	No. of respondents	Percentage
Are you satisfied with the services provided by Suburban Local trains in Mumbai?	Yes	49	62%	30	67%	12	70%
	No	30	38%	15	33%	5	30%

Source :- (Compiled by the researcher)

As per table 1.6, 70 percent commuters in the age group 46 to 60 years are satisfied with services of Mumbai Suburban Local trains on Central lines. 67 percent commuters belonging to middle age group 31 to 45 years are satisfied with services of Mumbai Suburban Local trains on Central lines while 62 percent commuters in younger age group 15 to 30 years are satisfied with services of Mumbai Suburban Local trains on Central lines. The dissatisfied commuters are 38 percent, 33 percent and 30 percent for the age groups 15 to 30 years, 31 to 45 years and 46 to 60 years respectively.

Conclusion :- Mumbai suburban railway service is inseparable service in public transport. It occupies the pivotal position in the life of Mumbai citizens who have chosen it as their major mode of travel for reaching their workplaces and educational institutions. Local trains in Mumbai has become the soul of the city and its suburbs. The Mumbai suburban railway is providing its services to all the economic classes of people and all the age groups. It does not discriminate on the basis of gender or age. Uniform services are rendered to all the passengers equally. But there are certain classes of respondents such as school and college students, elderly respondents they need specialized service. Railway need to give attention to these passenger's needs.

Scope for Further Research :- In the present study, the researcher studied the commuter satisfaction

in MSRS Central Lines in Mumbai and Mumbai Suburban region. The on-board satisfaction of commuters can be studied in detail in future studies. Further research can be taken up in the other divisions of Indian Railways. Also, the other wings of IR i.e Metro and Monorail commuters's satisfaction can be explored. Even the comparative study can be conducted, for example, gender wise commuter satisfaction, problems faced by male commuters and female commuters, service quality for long distance trains and local trains in Mumbai and Mumbai Suburban railway, etc.

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A Comparative Study of Eating Habits among Male and Female Residents of Mumbai

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Abstract :- Eating habits of the people refers to how and what people eat, It Indicates how people equips themselves in eating home cooked food or restaurant food. World is moved to order of innovations in every field. Food and beverages Industries are booming in the economy. 'People enjoys eating out rather than home cooked food' but is this statement is right? People eat restaurant food or Fresh home cooked food more frequently? What factors influence them to eat restaurant food or home cooked food? This research will answer all above questions. This research has been conducted to understand what is the eating pattern of male and Female? Is there any difference in their choice of food or not. This research is first step towards understanding eating pattern among male and Female residents of Mumbai. This research will give a direction to the Food and beverages Industry in their Business Strategies and Planning in the current new world of Innovation. Few literatures were studied to identify the research gap in this area. Data has been collected from 84 respondents using Questionnaire. Out of 84 respondents 43 were Male and 41 were Female. Data has been analysed using Ms- Excel. Hypotheses has been tested with correlation using Ms- Excel- Mega stat.

Keywords :- Fresh Home Cooked Food, order in food or eat from restaurants, nutrition, health and hygiene, Leftovers of home cooked meals from the fridge, Foodies.

Measurement :- A structured questionnaire was used to collect the responses of the respondents.

Time Frame :- The Data were Collected in the Month of September, 2022 and on that basis current research is done.

Introduction :- The term eating habits or food habits refers to What to eat, how much to eat, when to eat and so on. Eating habits differs from person to Person. Here, eating habits has been summarised and differentiated between Fresh home cooked Food or eating from restaurants or eating left over Food. Eating habits of people will give impact on various aspects such as in their life as well as on Economy positively and negatively. Good eating habits will give good health to the people but simultaneously if people eat it from outside frequently will give boom to Food and Beverages Industry. It will also affect the fitness and Medical Industry. So, It is Two sides of one Coin.

Here, the attempt has been made to understand What people are eating, How Much they are eating, whether they are eating Fresh Home Cooked Food? ordering from restaurants? eating leftover food? also why they are eating from restaurants and leftover food has been highlighted in this study. So, this research will answer all above questions.

The Purpose of The Research Paper :- Is to study the eating habits of people living in Mumbai city. It is an attempt to find answers to the following questions. Do people living in Mumbai city prefer to eat fresh home cooked food or do they prefer to order in food or eat from restaurants? Do they worry about nutrition, health and hygiene while deciding to eat? Do people compromise on the importance of nutrition, health, and hygiene when they are busy, tired, lazy, or do not want to or do not know how to cook, or are ill-disposed and cannot cook? Do people eat leftover food they have cooked from the fridge or even eat leftover food from the fridge they have ordered from restaurants? Do people enjoy ordering in food or

eating from restaurants? Do people think that buying food is a smart practical way to adopt instead of managing a kitchen and hiring a cook? All above questions have been answered in a comparative manner among Male and Female residents.

AIM :- This research paper aims at studying the pattern of eating habits of people living in Mumbai city. How often do people eat fresh home cooked food? How often do they eat food that is ordered in or from restaurants?

Objectives Of The Study :-

- 1) To understand eating habits among people in Mumbai.
- 2) To compare eating habits among Male and Female residents of Mumbai.
- 3) To analyse frequency of Male and Female ordering in or eating from restaurants.

Hypotheses Of The Study :-

Hypothesis 1

H_0 = There is no relation in the opinion of male and Female in eating Restaurant food.

H_1 = There is a relation in the opinion of male and Female in eating Restaurant food.

Hypothesis 2

H_0 = There is no relation in the opinion of male and Female in eating Fresh Home Cooked food.

H_1 = There is a relation in the opinion of male and Female in eating Fresh Home Cooked food.

Significance Of The Study :-

- 1) It will help to understand Eating Habits among Male and Female residents of Mumbai.
- 2) It will throw a light on Eating Fresh Home cooked Food and eating it from restaurants, which one is healthier and more important.
- 3) It will make people aware about how frequently they are eating Fresh Home Cooked Food or Restaurant food.

Limitations Of The Study :-

- 1) The study focuses on eating habits among

Male and Female residents of Mumbai Only.

- 2) The study is restricted to Impact of Gender on eating habits of Residents of Mumbai.

Scope Of Further Study :-

- 1) Further Research can be done in other geographical areas.
- 2) Research can also be done on eating habits of working and Non-working people, students, doctors, teachers, and all other professionals.
- 3) Research can be done by correlating other variables with eating habits like income, educational qualification etc.

Review Of Literature :-

1) Md Mahbubul Alam Shaun, (2021) has studied eating habits and lifestyle changes among higher studies students post lock down in Bangladesh. It was a web based cross sectional study. The objectives of the study were identifying the changes in eating habits and lifestyle including physical activity sleeping hours and sleep quality after the cancellation of lock down then the period of restrictions. Data was collected from 394 students using questionnaire and it was found that there were changes in eating habits and lifestyle after lock down.

2) Francisco Entrena, Duran, (2021) has studied students' knowledge of healthy food and their actual eating habits -a Case study on the University of Granada. The study was qualitative in nature. Semi structure interview was conducted and the gap was found in all the facts. Respondents was having a knowledge of healthy food but the actual eating habits were different. It was found that there was a gap in the perception of male and female respondents also. Interview was conducted for 34 respondents including UG PG and Ph.D. students.

3) Laura Di Renzo, (2020) has studied eating habits and lifestyle changes during Covid-19 lockdown. The study aimed to investigate the immediate impact of Covid-19 pandemic on eating habits and lifestyle changes among the Italian population. The data was collected from 3533 respondents in the age group of 12 to 86 years. The findings of the study were very interesting. It was seen that

smokers decided to quit smoking, there was a slight increase in physical activity and respondents turned to believe in organic and healthy eating.

3. Research Methodology :-

This research is empirical research whereby survey is conducted, data based on the survey were analysed and outcome has drawn. Sampling

method used for this research is Convenience Sampling which is a Non- Probability Sampling Method. Sampling is covered for the research is Mumbai city. Data were collected through Primary Data using Questionnaire from 84 respondents. Data Analysis is done using Ms- Excel -2019. Hypothesis testing is done with Correlation tool using Mega stat.

4. Data Analysis And Interpretation :-

Table 4.1 : Frequency of Ordering Food or eating from Restaurants

Frequency of Ordering Food or eat from Restaurants	Male	%	Female	%
NEVER	24	56%	13	32%
RARELY	7	16%	9	22%
SOMETIMES	10	23%	14	34%
OFTEN	1	2%	1	2%
ALWAYS	1	2%	4	10%
	43	100%	41	100%

Source:- Primary Data

It is seen that Frequency of ordering Food from Restaurants is high among Female as compared to Males. 10% of Female says that they always eat from Restaurants as compared to 2 % in Males. 34% Female agreed with they order sometimes but only 23% Males agreed with the order sometimes only. So, it is concluded that Female are ordering from Restaurants more than Males.

Table 4.2: Ordering Food because it is convenient and affordable

Ordering Food because it is convenient and affordable	Male	%	Female	%
NEVER	15	35%	7	17%
RARELY	6	14%	11	27%
SOMETIMES	12	28%	16	39%
OFTEN	5	12%	3	7%
ALWAYS	5	12%	4	10%
	43	100%	41	100%

Source: Primary Data :- 35% of Male agreed that ordering food is not convenient nor affordable but only 17% female agreed with ordering food is not convenient nor affordable.

Table 4.3: Fresh Home Cooked Food is Nutritious, Clean and Hygienic

Fresh Home Cooked Food is Nutritious, Clean and Hygienic	Male	%	Female	%
NEVER	2	5%	0	0%
RARELY	2	5%	0	0%
SOMETIMES	5	12%	2	5%
OFTEN	5	12%	3	7%
ALWAYS	29	67%	36	88%
	43	100%	41	100%

Source: Primary Data :- Both Female and male agreed with Fresh Home Cooked is Nutritious, clean and hygienic. AS a comparison 88% of Female are agreed with Fresh Home cooked food is Nutritious, Clean and Hygienic but only 67% of male agreed with it.

Table 4.4: Food Ordered from Restaurants is Nutritious, Clean and Hygienic

Food Ordered from Restaurants is Nutritious, Clean and Hygienic	Male	%	Female	%
NEVER	11	26%	11	27%
RARELY	9	21%	12	29%
SOMETIMES	17	40%	13	32%
OFTEN	3	7%	2	5%
ALWAYS	3	7%	3	7%
	43	100%	41	100%

Source: Primary Data :- Both of Male and Female agreed around Same percentage that Restaurant food is Nutritious, clean and Hygienic sometimes only not always.40% of male and 32% of Female agreed that restaurant Food is clean and Hygienic sometimes only not always, therefore respondents agreed with they prefer fresh home cooked food rather than restaurant food.

Table 4.5: Leftover Food is Nutritious, Clean and Hygienic

Leftover Food is Nutritious, Clean and Hygienic	Male	%	Female	%
NEVER	15	35%	15	37%
RARELY	15	35%	9	22%
SOMETIMES	8	19%	9	22%
OFTEN	3	7%	6	15%
ALWAYS	2	5%	2	5%
	43	100%	41	100%

Source: Primary Data

Both of Male and Female agreed around Same percentage that left over food is not Nutritious, clean and Hygienic.35% of Male and 37% of Female agreed that leftover food is never clean nor Hygienic.

Table 4.6: Old People or Sick People Depends on Restaurants for their Meals

Old People or Sick People Depends on Restaurants for their Meals	Male	%	Female	%
NEVER	8	19%	7	17%
RARELY	6	14%	7	17%
SOMETIMES	12	28%	12	29%
OFTEN	8	19%	7	17%
ALWAYS	9	21%	8	20%
	43	100%	41	100%

Source: Primary Data

28% of Male agreed that old people or sick people depends on Restaurants for their meals and 29% of Female agreed that old people or sick people depends on Restaurants for their meals.

Table 4.7: Factors affecting Eating Food from Restaurants

Factors affecting Eating Food from Restaurants	Male	%	Female	%
I can afford it	24	56%	19	46%
I cannot afford buying food frequently but still buy food as I am exhausted or lazy to cook	19	44%	11	27%

Ordering in and eating from restaurants is better than hiring and managing a cook	21	49%	15	37%
I am old and cannot cook my own food.	9	21%	7	17%
I am sick and cannot cook my own food	12	28%	10	24%
I am a student and feel I should not cook	11	26%	5	12%
I am employed and feel I should not cook as I feel I do not have the time or energy to cook	17	40%	9	22%
I do not know how to cook	15	35%	8	20%
I do not like to cook	9	21%	7	17%
I feel lazy to cook	13	30%	7	17%
I believe that the food industry has numerous food options to satisfy our every food craving.	25	58%	26	63%
I do not believe that home cooked food is more nutritious and cleaner than food cooked in restaurants.	15	35%	9	22%
It is convenient and practical as it saves time and energy	27	63%	23	56%
For celebrating festivals and special occasions we go out to restaurants to eat	27	63%	29	71%

Source: Primary Data

63% of Male and 56% of Female agreed that they eat from Restaurants because it is convenient and practical as it saves time and energy. 63% of Male and 71% of Female agreed that they order restaurant food for celebrating festivals and special occasions.

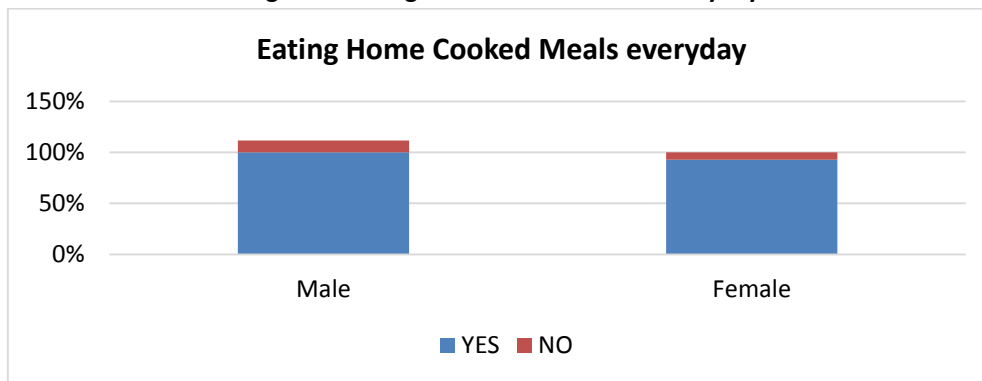
Table 4.8: Factors affecting Eating Fresh Home Cooked Food

Factors affecting Eating Fresh Home Cooked Food	Male	%	Female	%
I cannot afford to eat out frequently.	26	60%	25	58%
I can afford to order in food or eat from restaurants but I prefer to eat fresh home cooked food.	30	70%	31	72%
I love to cook	31	72%	37	86%
Love is served when I cook for my family	34	79%	34	79%
It is convenient and practical as it saves time and energy	33	77%	36	84%
For celebrating festivals and special occasions I believe in cooking and eating together at home	34	79%	31	72%
Fresh home cooked food is tastier than food in restaurants	34	79%	39	91%
Fresh home cooked food is more nutritious than restaurant food	33	77%	38	88%
Fresh home cooked food keeps me healthy and helps in increasing immunity	35	81%	39	91%
Fresh home cooked food helps me to manage my diet and keeps me fit and energetic.	37	86%	39	91%
As a foodie or food connoisseur I prefer cooking different dishes and experimenting on new cuisines	36	84%	35	81%

Source: Primary Data

86% of Male and 91% of Female agreed that Fresh home cooked food helps them to manage their diet and keeps them fit and energetic. 81% of male and 91% of Female agreed that Fresh home cooked food keeps me healthy and helps in increasing immunity.

Figure :1 Eating Home Cooked Meals Everyday



Source: Primary Data

Majority of Male and Female agreed that they prefer to eat Home cooked meals every day.

Findings Of The Study :-

- 1) Majority of Male and Female agreed on same ratio that they order food from restaurants for celebrating festivals and special occasions as well as it is convenient and saves time.
- 2) Majority of Male and Female agreed upon they eat fresh home cooked food as it is more nutritious than restaurant food, Fresh home cooked food keeps them healthy and helps in increasing immunity and Fresh home cooked food helps them to manage their diet and keeps them fit and energetic.
- 3) It is seen that people wants to eat restaurant food to celebrate functions and occasions, they believe that restaurant food is not hygienic. Male and Female have different opinion on Factors influencing ordering food from restaurant.
- 4) People are more interested in eating Fresh Home cooked Food but they don't have time due to their busy schedule. Both Male and Female have same opinion that Fresh Home Cooked Food is hygienic and it helps to keep them Healthy.

5.1 Hypothesis Testing :- Hypothesis testing is done using Correlation because researchers want to see the relation in the opinion among Male and Female of eating fresh home cooked food and eating from restaurant.

Table 5.1.1: Hypothesis 1

Hypothesis 1	Table Value [critical value at 0.05 (two-tail)]	Calculate d Value	Conclusion
H ₀ = There is no relation in the opinion of male and Female in eating Restaurant food. H ₁ = There is a relation in the opinion of male and Female in eating Restaurant food.	± 0.532	0.920	As Calculated value does not lie in the range of Table Value , So Null Hypothesis is rejected.

Source : Primary Data

Table 5.1.2: Hypothesis 2

Hypothesis 1	Table Value [critical value at 0.05 (two-tail)]	Calculated Value	Conclusion
H ₀ = There is no relation in the opinion of male and Female in eating Fresh Home Cooked food. H ₁ = There is a relation in the opinion of male and Female in eating Fresh Home Cooked food.	± 0.602	0.564	As Calculated value lies in the range of Table Value , So Null Hypothesis is accepted.

Source : Primary Data

6. Conclusion :- The current study explored eating habits of Male and Female in Mumbai region. The study reveals that there is no difference in the eating habits of Male and Female. The study also reveals that though people enjoy eating restaurant food but still they are interested in eating fresh home cooked food as it keeps them healthy and helps in managing their diet. Understanding eating habits of people is the first step for expanding Food and Beverages Industry. This type of More research will throw a light on exploring Business Ideas and its execution.

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A Study of the Effectiveness of the Instructional Programme Developed to Enhance the Computational Competency of the Students at Primary Level

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Introduction :- Education enables the student to face different challenges of life and education is a training for life. Nothing more empowers the student than competency in mathematics, to be successful in life. Hence development of computational ability and interest in mathematics is very essential for students at each and every level. This has to be emphasized at primary level itself. The researcher has undertaken this research to study the effectiveness of instructional programme to enhance the computational ability and mathematical interest in students of primary level.

Aim of the study :-

1. To develop an instructional programme to overcome the computational incompetency of students at primary level.
2. To study the effectiveness of the developed Instructional programme to enhance computational competency.

Review of research literature :-

- a) For this research the researcher has referred to reference materials by M. B. Buch such as - volumes 1 to 6.
- b) The reference materials under the collection of Ex-Head of the Dept of Mumbai University Prof. Pratima Deo
- c) The reference materials collected by Dr. Sali of Pune University.

In addition to this the available materials in the library of Mumbai University, SNDT Women's University, YCMOU and Web-site were also referred to.

By reviewing the related materials the researcher found that very little research has been done in the particular area of research.

However reviewing the related materials the researcher found the research references as follows.

Objectives of research :- The researcher has selected the following objectives for research

- 1) To find out the computational ability of students at primary level.
- 2) To study the mathematical interest of students at primary level.
- 3) To create an instructional programme to improve the computational ability and mathematical interest of students at primary level.
- 4) To implement the instructional programme developed for students at primary level.
- 5) To compare the computational (interest) /mathematical interest of primary level students location wise, medium wise, standard wise and gender wise.
- 6) To compare the achievement in computational ability of primary level students location wise, medium wise and gender wise.

Hypothesis of Research :- The researcher has stated the following hypothesis for the research.

- 1) There is no significant difference in mathematical computational incompetency between location wise and medium wise.
- 2) There is no significant difference in the interest between location wise and medium wise.
- 3) There is no significant difference in scores of achievement in the pre-test and post test of controlled group in primary level students.
- 4) There is no significant difference in scores of mathematical interest in the pre-test and post test of controlled group in primary level students.
- 5) There is no significant difference in scores of achievement in the pre-test and post test of experimental group in primary level students.

- 6) There is no significant difference in scores of mathematical interest in the pre-test and post test of experimental group in primary level students.
- 7) There is no significant difference in scores of achievement in the pre-test of Experimental and controlled group in primary level Students.
- 8) There is no significant difference in scores of achievement in the post-test of Experimental and controlled group in primary level students.
- 9) There is no significant difference in scores of mathematical interest in the pre-test of Experimental and controlled group in primary level students.
- 10) There is no significant difference in scores of mathematical interest in the post-test of Experimental and controlled group in primary level students.

Research Methodology :- The researcher has used descriptive survey method to find present status of Mathematical interest and mathematical achievement of students at primary level.

The researcher has used experimental method to find out the effectiveness of instructional programme developed to enhance the computational ability and mathematics interest of students at primary level.

Variables of the study :- The following variables use for research purpose.

- 1) Independent Variable - Instructional programme
- 2) Dependent Variables –
 - a) Interest
 - b) Achievement

Research Design :- For the following research the design of two equal groups(randomization) Pre-Test-Post Test design was used.

Sample :- For the descriptive study, the researcher has selected 521 students of standard VII and VIII.

For experimental study the researcher has selected 60 students of standard VIII.

Data collection tool :- The techniques for the collection of information for the research the following techniques for the collection of data were used.

1. Interest inventory
2. Achievement test- pre test and post test

Statistical analysis :- In this research the acquired data was statically analyzed for which the researcher used the following statistical techniques.

- Descriptive statistical analysis central tendency- Mean, Median and Mode
- Measures of variation - Standard deviation, Skewness and Kurtosis
- Graphical analysis- bar-graph and joint bar graph
- Inferential analysis for hypothesis testing/T-test,

Analysis of Achievement in mathematical competency and interest in mathematics of primary school students Measurement of central tendency and variation of achievement in mathematical competency of students of primary school as per area.

Table No. 7.1

Group	Sample	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis
Rural	197	6.19	5	3	4.43	0.89	-0.35
Urban	324	7.23	7	8	4.13	0.73	0.12

Graph No. 7.1

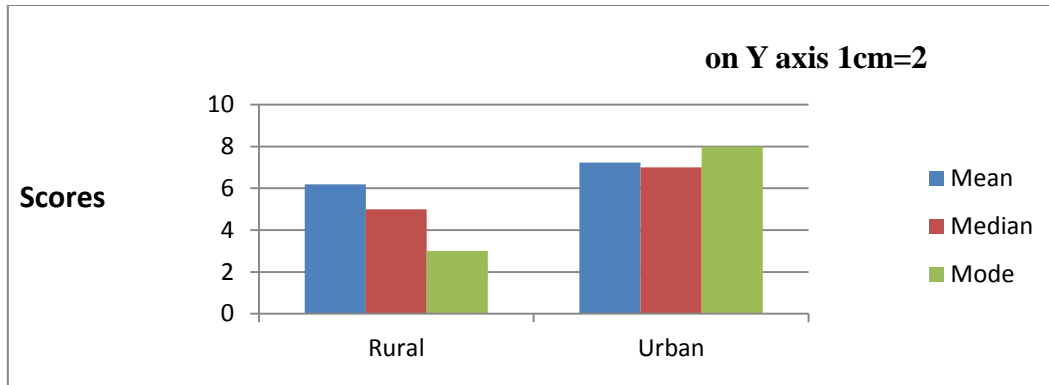


Table No. 7.2

Sr. No.	Group	Sample	Mean	Standard Deviation	Degree of freedom	t' table value		Calculated t' value	Level of significance
						0.05	0.01		
1	Rural	197	6.193	4.430	519	1.96	2.59	2.76	Significant difference
2	Urban	324	7.253	4.137					

Interpretation :- According to table and graph no 7.1 the mean ,median and mode of the scores of achievement in mathematical competency of primary school students in rural area is in descending order .The standard deviation of the scores is 4.43 and the skewness is 0.89.That means the frequency distribution exhibits positive skewness. The value of kurtosis is obtained as - 0.35. Since the value is negative, the distribution is platykurtic.

The mean and median of the scores of achievement in mathematical competency of primary school students in urban area is in descending order, while the mode of the scores is in ascending order. The standard deviation of the scores is 4.13 and the skewness is 0.73.That means the frequency distribution exhibits positive skewness. The value of kurtosis is obtained as 0.12. Since the value is positive, the distribution is leptokurtic

Inference :- The achievement in mathematical competency of primary school students in rural area is less compared to the students in urban

area.

7.2.Hypothesis :- Difference in means of mathematical competency of rural and urban students at primary level

Interpretation :-As per table no. 7.2, the calculated t-value for difference in means of mathematical competency of rural and urban students at primary level is 2.76.

The table value of t for degree of freedom 519 at 0.05 level of significance is 1.96 and at 0.01 level is 2.59. Since the calculated t-value is greater than the table value it can be inferred that there is significant difference in mathematical competency of rural and urban students at primary level.

Inference :- There is significant difference in mathematical competency of rural and urban students at primary level.

Major Findings :-

- 1) Lack of understanding of basic concept in mathematics was observed in primary students.

- 2) Lack of interest in mathematics was observed in students at primary level.
- 3) The mean scores in mathematical competency of urban students are more than that of rural students.
- 4) The mean scores in mathematical competency of English medium students are more than that of Marathi medium students.
- 5) The mean scores of mathematical interest did not vary much between Marathi and English medium students at primary level .
- 6) The mean scores of mathematical interest of experimental group was more in post test compared to pretest.
- 7) The mean scores of mathematical achievement of experimental group was more in post test compared to pretest.
- 8) The mean scores of mathematical interest of experimental group was more than that of control group in post test.
- 9) The mean scores of mathematical achievement of experimental group was more than that of control group in post test.

Recommendations :-

- 1) The mathematics curriculum should be framed by giving more emphasis to practical work.
- 2) Teachers handbook should contain the various guidelines to prepare different types of assignment according to the level and interest of students.
- 3) The teachers should give practice regarding the topics in commercial mathematics depending upon their importance in daily life.
- 4) Workshops should be organized by headmaster/management for mathematics teacher to improve their competency.
- 5) The mathematics teacher should teach maximum topics through Activity Based Learning.
- 6) The mathematics teacher should prepare instructional programme for different topics given in textbook.
- 7) Government should organize a group of innovative teacher in mathematics and instruct them to organize instructional

programme for math and conduct workshop at different levels to create awareness in math teachers.

- 8) Teacher should give more emphasis to constructivism approach while teaching the basic concepts of mathematics.
- 9) To inculcate interest in mathematics subject teacher should use play way method of teaching mathematics.
- 10) The management should construct a mathematics laboratory each school.

Reference material and web-site

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A Study on Analysis of Market Structure and Market Concentration in Telecom Industry in India

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Research Scholar

Abstract :- The purpose of this study was to investigate Structural changes in Telecom Sector of India in Pre-Reform period (1971-1990), post-reform period (1991-2015) and post-Jio period (2016-2022). This paper envisaged on Reliance Jio since its debutant from 1.25 GB per user per month in 2016 to 15 GB presently. The Primary Objective of the Study was to know the structural changes in the Indian telecom industry both before and after the reform period (Before the adoption of liberalization), it had been observed that, the telecom industry operated entirely under the supervision of the government, the then India's main public service providers was DOT, VSNL, and MTNL. Up until 1991, the Indian telecom sector had a monopoly on the provision of telecom services. After liberalization, the Indian telecom sector opened its market for investment by allowing the private sector to offer both basic and value-added services. The government policy of deregulation paved the door for the launch of mobile or cellular services in India on a commercial purpose.

With the debut of Reliance Jio, the era of free services started with respect to 4G data, 100 SMS & local- STD calls and by the end of 2017 the proportionate concentration and HHI of Jio in India Telecom Market raised to 35.37% and 0.125104 respectively.

The Study was based on Secondary Data i.e., the publication of quinquennial and annual reports of TRAI had been used whereas the Herfindahl-Hirschman Index (HHI) was taken a common measure to determine market concentration and market competitiveness. Thus, it is concluded that the battle for market share will further intensify where in availability of technology, capital, product innovation and plays a key role, but a further wave of price war will lead to further

concentration in telecom sector and could also result in market structure further challenging from oligopoly to a possible duopoly.

Key Words :- Market Structure, Market Concentration, Herfindahl-Hirschman Index (HHI), Telecom Industry, Reliance Jio

Introduction :- Information exchange through the use of technology is the subject of telecommunication. It has a positive and multiplier effect that enables individuals in both urban and rural places to engage with one another in an approachable and simple way. The second-largest market for communications services worldwide is India. In December 2021, India's subscriber base totaled 1178.41 million. January 2022 saw a total of 658 million internet subscribers. As of December 2021, India had 85.91% of the world's tele-density, which is measured by the number of telephone connections per 100 people. Subscriber growth averaged 33% yearly in the first ten years of the twenty-first century. This is the result of reforms in telecom market, continuous building of required infrastructure, Expansion of network and an astonishing boom was produced as a result of technological advancement and a supportive governmental environment.

The Beginning :- On July 31, 1995, former Sukh Ram and the then-Chief Minister of West Bengal, Jyoti Basu, made history by making the first mobile phone call. The naysayers were first proven correct, notwithstanding the euphoria around the introduction of mobile telephone. Only the wealthy could afford the service due to its high cost. The outcome was that the operators that had placed extremely high bids to buy mobile telephony licences began to fall behind on their payments. If not for the changes made by the

Centre under the New Telecom Policy in 1999, whereby telecom companies were permitted to pay an annual licencing charge rather than a one-time price, the ambition of supplying mobile cellphones to every citizen had nearly come to an end.

The growth of mobile phones in the nation was made possible by this. With more lenient regulatory requirements, up to 10 private enterprises entered the market, expanding the reach of the services outside the four metro areas. However, as a result of the high voice call rates of 2 rupee per minute in 2003, the operators collectively only managed to reach 10 million subscribers. Then Reliance Infocomm controversially introduced CDMA-based mobile services. Even though Reliance's entry into the market ignited a fierce legal battle, the Monsoon Hungama tariff plan that Reliance introduced reduced voice call rates to just 40 pence per minute. As a result, established players, like Airtel, had to lower their pricing.

About 300 million more users were gained between 2003 and 2008. Singapore Telecom, Hutchinson, and AT&T are just a few of the overseas companies that joined forces with already established companies in joint ventures. Forty companies were waiting in line to apply for new cellular licences due to the enormous demand for telecom services. 2008 saw the licencing of eight new operators, resulting in intense competition on the market. Globally significant businesses engaged in the expanding market, including NTT DoCoMo, Telenor, and MTS. With as many as 8–10 players available in each circle, phone call rates dropped to one pence per second, making consumers the king. However, a double whammy later struck the sector.

The Disruption :- But in 2016, Reliance Jio debuted its 4G services through a large pan-India network that provided free voice calls and affordable broadband services on mobile phones. This gave the industry a significant boost. The established operators committed their money in obtaining 4G spectrum since they didn't want to fall behind. Because 4G services became more affordable,

more people in rural areas as well as metropolitan areas were able to use them. From 1.25 GB per user per month in 2016 to 15 GB today, data usage has surged. The core of our digital future is now represented by telecom networks. The Covid malware outbreak has only served to highlight how crucial communication networks and the Internet are once again. Only because of online platforms have millions been able to purchase necessities, conduct financial transactions, and work from home.

The most recent 5G spectrum auction is yet another watershed in India's telecom industry. In addition to enhancing mobile broadband, 5G technology will enable the delivery of essential services like telesurgery and the Internet of Things over a mobile network with unprecedented efficiency.

Review Of Literature :-

Muller (1990) :- According to his research, the success of mobile commerce can be attributed to the personal aspect of wireless devices. Additionally, it includes distinctive speech and data transmission properties along with specific characteristics including localization, viability, and ease.

National Telecom Policy (1999) :- The goal has been set at 175 million phone lines by the year 2010 and 75 million phone lines by the year 2005. The number of lines in the Indian telecom sector has already surpassed 100 million. With over 100 million telephone lines, a 9.1% teledensity, and a Rs. 61,000 crores yearly revenue, our country is currently well developed. Over the past five years, the Indian telecom network has consistently increased by more than 30%.

Economic Survey Government of India (2002-2007) :- has highlighted the importance of the two main objectives of the telecom sector, which are to provide the biggest number of people with low-cost telephone service and the greatest number of enterprises with low-cost high-speed computer networking. When compared to 43.6 in March 2001 and 4.9 in December 2002, teledensity—the

number of phone lines per 100 individuals in a population—has significantly increased.

T. V. Ramachandran (2005) :- With a focus on quantities rather than profitability, the performance of the Indian telecom sector was reviewed. Indian consumers are particularly cost-conscious. This sector has seen exceptional expansion due to a number of socio-demographic reasons, including rapid GDP growth, rising income levels, a strong knowledge economy, and increased urbanisation.

Papori Baruah and Rashmi Baruah (2014) :- It might be said that India's telecom industry has evolved and grown to play a key role in the economic and social advancement of the nation. In order to supply services to their clients and so advance the nation's standing in the globe, every functional division and service provider working within the telecom industry of the nation strives to establish top-tier telecom infrastructure in their various areas of operation.

Prithish and Taruna Saxena (2015): It might be said that the Indian telecom sector significantly contributes to the country's overall socioeconomic development. It is essential to the prosperity of the nation. Numerous telecom service providers offer voice and data services to customers in different regions of the nation, including both urban and rural areas, which supports the growth of the sector.

Jewel Robinson (2016) :- This article applies the Cournot model to the telecoms industry. We aim to use a fundamental and well-known oligopoly model using Vodafone and Orange as examples, two of the biggest and most recognisable telecom companies in the European Union. Numerical simulations were employed in the research by the Department of Economics and Finance at Utah University.

Madhuri Singh (2021) :- Regulation of the telecom industry in India has frequently been up for

debate. TRAI's activity has been separated in order to evaluate how telecom agents are seen in terms of their age, understanding, capability, and designation. It has also been done to thoroughly examine how the Telecom Regulatory Authority of India operates. Overseeing the telecom sector has been the responsibility of the Telecom Regulatory Authority of India (TRAI) since 1997.

1. Objective Of The Study :-

- To examine the structural changes in the Indian telecom industry both before and after the economic reforms
- To analyze market concentration in telecom industry in India
- To analyze impact of JIO on market structure and market concentration in telecom sector in India

2. **Research Methodology** :- The Study is based on Secondary Data i.e., the publication of quinquennial and annual reports of TRAI had been used whereas the Herfindahl-Hirschman Index (HHI) was taken a common measure to determine market concentration and market competitiveness.

3. **Market Structure Of Telecom Industry In India** :- Market structure of telecom industry in India is to be studied in different phases, Pre-reform, Post reform and post the entry of JIO.

5.1 Market Structure Of Telecom Industry In India

- **Pre Reform Period** :- One of India's key industrial sectors is the telecom industry. Before the adoption of liberalization, the telecom industry operated entirely under the supervision of the government. Before 1986, the sole state-owned corporation offering telecom services was Department of Telecommunications (DOT). Videsh Sanchar Nigam Limited (VSNL) and Mahanagar Telephone Nigam Limited (MTNL), which were founded in 1986 to offer telecom services in India, were state-owned businesses by the end of that year.

Telecom Firm	Year of Establishment	Telecom Circle (Area of Operation)	Public / Private Telecom Company	Market Structure (in %)	Form of Market Structure
DOT	1985	All India except Delhi and Mumbai	Public	100	Monopoly
VSNL	1985	International Services	Public	100	Monopoly
MTNL	1986	Delhi and Mumbai	Public	100	Monopoly

(Table No.1: Telecom industry market structure in pre-liberalisation era.

Source – Telecom Regulatory Authority of India (TRAI) and Department of Telecommunications (DOT).)

Up until 1991, the Indian telecom sector had a monopoly on the provision of telecom services. Because of the pre-reform market framework, the telecom industry was thus subject to several restrictions. Monopolistic practises had been present. In other words, the public sector predominated the Indian telecom industry prior to the reform era due to the 100% ownership of state telecom companies at the time. A lack of (a) competition, a lack of (b) telecom policy, and a lack of (c) an independent regulator in the telecom sector. It took a while to provide telecom subscriptions.

5.2 Market Structure Of Telecom Industry In India - Post Reform Period :- The Indian telecom sector opened its market for investment following the reform phase. Additionally, it has allowed the private sector to offer both basic and value-added services. The government's actions helped the telecom industry in India grow. This deregulation also paved the door for the launch of mobile or cellular services in India on a commercial purpose.

Telecom Firm	Year of Establishment	Head Quarter	Public / Private Telecom Company	Market Structure (in %)	Form of Market Structure
Bharti Airtel	1995	New Delhi	Private	24.31	Monopolistic
Vodafone	1994	Mumbai	Private	19.15	Monopolistic
Idea	1995	Mumbai	Private	16.94	Monopolistic
Reliance	2003	Mumbai	Private	9.91	Monopolistic
Aircel	1999	Chennai	Private	8.43	Monopolistic
BSNL	2000	New Delhi	Public	8.35	Monopolistic
Tata Teleservices	1996	Mumbai	Private	5.81	Monopolistic
Telenor	2009	New Delhi	Private	5.07	Monopolistic
Sistema	2008	New Delhi	Private	2.03	Monopolistic
Quadrant	2008	Haryana	Private		Monopolistic
MTNL	1986	Delhi and Mumbai	Public		Monopolistic
Reliance Jio	2016	Mumbai	Private	Testing phase	Monopolistic

(Table No.2: Telecom industry market structure in post-liberalisation era.

Source – Market Share as on 31/03/2016 - Annual report Telecom Regulatory Authority of India (TRAI) 2015 - 2016)

5.3 Current Market Structure Of Telecom Industry In India – Post Jio Entry In Telecom Sector :- On 5th September 2016 Reliance Industries Limited commercially launched its telecom services under the brand name of JIO. Telecom Industry had been highly competitive with number of firms providing telecom services to the public and was more of a monopolistic market. At the time when Mukesh Ambani's JIO was launched in the market outgoing calls and data charges was on upwards side. Powered with optical fiber technology and Customer Acquisition being the primary objective, JIO started the era of free services 4G data, 100 SMS & local- STD calls until the end of the year 2016 to all the users of JIO. From January 2017, they will have to pay for data but voice call remains free. JIO became the country's largest 4G network on the basis of free data & low price offers such as JIO DHAN DHANA DHAN JIO PRIME MEMBERSHIP SUMMER SURPRISE. All this offers attract more number of customers & then according to Telecom Regulatory Authority of India. The results of the same can be observed below:

Telecom Firm	Year of Establishment	Head Quarter	Public / Private Telecom Company	Market Structure (in %)	Form of Market Structure
Reliance JIO	1995	Navi Mumbai	Private	35.73	Oligopoly
Bharti Airtel	1995	New Delhi	Private	30.66	Oligopoly
VI	1994	Mumbai	Private	22.4	Oligopoly
BSNL	2003	Mumbai	Public	10.39	Oligopoly
MTNL	1986	Delhi and Mumbai	Public	0.51	Oligopoly
Tata Teleservices	1996	Mumbai	Private	0.14	Oligopoly
Quadrant	2008	Haryana	Private	0.02	Oligopoly
Reliance Com	2003	Mumbai	Private	0.02	Oligopoly

(Table No.3: Telecom industry market structure in post entry of JIO.

Source – Market Share as on 31/03/2012 - Annual report Telecom Regulatory Authority of India (TRAI) 2021 - 2022) :- From the above table we can observe that, the entry of JIO has played the role of disruptor in Indian telecom industry. The predatory pricing and aggressive marketing practices have made Jio the market leader with the maximum market share which is more than $\frac{1}{3}$ of the market. It is also observed that role of PSU in telecom sector is on a continuous declining trend.

6. Market Concentration :- HHI INDEX for Seller's concentration in Telecom sector in India By compiling the data from TRAI report and calculating market concentration by $H^A H^A$, it can be observed that during the period of last decade (2012 – 2022) Indian telecom sector has moved from less concentrated market to highly concentrated market.

HHI Index A variant of the marketing indicator for market concentration is the Herfindahl index. The Herfindahl index applies a multiple (squared) effect to the difference in market shares for all/most brands rather than just adding the market shares of the more popular brands in the marketplace. It is a reasonably easy calculation to conduct using a spreadsheet, and once it is set up, it can be tracked through time and used to compare different industries.

HHI = Less than 0.150 = a competitive (low concentration) market

HHI = 0.150 to 0.250 = a medium/moderate concentrated market

HHI = More than 0.250 = a highly concentrated market

MARKET CONCENTRATION AS ON 31/03/2012					
Sr. NO	Telecom Firm	Number of Subscribers (In Million)	Market Share (in %)	Market Share (in Proportionate)	HHI Index
1	Bharti Airtel	181.28	19.72	0.1972	0.038896
2	Reliance Com	153.05	16.65	0.1665	0.027725
3	Vodafone	150.47	16.37	0.1637	0.026798
4	Idea	112.72	12.26	0.1226	0.015039
5	BSNL	98.51	10.72	0.1072	0.011486
6	Tata	81.75	8.89	0.0889	0.00791
7	Aircel	62.57	6.81	0.0681	0.004634
8	Uninor	42.43	4.62	0.0462	0.002131
9	Sistema	15.8	1.72	0.0172	0.000295
10	Videocon	5.95	0.65	0.0065	4.19E-05
11	MTNL	5.83	0.63	0.0063	4.02E-05
12	Stel	3.43	0.37	0.0037	1.39E-05
13	Loop	3.27	0.36	0.0036	1.27E-05
14	HFCL	1.33	0.14	0.0014	2.09E-06
15	Etisalat	0.782	0.09	0.0009	7.24E-07
TOTAL		919.172	100.00	1.0000	0.135026

(Table No.4: HHI Index for 2012, Source: TRAI annual report 2011- 2012)

MARKET CONCENTRATION AS ON 31/03/2017					
Sr. NO	Telecom Firm	Number of Subscribers (In Million)	Market Share (in %)	Market Share (in Proportionate)	HHI Index
1	Reliance JIO	102.80	8.83	0.0883	0.007797
2	Bharti Airtel	270.68	23.25	0.2325	0.054056
4	Vodafone	207.23	17.8	0.178	0.031684
5	Idea	193.26	16.6	0.166	0.027556
6	BSNL	98.96	8.5	0.085	0.007225
7	Aircel	91.04	7.82	0.0782	0.006115
8	Reliance Com	86.27	7.41	0.0741	0.005491
9	Telenor	51.57	4.43	0.0443	0.001962
10	Tata	51.22	4.4	0.044	0.001936
11	Sistema	5.24	0.45	0.0045	2.03E-05
12	MTNL	3.61	0.31	0.0031	9.61E-06
13	Quadrant	2.21	0.19	0.0019	3.61E-06
TOTAL		1164.08	100	1.00	0.1439

(Table No. 5: HHI Index 2017, Source: TRAI annual report 2016 - 2017)

MARKET CONCENTRATION AS ON 31/03/2022					
Sr. NO	Telecom Firm	Number of Subscribers (In Million)	Market Share (in %)	Market Share (in Proportionate)	HHI Index
1	Reliance JIO	403.96	35.37	0.3537	0.125104
2	Bharti Airtel	360.33	31.55	0.3155	0.09954
3	VI	260.74	22.83	0.2283	0.052121
4	BSNL	113.75	9.96	0.0996	0.00992
5	MTNL	3.20	0.28	0.0028	7.84E-06
6	Reliance Com	0.00	0.0003	0.000003	9E-12
TOTAL		1141.981217	99.9903	0.999903	0.286693

(Table No. 6: HHI Index 2022, Source: TRAI annual report 2017 - 2022)

Overview of market concentration by applying HHI index during 5 the period of last decade (2012-22)

YEAR	2012	2017	2022
HHI Index	0.135	0.1439	0.2867
	Less Concentrated	Less Concentrated	Highly Concentrated

(Table No. 7: HHI Index 2012 - 2022)

7. Future Challenges :- Recently the auctions for 5G spectrum was successfully conducted, wherein Telecom Service Providers (TSPs) like Bharti Airtel Ltd, Reliance Jio Infocomm Ltd, Vodafone Idea Ltd, and MTNL have received approval from the Department of Telecommunications to conduct 5G testing. In order to do this, the TSPs have teamed up with Ericsson, Nokia, Samsung, and C-DOT. The TSPs' decision to forgo Chinese original equipment manufacturers or technologies is interesting. Reliance will conduct the testing with internal technology. The DoT has given telecom service providers permission to conduct 5G experiments using their existing spectrum (800 MHz, 900 MHz, 1800 MHz, and 2500 MHz). The experimental spectrum is provided in a variety of bands, such as the mid-band (3.2 GHz to 3.67 GHz), millimetre wave band (24.25 GHz to 28.5 GHz), and the sub-gigahertz band (700 GHz). A six-month trial period has been established. With commercial 5G roll out expected soon, TSP are expected to further capitalize on their existing 4G consumer base. The battle for market share will further intensify where in availability of technology, capital, product innovation will play a key role, but a further wave of price war will lead to further concentration in telecom sector and could also result in market structure further changing from oligopoly to a possible duopoly.

8. CONCLUSION: STRUCTURAL CHANGES IN TELECOM SECTOR IN INDIA

Parameter	Pre-Reform period (1971 -1990)	Post-Reform period (1991 -2015)	Post-Jio period (2016 -2022)
Nature of Industry	Public Sector	Both Public & Private Sector	Both Public & Private Sector
Telecom Service Providers	DoT, MTNL and VSNL	More than 15 firms including both Private and Public Sector	Reduced to 6 firms including both public and private sector within which the top two firms accounts for more than 2/3rd of Market Share
Regulator	DoT	TRAI	TRAI
Telecom Policy	No Specific policy	NTP 1994, 1999, 2012	NTP 2012
Market leader	Public Sector Monopoly	Bharti Airtel (Private Sector)	Reliance Jio (Private Sector)
Technology development	Very Low	Introduction of 2G, 3G and 4G	4G services and soon to be commercially rolled 5G services
Market Structure	Monopoly	Monopolistic	Oligopoly

(Table No.: 3 Different Era in telecom industry in India)

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To Study the Importance of Artificial Intelligence and its Impact on Medium Scale Business with Reference to Laundry Business

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Abstract :- Over the past few years, we've seen unexampled growth within the artificial intelligence in upcoming business. With the objective to increase profit and to satisfy the need of customer the large scale business are now witnessing a need for Artificial Intelligence. However medium scale businesses are finding it difficult to adopt this technology but as the days will go on they have to adopt this technology for their success. In order to achieve significant financial benefits from their machines, companies will have to look beyond automation and focus instead on learning and organizational transformation. AI simply means making machines and technology work smartly like human being.

Key words :- Artificial intelligence, Entrepreneur, Medium scale business.

Introduction :- Many businesses will be getting affected by Artificial Intelligence in the coming years, it will become like a need for an hour, and hence middle scale entrepreneur should be prepared for what this will mean for you and your organisation. Artificial intelligence computing was in past, today and will be in future. Embracing the increase and development of Artificial Intelligence is crucial to future of business. Nowadays large companies are using artificial intelligence software to make best use of resources which leads to reduction in cost, saves time and its leads to increase in production. Technology is evolving at an unprecedented rate, and teams already making the move to marketing AI software are at a distinct advantage to jump on the next innovation. The impact of AI on customer and daily life will touch everyone and many businesses predicted the importance of AI in future. AI can be treated as a revolution of computer and machinery. What makes AI so different from earlier technology is that it performs the activities what we thought

that only human beings can do.

Artificial intelligence can be used in laundry business where they can have the data of customer, based on that they can provide better automation services to their customers, as we have seen still in India the laundry business is still running in a traditional way, hence AI can be used in this business where features like process automation, marketing chat bots, schedule of delivery of clothes, automated sensor washing machine, automated payment can be done in smarter way, this can also help the businessman to reduce labour cost and provide better service to their customers.

Artificial Intelligence (AI) is swiftly turning into greater relevant to the everyday virtual global, and the advertising and marketing and marketing global isn't any exception. From sarcastic and extremely good Siri to Tesla's self-driving vehicles to Google AI that may research video games in mere hours, Artificial Intelligence is revolutionizing industries one with the aid of using one. The packages of Artificial Intelligence variety from detecting developments in facts to mitigate marketplace risks, improving customer support through digital non-public assistants, or maybe analysing tens of thousands and thousands of files throughout a company's servers to discover compliance failures. But it's miles simple these days that groups have been cap in a position to expect and envision the possibilities that Artificial Intelligence and robotics can bring to the future of the enterprise global. Artificial Intelligence leverages self-gaining knowledge of structures with the aid of using the usage of gear like facts mining, sample reputation and herbal language processing. So, in phrases of its key enterprise benefits over human intelligence, Artificial Intelligence is incredibly scalable, ensuing in exceptional price savings. Besides, Artificial Intelligence's consistency and rule-primarily based

totally applications permit establishments to limit their errors. Its longevity, coupled with non-stop enhancements and its cap potential to document processes, translates into rewarding enterprise possibilities. AI use technology which consists of herbal language processing, speech reputation, gadget gaining knowledge of, robotics, and pc vision. These technologies offersome of possibilities for enterprise. Machine gaining knowledge of is a approach to get synthetic intelligence and deep gaining knowledge of is considered one of the branched of gadget gaining knowledge of and a technique for expertisegadgetgaining knowledge of. The important emphasis of deep gaining knowledge of is on algorithms pushed with the aid of using the configuration and characteristic achieved with the aid of using the human brain. Like every other domain, advertising has additionally been significantly influenced with the aid of using the introduction of latest technology and this impact will majorly develop in the approaching years. It is clear that AI has boosted the overall performance of advertising in extraordinary ways. In close to future, it's miles anticipated that AI will improve the impact, for e.g. Robots can be used as a substitute of salespeople, websites will be updated and reformatted robotically with the aid of using eye-monitoring facts. Undoubtedly, the studies on advertising can be shifted and grow to be insignificant as the brand new developments in advertising will emerge because of the AI. The subject of advertising is and can be converting swiftly with the modifications and development in AI. The pace of this transformation may also remodel the general panorama of advertising in academics, studies, and enterprise context. This can be a prime challenge for the organizations to remodel according to the converting panorama of advertising. The groups will must teach their personnel continuously with the emergence of latest technology. Working with AI is not perceived as science fiction however instead, its miles viewed as a reality which will grow to be a need for survival. The personnel of advertising must apprehend and discover ways to decorate and suit their talents for AI and robots

to be equipped for the close to future. The gifts surroundings may be very interesting and challenging.

Role of artificial intelligence in business :-

Artificial intelligence makes better use of data what organisation has through which it comes easy for the businessman to take business decision. With AI data analysis pattern businessman doesn't have to think much as such intelligence will help them in making proper decision. AI has the capability to run the data in case of retail store it can help the business man to understand the needs and wants of the customer.

AI also helps the businessman by providing more intelligent and personalised services this is link to the upper statement if you have proper customer understanding AI allows you to provide better intelligence services, like Amazon they are using AI to collect the data of their customer and automatically recommend them best product, Netflix also use similar pattern where AI recommend the customer films based on their choices they even know at what time customers are watching Netflix, for eg if you have watched sharukh khan films they will recommend you more of sharukh khan movies in which you will be interested, this become more enticing to watch.

AI helps the businessman by making their product more smarter and intelligent, nowadays AI can be seen in smart television, smart watches, cars and so on, I predict soon AI will be seen in all product in the coming years for eg smart toothbrush uses AI which inform the user how well they have brush the teeth the user can also see in the App that which part they need to clean better, you can also see in car nowadays which are having lots of automation like sensors have come up in case of emergency brake, self driving mode, spots what is happening around the car how to stay in the lane etc there are so many features which drive us also smart yoga mat which inform you about your position automatically, it can be seen in toaster and refrigerators, and soon product without intelligence will find it difficult to compete in the market.

AI helps to optimise business process, if you think AI can be used to make machine

intelligent which work for you, we even have intelligent robots that are aware of their surroundings if you see latest iPhone factories and car factories you realise how the product are manufactured in automated way but now this happen in all the supply chain from warehouse to retail store where delivery of product are automated where robots are delivering the product to the customer and this will happen more and more in the coming future its not only physical process but also clerical and managerial part, for e.g. in call centre AI is used to solve the problems of customer as they are aware of the problems face by customer which becomes a kind of pattern to reply them in the fastest way then what humans can do.

Advantages of Artificial Intelligence in business

The Advantages of Artificial Intelligence are:

1. Ease of doing business
2. Can provide better service to customer.
3. Cost effective in business
4. Create technology that allows computer and machine to work intelligently.

Review of literature :-

According to Dr.V.R. Palanivelu and B. vasanthi, (2020) in their research as stated that Artificial Intelligence (AI) is one of the fast growing fields which is getting more attention in business world. Artificial Intelligence has already found application over many fields such as commercial and daily life. Making use of this AI in marketing practices, an entrepreneur can benefit higher response from the audience and can achieve a strong competitive besides other online brands. Apart from marketing, it also has the ability to renovate business with innovative ideas. It also delivers solution to complex tasks and thus helps in massive growth of business. Hence, in this work we will discuss about the growth of business sector and entrepreneur using AI topology and its role in various part of the business.

According to Nehasoni, Narotamsingh, Amita Kapoor (2020) in their research stated that one can see the need of intelligent goods and services, their presence in market and the impact

on society and economic raises the question if the present emergence of AI is just hype or does it really have the capability of transforming the world. The researcher has investigated the large range of impact of artificial intelligence (AI) on society, economic and markets. This researcher has investigated the overall impact of AI - from research and innovation to coming changes. The researcher have pointed out the innovations in the field of AI and their impact on the business activities and thus on the global market.

According to Ann Geisel, (2018) in her research paper stated that the use of artificial intelligence (AI) programs has become widespread in business processes. There is some confusion as to what technology is considered AI. There are several levels or types of AI. When referring to artificial intelligence, it is necessary to define the capabilities of the technology. Businesses use a fundamental form of AI, with limited learning capabilities. The costs of the use and development of AI run the continuum from potential job loss or retraining to danger to human life. There may be aspects of the evolving technology that haven't yet been considered. AI has the potential to create a better world for humanity. Artificial intelligence will continue to evolve in the future and change the landscape of business. Both individuals and organizations need to prepare for the future by embracing the technology and understanding which shifts are required to be successful in the future.

Problem Statement :-

1. AI leads to unemployment, especially in labour intensive countries.
2. AI makes human lazy as everything is automated due to which less physical work is required.
3. AI lacks in motivating and creating impression among customers, as they don't think out of the box like human being
4. AI is not suitable for small scale business due to high cost.
5. AI is emotionless as they don't have feeling like human being.

Research Objectives :- The research is aimed to research the following.

Objectives :-

- To find out the impact of Artificial intelligence on laundry business.
- To understand if there are solutions or strategies for the effective use of AI technologies in laundry business.
- To study if Artificial Intelligence provide better service to customers.

Hypothesis :-

H0: There is no impact of Artificial intelligence in laundry business

H1: There is high impact of Artificial Intelligence in laundry business

H0: There are no solutions or strategies for the effectiveness use of AI in laundry business

H1: There is a solution or strategies for the effectiveness use of AI in laundry business

H0: Artificial Intelligence do not provide better service to customer

H1: Artificial Intelligence do provide better service to customer.

Research Methodology :-

Primary Data: A sample size of 100 was selected using Google forms out of which 100 response were retrieved in usable form. This represents a response of 100%. The samples include laundry businessmen since they are the ones who give their views on introduction of Artificial Intelligence in business.

Secondary Data: The descriptive methodology has been used collect the data the data collected mostly from secondary sources from various, journals, book articles and research papers.

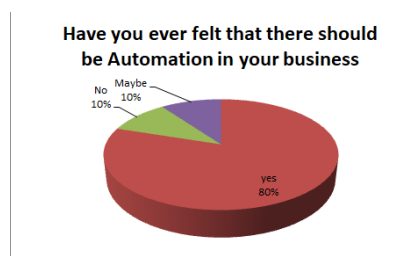
Data Collection and Analysis and Interpretation :-

1) The below analysis is done after collecting responses from the target audience by distributing self-administered questionnaire 103 respondent answered to the questionnaire.



The above diagram depict the people who are running laundry business for more than 6 years has respondent to the question mostly, there are also laundry businessmen who are running the business in between 1 to 5 years are 50%, also the people running laundry business between 5 to 6 years are 30%.

2) The below analysis is done after collecting responses from the target audience by distributing self-administered questionnaire 103 respondent answered to the questionnaire.



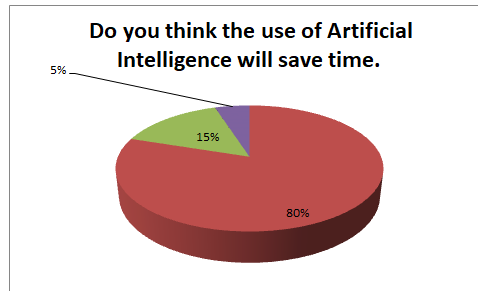
From the above diagram it can be seen that 80 % of the respondent feels that there should be automation in laundry business.

H0: There is no impact of Artificial intelligence in laundry business

H1: There is high impact of Artificial Intelligence in laundry business

Hence from the data received null hypothesis there is no impact of Artificial intelligence in laundry business is rejected and alternative impact of Artificial intelligence in laundry business is accepted.

3)The below analysis is done after collecting responses from the target audience by distributing self-administered questionnaire 103 respondent answered to the questionnaire.



From the above diagram it can be seen that 80 % of the respondent feels that Artificial Intelligence will save the time of customer.

H0: Artificial Intelligence do not provide better service to customer

H1: Artificial Intelligence do provide better service to customer.

Hence from the data received null hypothesis state that Artificial intelligencedo not provide better service to customer is rejected whereas Artificial intelligence do provide better service to customer is accepted.

Testing of Hypothesis :-

H0: There is no impact of Artificial intelligence in laundry business

H1: There is high impact of Artificial Intelligence in laundry business

Hence from the data received null hypothesis there is no impact of Artificial intelligence in laundry business is rejected and alternative impact of Artificial intelligence in laundry business is accepted.

H0: Artificial Intelligence do not provide better service to customer

H1: Artificial Intelligence do provide better service to customer.

Hence from the data received null hypothesis state that Artificial intelligence do not provide better service to customer is rejected whereas Artificial intelligence do provide better service to customer is accepted.

The below analysis is done after collecting responses from the target audience by distributing self-administered questionnaire 103 respondent answered to the questionnaire.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Are you aware of Artificial Intelligence	103	146	1.41747573	0.5396916		
Have you ever felt that there should be Automation in your business	103	123	1.19417476	0.27565201		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2.56796117	1	2.56796117	6.29908942	0.01285725	3.88744666
Within Groups	83.1650485	204	0.40767181			
Total	85.7330097	205				

From Anova single factor data analysis test was applied the P value is 0.01. since the

significance level is below 0.05 so null hypothesis Artificial Intelligence do not provide better service

to customer is rejected and Artificial Intelligence do provide better service to customer is accepted.

Findings :- As per the research it can be seen that Artificial Intelligence is the future of the business, the businessmen can save lots of money by lowering down the cost which will help him to expand his business also AI will provide better service to its customers, but it does require huge capital to set up Artificial Intelligence in business which is a kind of one time investment.

AI helps in developing the sales and marketing strategies that drive substantial improvements in business performance. Customers are getting addicted towards such service provided by AI, the future will be such that customer cannot be living without it as in each goods and services they will be requiring AI to make their life more easy and comfortable.

Social Implication :- Artificial Intelligence use in laundry business can be very helpful for the society, as we can see many bachelors, working men and women doesn't have time to wash their clothes also they cannot keep a track on the local laundry men, with the introduction of AI in laundry business customer can get their clothes wash through smart washing machine available in laundry store also they can keep a track of their clothes through their app provided by laundry store through which they can know whether their clean clothes is ready or not and once their clothes are ready they can get the message about it, and as per their convenience the customer can go and pick up their order this will save the time and energy of the customers.

Conclusion and Suggestion :- The aim of the paper was to find out the impact of AI on Laundry business. In order to reach the objective of the research and to answer the research questions, different steps were followed. At first, a comprehensive literature review was highlighted which a detailed understanding of AI and the use of AI in business by including the perspective of different researchers. Secondly, the researcher used the quantitative research method which

involved a semistructured questionnaire with 100 different entrepreneurs. The major findings of the research showed that the majority of the businessmen wanted AI to be a part of their business. On the findings related to the benefits of AI to customers, different responses were gathered from the respondents. The major benefits according to the researcher are it is time-saving for customers also it will enhance service and customer satisfaction. The initial high cost is considered as the major challenge of introduction of AI in business according to the respondents.

On the question related to the usage of AI in the laundry business, respondents stated that AI will make the business more effective. They stated that AI will help in providing better service to their customers and can drive substantial improvements in business performance.

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Gamesmanship via Corporate Social Responsibility

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Abstract :- India is the land of religion having a society of believers who have charity and giving as a clause of religious beliefs and follow the same practice in the businesses. Philanthropic activities prevail in India since the history of its birth; years before the evolution of mandatory Corporate Social Responsibility in the year 2014. Their contributions towards the society under the heads of Corporate Social Responsibility have remarkable contributions towards community development. Even during the pandemic of COVID-19 the corporate houses contributed big helping hand through CSR funds and even beyond to help nation fight strongly and survive through COVID-19 pandemic. It is a known fact "charity benefits the giver more than the receiver." The corporate houses have gained goodwill through their CSR initiatives. They have been successful in creating a positive social image in the mind of stakeholders.

The study therefore tries to find out the purchasing preference of the customers towards the product of those companies who have good social contribution through their Corporate Social Responsibility initiatives and publicize them through their ads or campaigns and find out whether they gain competitive advantage through it.

Keywords :- CSR Initiatives, Social Ads, Competitive Advantage.

Introduction :- India is the land of religion having a society of believers who have charity and giving as a clause of religious beliefs and follow the same practice in the businesses. Philanthropic activities prevail in India since the history of its birth. India has been the first country to mandate Corporate Social Responsibility (CSR). The term Corporate Social Responsibility gained popularity when the Companies Act, 2013 provided for mandatory compliance with CSR on the Companies with a net worth of Rs.500 crore or more, or turnover of 1000

crore or more, or a net profit of Rs. 5 Crore or more during the immediately preceding financial year, to spend 2% of their average net profits of immediately preceding three years on CSR activities which have a big list of the societal, environmental development of nation. CSR expenses are connected to all social and charitable causes.

The corporate houses have been spending huge funds on the programmes of poverty eradication, education improvisation, sanitation, health care, disaster management, environment sustainability and other activities of social and national importance. All are required by law to publish their annual CSR report on the websites but in general not every consumer visits the website of the company to check its social contribution. Only those companies get popular among the public who through their ads, campaigns, social media and mass media presence create awareness of their social, environmental activities and generate public liking towards their acts. Many companies have been broadcasting their ads through televisions, radios appealing public to buy their products and indirectly contribute towards their social activities. The sustain in modern societies businesses cannot survive focusing only on the profit motives rather they also require to focus on customer satisfaction and social activism. Its social activeness can be a great source of customer attraction and pave its way absorption of increased competition in the era of globalization.

Objectives of the Study :-

1. To study the consumer buying preference in response to the social contribution of the corporate houses under CSR.
2. To study the aspect of competitive advantage gained by the corporates by popularizing their CSR activities.

3. To provide suggestions to the corporates presence.
regarding their mass media and social media

Research Methodology :-

Sources of Data :	Primary and Secondary
Sample Size :	108
Sampling Method :	Simple Random Sampling
Data Collection Tool :	Questionnaire
Technical Analysis :	Percentage Analysis
Secondary Data :	Research Articles, Journals, News Articles And Other Published Resources.

Review of Literature :- Ceglinski, P. and Wisniewska, A ,(2016)¹, in their study CSR as a source of Competitive advantage: The Case Study of Polpharma Group, Poland analyzed the relationship between CSR and Competitive advantage and found that the companies CSR activities can bring many benefits and increase customer trust thereby improvising its competitive advantage.

Ahmed, A., (2022)², carried an empirical study on Sustainable Competitive Advantage Through Corporate Social Responsibility and Green Behavior Strategies found that the performance of the firms is strongly impacted by CSR and Green Behavior. Companies adopting both are proved to have a sustainable competitive advantage.

Siddique, N., (2014)³, in the study CSR Practices and Competitive Advantages: A Descriptive Study states that the companies who practice CSR enjoy numerous benefits and promote long run financial returns and help gain brand image in the mind of

its stakeholder. Companies should therefore have more attention towards their CSR activities.

Marakova, V., Wolak-Tuzimek, A., & Tuckova, Z., (2021)⁴, in their study Corporate Social Responsibility As a Source of Competitive Advantage in Large Enterprises state that the CSR activities contribute to the improvement of the image of the enterprise, public relations, as well as innovative activities. They used Kaiser Criterion to identify the factors and analyzed them through Cattell Scree test.

Hypotheses :-

H₀- The corporates do not gain competitive advantage through creating awareness of their CSR activities.

H₁- The corporates gain competitive advantage through creating awareness of their CSR activities.

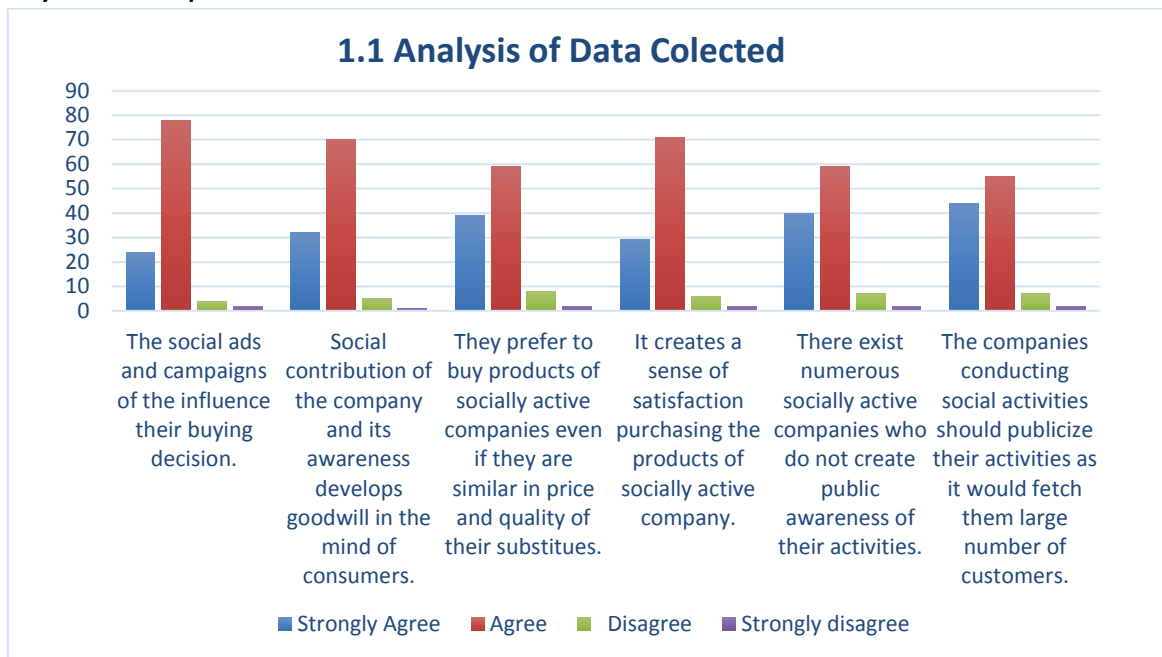
¹ Ceglinski, P. and Wisniewska, A., (2016), Competitive advantage: The Case Study of Polpharma Group, Journal of Corporate Social Responsibility and Leadership, Vol 3 Issue 4, pg. 10- pg. 25.

² Ahmed A., (2022), Sustainable Competitive Advantage Through Corporate Social Responsibility and Green Behavior Strategies, Hindawi Discrete Dynamics in Nature and Society, Volume 2022, Article ID 3734707.

³ Siddique. N.,(2014)3,CSR Practices and Competitive Advantages: A Descriptive Study, American Journal of Trade and Policy, ABC Research House Bangladesh, Vol 1, Issue 3/2014.

⁴ Marakova, V., Wolak-Tuzimek, A., & Tuckova, Z., (2021), Corporate Social Responsibility As a Source of Competitive Advantage in Large Enterprises, Journal of Competitiveness, 13(1), 113-128.

Analysis and Interpretation :-



The data collected for the study shows that the consumers prefer to be aware of the social contribution done by the corporates under the heads of Corporate Social Responsibility through their product ads & campaigns. They accept that the awareness of such campaigns influences their purchase decision. They are likely to prefer purchase the products of socially active companies. The respondents accept that they would feel more satisfaction being a consumer of such socially responsible companies. Through the analysis we can arrive at the conclusion that CSR can be used as gamesmanship strategy by the corporates.

It brings numerous benefits to the organization which can be explained through following points:

Competitive Advantage :- The corporates who successfully promote their social contributions through their ads, campaigns and social media generate consumer preference in buying decision. They prefer to buy the products of these companies over the substitute goods of the competitors.

Increased Sales, Revenue and Profit :- As the consumers prefer to buy the products of the socially active corporates it results in increased

sales of the companies which generates higher revenue to the firm. It brings good returns to the firm and make better availability of working capital and the profit of the corporates increase considerably.

Good Corporate Image :- The corporates who are good social contributors and communicate effectively about it generate goodwill in the mind of all stakeholders. They feel prestige to be connected with the socially active organization.

Employee Morale :- The employee morale gets boosted when they be a part of the firm having good corporate image which leads to job satisfaction, increased motivation and commitment on the part of employees lead to better work performance which in turns lead to optimum utilization of resources and increased productivity.

Accelerates Nation Development :- The social contributions of the corporates through CSR activities have been a great support to the government as they help in upliftment of the deprived social class of the nation along with certain projects of environmental sustainability and accelerates the development of the nation.

Hence, H_1 is proved that the corporates gain competitive advantage through creating awareness of their CSR activities.

Limitations of the Study :-

1. The study focuses only on the benefit of competitive advantage through CSR activities.
2. Time Constraint.
3. The sample size is limited to only 108 respondents.

Suggestions :-

- The eligible corporates carry out CSR activities as it has become mandatory as per the Companies Act, 2013 they should publicize it through mass media and social media as it creates awareness of its social contribution.
- The corporates are required to be active on social media platforms and have good public relations which can act as a marketing tool if used creatively.
- The publicity of CSR helps generate goodwill and brand recognition among the prospective buyers.
- The CSR activities helps boost the goodwill and can fetch easy credit policy from the financial institutions whenever required.

Conclusion :- The study concludes that the corporates who are socially active and publicize their social contribution gain competitive advantage through their customer buying preferences and in turn increase their sales, revenue and profits. The popularity of CSR activities develops good corporate image in the mind of citizens. The employee satisfaction brings in higher productivity to the firm leading to optimum utilization. The CSR activities are very supportive to the government as it helps in development of the nation through upliftment of socially deprived and environment sustainability.

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Holistic Approach in Education

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Abstract :- Holistic education focuses on the fullest possible development of the person, encouraging individuals to become the very best or finest that they can be and enabling them to experience all they can from life and reach their goals (Forbes 2003) and moreover its child connecting education. it is more than the education of the whole student and addresses the very broadest development of the whole person at the cognitive and affective levels. it emphasizes the education of the student beyond the classroom and holistic education is not only to prepare students for academic success, but to also enable them to learn the challenges of living as a whole (learning about themselves, about healthy relationships, about social responsibility, compassion, etc). The present paper explains the features of holistic education and developing critical learners. Moreover, it gives certain implications of holistic approach to the students as well as teachers. Additionally, this paper emphasizes the importance of holistic education in present scenario.

Introduction :- In Rural areas school's dropout have increased. More Indian kids are not compelling their school Education and due lot of constrains. Our government and Education are planning to remove these constrains, also move towards holistic development communications and Interpersonal skills, Cognitive abilities, Logical thinking need to come to the forefront. It's also helps the students to do the better performance. A holistic way of thinking tries to involve integrate the various and experience rather than defining human possibilities narrowly.

Holistic education means child-connecting education not child centred education. holistic education is connecting the child with her knowledge, community, the environment and to the cosmos. So, conducting schools' programs that are based on connectedness and unity rather than fragmentation.

Holistic education never reduces the

curriculum or teaching strategies. It emphasises the wholeness or loving consciousness of the teacher.

Holistic education :- Holistic education is based on theories of holism. There are many philosophical & practical learning theories are behind the holistic education. however, the common and unifying principle is an that everything in the involved/ universe is interconnected (Clark, 1991). In addition, it's based-on quantum physics where all things in the physical universe are to be connected at the quantum level (Al-Khalili, 1999, Talbot, 1991). Based on the above the holistic education also interconnected with our experience & reality.

As Ron Miller (1992) mentioned that holistic education is not to be defined as a particular method or technique. it is a paradigm a set of basic assumption and principles that can be applied in various ways. It addresses the whole development of a person in cognitive and affective levels (Singh, 1996). It aims is, fullest possible human development of a person to become the very best of finest that they can be a develop fully those capacities that together makeup a human being (Forbes, 2003).

Holistic education focuses on the relationship between whole and the part and it suggests that teaching, learning approaches need to be rooted in a larger version. In holistic perspective, the studied is positioned as an active, participatory & critical learner who perceives and understands. The holistic vision includes a sense of the whole person who is connected to his / her surrounding context & environment (J.Miller 2004). So, holistic education should be flexible & dynamic to those accommodate those personal difference in the rate of personal progression (Hau, 2006). Finally, holistic education is, without doubt, it's a education for 21st century, directed towards developing human beings with a global conscience, a vision of peace, love & intelligence (Nova, 2011).

The main element of Holistic education :- It is focus on the interconnectedness of experience and reality. Suggest, philosophical have developed a picture of reality that indicates the deep interconnection of all things in the world. Holistic education emphasized that inter connection between whole to part. Holistic approaches to teaching and learning offer a broad perspective of learning that stretches beyond the academic achievements of an individual, to consider the development of the whole person. This process is based on the fact that people do not behave and act as robots, by just have emotions & spiritual thoughts that make them human is separate them from the machines, holistic approach is has different dimensions is classroom practices that's engaging learners.

Each of these contextual elements can be helpful to the educationist to set the scholarly goals, teaching team can easily identify there relevant and meaningful capabilities which can guide them to reach their teaching & learning goal.

Engaging learners :- Engaging learners in the process of learning involves teachers adopting and fostering active, interactive and deep learning approaches so that learners can interact meaningfully with the concepts, materials, processes and people in a course.

Designing for learning :- Designing for learning requires planning and design of appropriate curriculum, activities, environments and assessment to support student learning and achieve planned student learning outcomes.

Assessing for learning :- Assessment informs what and how students learn. Setting appropriate and challenging standards, assessing the learner and their learning progress (through diagnostic, process and outcome assessment) are integral to learning process.

Managing for learning :- Managing teaching and student learning is enhanced by effective administration and organization of time to plan and generate resources, organize and plan systems and people. It requires an engagement with the

policies and organizational priorities that impact on teaching and learning.

Education Aims :- Holistic education aims to encompass all aspects of personal learning and growth, it emphasizes the development of active relationships at all levels, between the individuals, peer groups, communities and world around us.

- It aims to promote the importance of relationships at all levels within a learning community and develop an open and collaborative relationships.
- It emphasizes on life experience and learning beyond the confines of the classroom and promotes the formal educational environment towards education as growth, discovery, broadening of horizons.
- To understand and engaging with the world better.
- The holistic learner is assumed to want to achieve the highest aspect of awareness of knowledge, and appreciates the value that it adds to our life.

In the holistic environment focused on the development of critical learners and elicitation, challenging of personal constructs.

Implication of Holistic education for the students

:- Holistic education prepares a student for life long learning beyond the classroom, it focuses, moves towards the life skills, increasing awareness in the complex world. Moreover, it emphasizes the broad educational approach in the intellectual, personal and interpersonal development of the student and develop the values, attitudes, skills that will serve the student well throughout life.

- Holistic education to develop the social and academic maturity of the learner that they accept the challenges of life and develop the ability understanding learn from the errors, develop the responsibility of their own personal academic growth.
- To set clear and realistic targets, prioritize conflicting demands and plan for success. In addition, should persist in their task and maintain high standards in their outcomes.
- To think creatively, feel empowered and

confident to find solutions and should take risks in new, unfamiliar areas of thinking and action.

- Should act and learn with care, consideration, compassion, empathy in their interactions with others,
- Should demonstrate a reflective approach and an attitude of continuous improvement.
- Demonstrate in effective written and oral communication skills and have sufficient confidence to change and adapt their style to communications according to the situation or circumstances change.
- To contribute actively, collaboratively, challenge with others, with respect, should encourage their decision-making process,
- With help of understanding of their subject areas, should develop interdependences, interrelationships, should appreciate the inter connections in human knowledge, should appreciate and debate global issues, the impact of human activity on the environment.
- Should develop the learner as critical, confident, independent learner, and provide the holistic learner. The interactions between the teacher and the students are a social act that needs to encompass the personal, professional, social and human needs of the learner, these skills are required not only to learn new knowledge but also to be heard, praises accepted into the community of learners.

Holistic education: Implication for the Teacher :-

Holistic education challenges the teachers to think differently about student cognitive and affective development. The teacher and student relationship should be inclusive, dynamic and egalitarian. The appropriate pedagogical approach will become one of active, planned interventions that are developed for students to meet their development needs. Facilitation, guidance, mentoring the skills are required for holistic teacher to handle the students.

The holistic teacher produces the students are construction system or their self-characterization in lectures, seminars, workshops and tutorials. the purpose of this is to design true

interaction meaningful to students, it is the basis of introducing subject knowledge, which enable the students to related it to their personal constructs.

As the aim of the holistic education is to develop critical learners, it is necessary to develop the students' personal constructs that are relevant to achieving this aim. The types of personal constructs that have been elicited are social, institutional, knowledge and belief constructs. Knowledge and belief constructs are especially important, because students own understanding is the very important to developing critical learners. By surfacing personal constructs students can begin to see themselves in the process of knowledge generation, questioning and learning.

Teachers must often examine the learning culture within their school so that it is conducive to creating an inclusive learning community that stimulates the growth of a person's creative and inquisitive engagement with the world. The aim becomes the development of healthy, curious individuals who can learn to apply their knowledge in new context, and have self-motivation and confident learners.

Conclusion :- Holistic education is an approach to pedagogy that can meet the needs of all types of learners, that can be a source of fulfilment and gratification for teachers, and that reparse future citizens who will contribute a concern and mindfulness for others, for their communities, and for the planet. It is compatible with both global education and environmental education, which are also based on the principles of interdependence and connectedness. Based on this interdependent perspective, holistic education seeks to create a society where we live in harmony with the surrounding environment. Holistic education seeks to connect the part with the whole. We have tended in education to forget the larger vision of wholeness and connectedness, and holistic education calls on us to restore that vision. Such a vision, of course, is a primary goal of Education for Sustainability

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A Study on Role of Social Media Marketing in Globalised Era

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Abstract :-Globalisation has led to increased connectivity and business opportunities between nations around the world. Nations today have better access to each other due to growing trend of social media. Social Media platforms like Facebook, Twitter, YouTube etc, have brought people closer and connected. Companies going global have better communication due to Social Media Marketing. Companies use these social networks to advertise, share and inform audience about the events happening in their organisation. The aim of this paper is to study the conceptual background of Social Media Marketing in Global arena. In addition, this paper will discuss various platforms of Social Media Marketing which help companies to reach out to larger audience with ease. The present study will bring out the Role played by Social Media Marketing in Globalised world.

Key Words :- Globalisation, Social Media Marketing, Digitization.

Introduction :- Globalisation is the interconnectivity of people and trade between different parts of the country. Internet has clearly changed the business scenario all over the world. Companies working globally have better access to customers, suppliers, shareholders situated in different parts of the world. Globalisation has also given competitive advantage to leverage profits. Companies can make use of lower labour cost from developing country and technical knowledge from a developed country, that's how globalisation benefits organisation. Advent of superior technology has surely changed the communication network among various countries. A person sitting in Mumbai can connect easily to someone sitting in Dubai using Social Media Networks like Zoom, Skype, Google Meet, and LinkedIn etc.

Dynamics of market have been changing drastically and it is imperative for businesses to

keep track of changes whether it is technology or methods of operating business. Gone are the days when marketers used to rely on traditional channels for promotion. Social Media is an emerging marketing tool widely used by organisation to create and sustain brand in the market. Communication via internet is the key to any successful business. Social media marketing caters the need of global consumers thereby serving businesses to cope up with variety of consumers with different cultural background.

Social media marketing enables the consumers to get better access to brands, quality and price. A consumer can compare the prices of a product sold in all together in different countries, he can review the product, share his feedback, file a complaint directly to the company etc, with the help of social media. Social media provides variety of platforms to choose from. Companies can pick and choose a particular networking site which best fits for his business. In order to create global audience companies have to frequently keep posting stories, videos, chats, blogs with attractive content to keep the audience glued. The above study is undertaken to find out how the organizations use social media as a tool of marketing in today's global era.

Review of Literature :-

Esha Jain, Manish Madan, Nidhi Gupta, Nitin Goel, (2015): An Empirical study on effects of Globalisation on Marketing Strategy and Performance :- The study gives an insight about globalisation and its implication on marketing strategies of garment firms. The researcher has conducted research using primary data by preparing structured questionnaire. The positive findings of the study include quick movement in quality of local goods, inflow of foreign investment and improved relations between countries. The negative ones include reduction of locally

manufactured goods, brain-drain.

Parag Shukla, Parimal h. Vyas, Madhusudan n. Pandya, (2020): An Empirical Study on Actual Experience of Selected Social Media Users in Vadodara City of Gujarat State :- The Study reveals the pivotal role played by social media amongst youngsters. The researcher quotes social media as Digital Dopamine for young and restless consumers in 21st century. The researcher has suggested marketing strategies for manufacturers to retain the consumers. Social media and smart phones are intertwined and hence the marketers must grab this opportunity.

Palak Saxena, (2021): Effectiveness of social media promotion for online shopping sites: A study on buying behaviour of consumer :- This Study reveals the influence of social media on consumers for online shopping. The researcher has used exploratory and descriptive research to study the influencing factors for online shopping. The study finds out that product reviews on online websites are important for consumer purchase decision. The Researcher has come to the conclusion that social media provides impactful verbal exchanges between buyers and E-commerce vendors.

Objectives of the study :-

1. To study the conceptual background of social media marketing.
2. To study the various social media platforms for marketing.
3. To understand the role of social media marketing in context of globalisation.

Research Methodology :- The Research paper is based on Secondary data collected from the various resources such as Websites, Books, and Reference Journals.

Conceptual Background of Social Media Marketing :- Human is a social animal and it is almost impossible to live in isolation. The roots of social bonding were created far before the emergence of technology. Advanced technology has paved a way to easy and convenient socialised

life.

Speaking of technology, the first computer ENIAC was invented in 1945. Post the invention of Computers, invention of Internet became the game changer in business world. Internet brought in innovations in communication methods used. Social Platform like Face book was launched with the aim to bring people closer but today the same platform is used as a market place to sell and buy products without any additional marketing cost. You tube is a great platform for start-ups where entrepreneurs hardly have capital to invest into business. Simply at the click of button entrepreneurs are able to sell their products to large number of audiences. Audience engagement has also become simpler with social media.

Businesses in the modern age is highly dominated by what consumers want. It's important to understand how consumers behave while making a particular purchase. Today, consumers before purchasing any product ,search online about the reviews, performance, price of the product .It is difficult to manipulate consumers these days because they are already educated and informed about products. Hence, online visibility of companies is now gaining relevance. Companies have to be very conscious about their reputation on Social Media. One wrong move will lead the company into problems which will be difficult to correct.

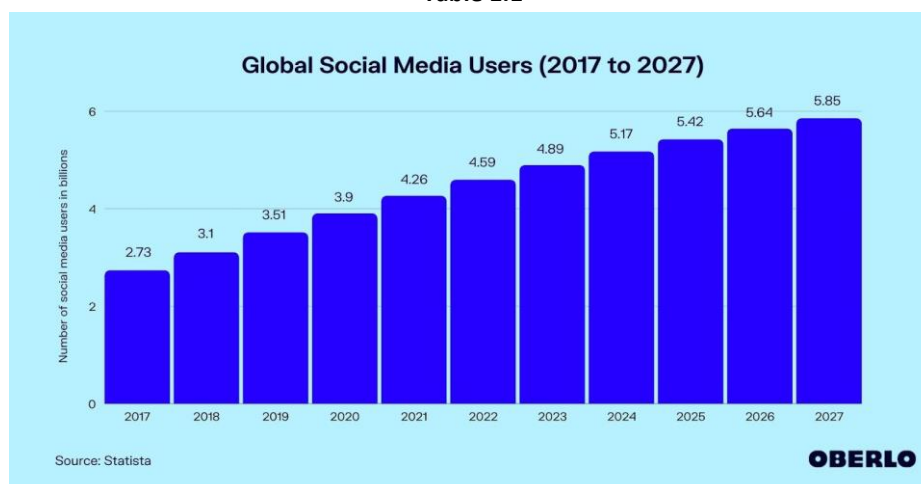
Social Media Marketing enables the companies to keep track on the purchases made by the consumers which in turn help them to make strategies around product development and modification. Use of traditional media will only capture limited consumers.

Social Media as a Marketing tool :-

- **Creates Brand Awareness:** Allow companies to create brand awareness by creating content including short videos, advertisement campaigns, customer feedback etc.
- **Reach out to larger masses:** Help to acquire local and global customers
- **Measuring Success with Analytics:** Google Analytics is the most powerful tool to measure your brand performance.

- **Higher Consumer conversion:** Helps to better understand your consumer and identify the trends they are following.
- **Cost -effective:** Allows you to sign up and create profile for free and paid promotions are also inexpensive.
- **Customer Satisfaction:** Social media enables companies to give personalised service to consumers.
- **Competitive edge:** Always being updated with changing trends
- **Increase sales:** social media has higher lead-to-close rate than any other form of marketing.
- **Audience insights:** helps to understand consumer psychology and purchase pattern

Table 1.1



The Above Table clearly explain the rising number of social media users. Hence, companies have to be visible online to create their space in the market.

Different platforms used in Social Media Marketing :-

Social media is omnipresent and it is almost impossible to survive a business without social media presence. Having said this, it is also relevant for businesses to understand which platform would work for their business. Not every platform would be suitable for every business. A fashion brand may use Instagram or a YouTube Channel to showcase changing fashion brand whereas a MNC may require a social platform like LinkedIn or a Blog of its own. Social media can help businesses to counter competition by rewarding consumers with sneak peeks, lucrative deals, promo codes, pre booking orders etc.

There are many emerging social media platforms that marketers need to take note of. Here's a list of some social media platforms commonly used by companies.

2.1. Facebook :- Facebook is being considered as the king of social media sites. Facebook has more

than 2.27 billion active monthly users which clearly shows the number one position in social media platform list. More than just being a social platform for connecting people it has now made space for businesses to launch, sell, promote products. Small business who has limited marketing cost mostly use Facebook to promote brands and reach out to larger audience. Large corporations have digital marketing in place using Facebook as a tool to grab new customers attention by posting attractive deals. Facebook ads appear on side columns of Facebook site as classic ads. They include image, click through link to Facebook page or Facebook app where customers can easily get access to company's Facebook profile and browse through wide range of products and services. Facebook also has a feature of market place which is a virtual platform for vendors and buyers to sell and purchase products.

2.2 Instagram :- Instagram is the second most used social media site by over one million people across the globe. Instagram allows people to post pictures and videos on their profile stories. Instagram hashtags greatly help marketers to reach a wider audience, and this audience can be expanded further, through the Instagram stories or Instagram Live Video feature. The best example to site here is of Swiggy, food delivery app who wanted to expand customer base and mobile installation. Swiggy used Instagram stories feature by creating creative resources for Instagram stories to drive app installation and measured the performance. This strategy helped to acquire new customers.

2.3 Twitter :- Twitter has over 326 million average monthly users over the world. Twitter is a powerful social networking tool for getting updates about anything and everything. Many companies use twitter to involve users and followers, develop brand awareness, convert customers and most importantly it acts like a search engine tool to find out the content and strategies used by competitors. It is a good marketing platform used by companies to publish original content regularly.

2.4 Linked In :- This social media network enables people to stay connected professionally. People can find jobs over this platform. Most companies use this platform to recruit and hire professionals having competencies that match the job requirement. Linked In self-service advertisement function allows to create awareness about your company by sharing important information, customer relationship and quality leads. Just by paying on the number of clicks you can reach to specific person with specific job title, position, seniority level within your company size and particular industry.

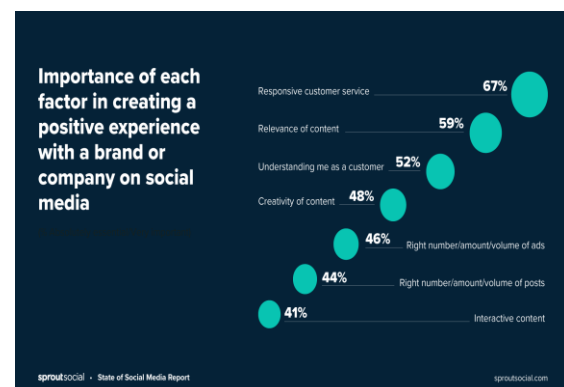
2.5 Pinterest :- Pinterest is one of the most inexpensive, versatile and influential marketing tool that businesses use for converting potential customers into purchase, increase website traffic and grow brand awareness. Pinterest users have the highest percentage of purchase intent than any other social media sites. 85% of pinner search for visual content, making pinterest a powerful and engaging site to distribute all types of

content. Users also have an access to clicking live links. Companies can create a community for regular pinterest users who may in future become your customers.

2.6 Snapchat :- Snapchat has more than 238 million daily active users. It is a good platform for sending real-time updates and promoting events. Snapchat allows its users to post photos and videos that remain active on the platform for 24 hours. It is a good option for businesses that need to promote timely events, like product launches or a conference. It also allows marketers to create custom, branded geo tags to promote events in particular locations during a particular period. Snapchat is a well-known platform for target college students.

2.7 You Tube :- You Tube has over 1 billion unique visitors every month. It is most effective tool for small business where marketing cost is limited. Companies can create their own you tube channel to reach to the target audience. You tube also is an engagement tool where companies know how many people are following them. From product demonstrations to seminars to video presentation there are ample ways to connect with customers and showcase what you want to sell. Companies can gain the trust of customers by sharing customer testimonials and experience.

Above mentioned social media platforms are widely used by the organizations for domestic and international marketing. In contrast to traditional marketing, these social media platforms help businessman to reach the masses at fast pace.



- This chart gives an insight about the influencing parameters for consumer positive experience
- 67 % of consumers go for repeat purchase if the customer service is responsive and quick.
- Social media enables better customer service,advertisement,interactive content.

3.Role of Social Media Marketing in context of globalisation:- The 21st century has witnessed some of the greatest inventions in technology. Everyday there is a new technology invented and modified.With the dynamics of market changing speedily,companies are trying to cope up with the technological advancement.No company can survive without its presence on social media.Globalisation and advancement of technology goes hand in hand.globalisation brings people together and social media is an effective tool to network people across the globe.

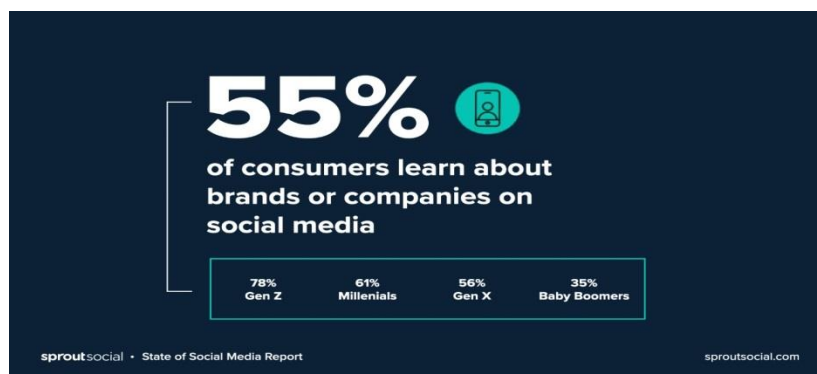
Speaking of networking,people around the globe are diverse and scattered. Social media enables to understand and exchange culture with just one click. If an Indian company wishes to sell its products to U.S, it has to understand the cultural preferences of consumers there. Social media indeed helps to study these cultural differences. Companies can then modify its products according to the needs and likes of that particular set of consumers. Niche Marketing with help of social media is the new generation hack that every company bangs on. Companies can target their set of consumers and design an effective marketing campaign for their target audience. This will surely give the desired results also saving huge marketing cost which would otherwise be higher if companies would go for traditional marketing where target marketing is slightly impossible because traditional marketing focuses on mass marketing.

Traditional marketing revolves around the concept of One Size fits all.But with globalisation acquiring space,there are end number of diverse consumers and market place.Hence,Social media is now being used by companies to outreach every

consumer whether domestic or international.Small or Big organisation both can benefit from social media. Small companies can introduce their products saving on product introduction cost whereas large companies can use social media to add new consumers by providing lucrative offers.

E-commerce companies highly swear on social media for reaching out to potential customers as it gives real time feedback-commerce companies can get access to the variety of consumers and their varied needs.They can customise their products according to the needs of consumers.To site an example,Amazon.com was founded in July 1994 and today it is the largest internet-based retailer in the world by total sales and market capitalisation.Amazon uses social media for product promotion,Product launches,Sale,Offers to attract consumers.It is able to expand its wings due to social media visibility.Amazon facebook page has a direct link connected to amazon website where consumers can browse and choose products.Also Social Media influencers on Instagram share their stories about the products bought from Amazon.

Consumers today are highly informed and it just takes one wrong move by the company to switch to another brand. That's 'the reason why companies keep their consumers updated about the trends and upcoming events of the company. I Phone launches new model using social media platform where consumers from any part of the world can easily get information. Such campaigns are done so that companies can gauge the product sale. Pre booking orders are something which I phone is Pro at. Be it a product launch or promotional programme companies are truly benefiting from social media in this age of globalisation.



- According to 2021 statistics by sprout social 55% of consumers are informed about brands through social media.
- Z generation consumers are high on use of social media.
- By 2025, over 243 million social network users in US which means if your organisation is unable to capitalise growing network, those consumers are likely to shift brand.

Limitations :- The study only focuses on social media as marketing tool in global scenario. The Study is limited to the data found by secondary sources like newspapers, journals, websites, research papers, books.

Conclusion :- This study concludes that the new generation customers are highly informed and aware about various brands due to social media. Hence, companies must make strategies using social media as a marketing tool to attract customers. Also, social media has a huge role in global arena due to its wide accessibility and convenience. Its imperative for organisations to tap the global opportunities using social media marketing. Organisation can choose from various platforms of social media and use it for marketing their products.

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Innovative Developments Adopted by BSNL to Sustain Business during Global Turbulence

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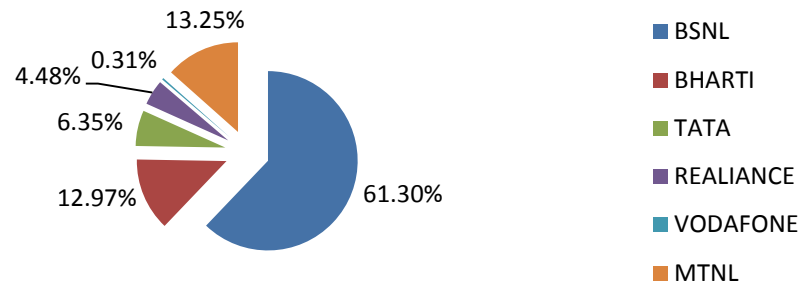
Abstract :- This studies paper based on the worldwide turbulence with the accelerated globalization and interconnectivity no economic system of the sector is able to stay immune to recession. Recession and crises are the ordinary part of each commercial enterprise cycle however from closing three 12 months there are so many reasons of global turbulence and Covid -19 is primary purpose behind it. These pandemic periods wherein all and sundry scroll by way of the losses & telecom enterprise is likewise suffer through those kinds of turbulence. Researcher wants to awareness on impact of turbulence and new method use by using BSNL and their employees view towards government guidelines. There may be extraordinary styles of turbulence like market, purchaser, most economical, pandemic and so on. Those all affected in least expensive situation of organization. For research secondary facts turned into gathered from BSNL internet site, telephonic communication with employees, some of studies paper from studies gate.

Introduction :- BSNL is an applicable public region task based totally in New Delhi, India. It is under the possession of branch of Telecommunications, Ministry of Communications, and government of India. It turns into included on 1 October 2000 via manner of way of the government of India. Its pinnacle legitimate is positive as Chairman and dealing with Director who is an applicable authority's civil servant of the Indian conversation Finance carrier cadre or a relevant authority's engineer of the Indian Telecommunications provider cadre. It gives cellular voice and internet offerings through its national telecommunications community in the course of India. It's miles the

biggest authorities-owned-wireless telecommuni - cations company provider in India. Bharat Sanchar Nigam constrained is India's authority's company and its information may be traced decrease lower back to the British India. The basis of telecom community in India becomes laid through manner of method of the British someday in the course of the nineteenth century. at some stage in the British technology, the primary telegraph line grow to be mounted among Calcutta and Diamond Harbor in 1850. The British East India Corporation began out using the telegraph in 1851 and until 1854 telegraph lines had been laid all through the United States.

In 1854, the telegraph issuer turns into opened to the general public and the number one telegram will become dispatched from Mumbai to Pune. In 1885, the Indian Telegraph Act will become handed thru way of approach of the British Imperial Legislative Council. After the bifurcation of submit and Telegraph department with within the Eighties, the introduction of department of Telecom ultimately brought about the emergence of the government owned telegraph and Tele cell smart phone organization which triggered the muse of BSNL. For 160 years, BSNL had operated the general public telegram provider. In 2010 the telex community among its 182 offices emerges as changed with the "internet primarily based Telegram Messaging device" which trusted net connections rather than telex traces (which is probably more dependable in which strength outages are extra commonplace). This triggered a decline in issuer, and the business enterprise applied the identify "dwindled provider" to telegrams in 2010. Sooner or later on 15 July 2013 most of the people telegram issuer ends up close down completely.

SALES OF DIFFERENT TELE COMPANY



It have 61.30% marketplace percent which means that humans trust n like live on of BSNL even they've selections of different telecom agency as it is a government organization people accept as proper with a lot . In same time MTNL have thirteen.25% percentage, Bharti have 12.97%, Reliance have 48% percent, Tata have 6.37%, Vodafone have 31% Unpredictable and quick modifications in an organization's out of doors or internal environments or in an financial system, impacts its performance.

Turbulent business surroundings are characterized thru uncertainty and its lack of ability to anticipate the destiny is quite hard and therefore calls for the development of recent competences. To develop a technique to improving organizational disaster preparedness in today's fairly unsure and turbulent business enterprise surroundings, it additionally shows that disaster control is a crucial issue of present day strategic control. The economic enterprise environment is defined in particular as operations underneath monetary catastrophe , more in particular it refers to a turbulent business organization surroundings that's dynamic and rapidly converting inside a time body from some months as a good deal as 365 days. 36% market which means that human beings trust and like live on of BSNL even they've selections of different telecom corporation as it is a central authority organization human given as real with loads. In same time MTNL have thirteen, 45%, Bharti have 12.97%, Reliance have 48 %, Vodafone have 31% Unpredictable and fast adjustments in a corporation's outdoor or inner environments or in an economy impacts its performance. Turbulent commercial enterprise surroundings are

characterized thru uncertainty and its incapability to assume the destiny is fantastically difficult and therefore calls for the development of new competences. To expand a technique to enhancing organizational disaster preparedness in nowadays fairly unsure and turbulent business organization environment, it moreover suggests that disaster control is an essential factor of present day strategic manipulate. the industrial employer surroundings is defined mainly as operations under monetary catastrophe , greater specially it refers to a turbulent commercial business enterprise environment which is dynamic and hastily converting internal a time frame from a few months as a whole lot as 12 months, below heavy impacts of global economic catastrophe.

The late 20th century considered turbulent surroundings for commercial organization because of fast boom in generation, globalization and frequency of restoring and merger interest. These outputs are probably to worsen and result in international economic disaster. 2008 became an particularly turbulent period for economic markets the worldwide economic crises took a flip for the greater severe in September 2008 with the collapse of several global economic institutions, along with several businesses as banks could not meet their economic requirement and that they had to depend upon the government support. The worldwide financial crises took a turn for the greater extreme in September 2008 with the collapse of numerous worldwide economic institutions, such as numerous businesses dealing within the area of investment, loan, & coverage Sustainable development, international locations are able to benefit effective monetary and social

development, without more environmental degradation, in a way that every protects the rights and opportunities of coming generations and contributes to likeminded techniques someplace else. Many dimensions of sustainable improvement not virtually economic and environmental, however additionally spiritual, religious, corporation and social, clinical and political. Worldwide adjustments and sustainable improvement are closely connected. Sustainable development is a widespread sufficient concept to answer the monetary social in addition to surroundings demanding situations.

As it's far tough for the growing economies to preserve their finished boom fee in turbulent business organization heavy affects of worldwide economic disaster. The overdue 20th century taken into consideration turbulent environment for Business Corporation because of fast growth in generation, globalization and frequency of restoring and merger interest. These outputs are in all likelihood to worsen and result in worldwide financial catastrophe. 2008 became in particular turbulent period for economic markets, the global monetary crises took a flip for the extra severe in September 2008 with the crumble of numerous worldwide monetary establishments, inclusive of numerous groups as banks couldn't meet their monetary requirement and they had to depend on the authorities guide. The worldwide monetary crises took a flip for the extra critical in September 2008 with the disintegrate of numerous worldwide economic establishments, inclusive of several agencies dealing in the quarter of funding, loan, & insurance Sustainable development, global places are able to benefit powerful economic and social improvement, without extra environmental degradation, in a manner that every protects the rights and possibilities of coming generations and contributes to likeminded methods someplace else. Many dimensions of sustainable improvement now not definitely financial and environmental, however moreover religious, spiritual, company and social, scientific and political. Global modifications and sustainable improvement each are closely related. Sustainable improvement is a tremendous enough concept to answer the financial social further to

surroundings challenges, as its miles hard for the growing economies to preserve their finished boom price in turbulent commercial enterprise.

Review of Liturature :-

1. Prof. M. Yadagiri & B. Raja ram (2018) of their studies article "evaluation OF operating overall performance OF BSNL" Calculates to assess the walking standard overall performance of BSNL phase smart in phrases of sales , common income, operational income, strolling expenses standard charges, worker advantage fees, administrative, strolling and unique fees, earnings in advance than tax, tax fees and income after tax
2. Dr. M. Dhanabhakym & SwapnaKurian (2012) of their studies Article "Profitability analysis of Bharat Sanchar Nigam confined (BSNL)" calculated the net income Ratio, go back on belongings Ratio, go back On equity, earning per proportion and cash earnings Ratio.
3. Anshu Gupta (2015) in his research Article "economic overall performance evaluation of Telecommunication with precise connection with BSNL" concluded that the BSNL follows aggressive coverage of managing liquidity & company has sufficient liquidity assets to satisfy its brief time period liabilities. After overhauling the 5 years balance sheets of BSNL and all situations, the writer concluded that BSNL is coping with the capital hassle because of which economic role of BSNL are affected. Economic position of BSNL changed into amazing in 2004 comparative to offer 365 days. The profits of the business enterprise are lowering twelve months via way of means of twelve months due to maintaining excessive liquidity.
4. N. Swapna (2012) in her research Article "Telecommunication zone in India – An analysis" concluded that the telecom organization in India has witnessed an notable and manifold boom over the trendy years. Inside the US, customized telecom get proper of entry to has emerge as an important necessity of existence for a developing style of humans. The telecom location in India holds countless cap capability speaks me of destiny

boom. within the country, each Public further to personal agencies are vigorously improving their generation in a assignment to take the telecom enterprise with inside the America to a miles higher development.

5. Ms. Pritish & Dr. Taruna Saxena (2015) of their studies Article on —An analysis of the Indian Telecom enterprise concluded that the Indian Telecom industry contributes substantially to the overall socioeconomic improvement of India. it's far an essential tool for the boom of the US and the diverse telecom provider companies provide voice and information services to the clients at some stage in extraordinary areas of the USA inclusive of every metropolis and rural regions thereby facilitating the boom of this agency.

6. Anand Pawar & M. Pandya Nayak (2012) in their studies Article on- economic overall performance evaluation: a case have observe of BSNL studied the economic role of BSNL for nine years from 2002-03 to 2010-11 and concluded that the liquidity function changed into sturdy thereby reflecting the capability of the corporations to pay quick-term responsibilities on due dates. Long time solvency in case of BSNL is decrease which suggests that corporations relied more on out of doors charge range in terms of long time borrowings thereby supplying a decrease degree of protection to the creditors.

Statement Of Problem :-

1. More than 70% of patron diverted to other telecommunication organization in duration of pandemics.
2. There are 3 primary challenges of BSNL scale up are marketplace get right of entry to, consumer gaining, improve productiveness & be given new strategies.
3. Loss of accurate patron services and network.
4. Deterioration in chance management slandered in the regulated entities.
5. In consist policy of presidency giving rise to imbalance.

Objective Of The Study :-

1. The cause of this take a look at is basically to

understand affects of worldwide (political & low-budget, Pandemic) turbulence on BSNL.

2. To discover modern-day policies and techniques for innovative traits followed via manner of BSNL to hold commercial company all through international turbulence.
3. Enforce of techniques an awesome manner to help to get higher and overcome crunch of worldwide turbulence
4. To indicate opportunities in near future for the commercial business enterprise of BSNL.

Research Problem :-

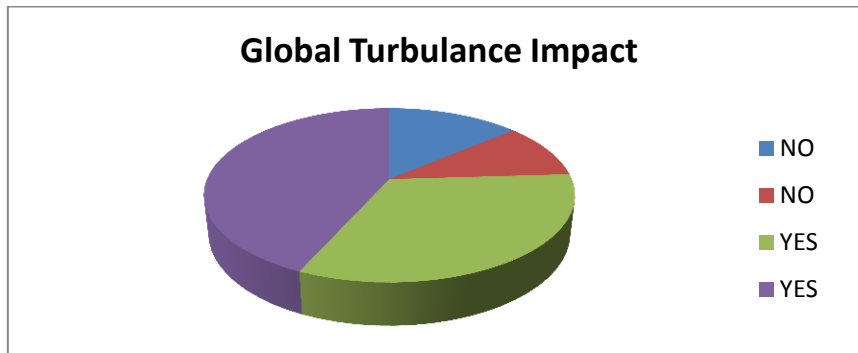
1. What are the fine approaches for effective and green policy with the aid of the government to BSNL in global turbulence?
2. What are the current strategies of advertising and marketing?
4. What trouble affecting on BSNL?
5. What are the strategies for tackles this pandemic scenario and how to overcome economically?

Significance of Study :- The following are the significance of the observe,

1. This look at analyses the level of impact of world turbulence in BSNL & their employees view in the direction of turbulence.
2. To examine innovative strategies adopted via BSNL all through worldwide turbulence.
3. Suggest protection measures for the BSNL to preserve their commercial enterprise all through international turbulence.

Research Methodology :- The look at is based on number one and secondary records related to the subject of study. Gift take a look at deals with the progressive techniques followed via BSNL at some stage in global turbulence. Questionnaires amassed from the respondents had been of first-rate supply of statistics. The present examine is primarily based on both number one data and secondary information. The prevailing observes adopts an analytical and descriptive studies layout. 15 questionnaires have been disbursed however 100 despondences (BSNL personnel) might be received filled and hence considered for the take a look at. In step with survey a number of question

and there diagram are show that how turbulence impacted on employees view in the direction of their low-budget failure.

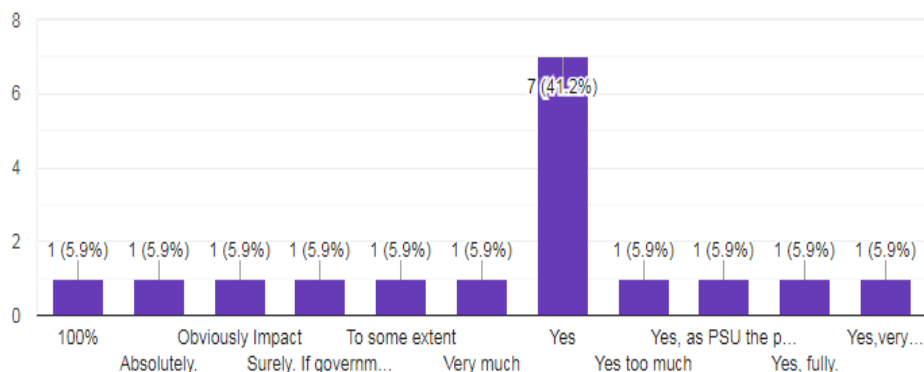


In keeping with respondent reaction of survey this pie chart represents the poor impact of world turbulence on BSNL.

Data Analysis and Interpretation :- BSNL isn't in a high-quality role. The kingdom-owned telecom operator has been struggling for the previous couple of years to gain traction with within the market, especially after the Jio insurrection in 2016. No matter struggling with its offerings, BSNL has been lately lengthy long gone to the personal sector way of presenting more blessings with its pay as you pass and postpaid plans to lure greater clients. But, the corporation hasn't been able to clear up its economic catastrophe and is now on the lookout for help from the government all over again to stay afloat. in line with a contemporary record from enterprise popular, BSNL is in a extreme economic disaster all another time and is looking for the authorities' help, which in flip has have become to the banks for loans. The authority is soliciting for a mortgage of Rs 2500 criers to hold the employer afloat for as a minimum the

subsequent six months. The negotiations are already underway and plans are being mentioned for favorable reimbursement alternatives. even though plans are underway for granting the loan quantity, it's miles said that the Rs 2,500 cr. mortgage receiver's be enough to keep the organization strolling for lengthy and it could need to do away with staff to ease the monetary strain.

Merger & Acquisitions •On 24 October 2019, the authorities of India has delivered revival package deal for BSNL and has given its nod for in-main merger (operational merger, i.e. handiest the operations of MTNL and BSNL can be merged and to be managed thru way of means of BSNL) for MTNL and BSNL •On 27 July 2022, the authorities of India introduced every other revival bundle deal for the country-owned BSNL, for presenting 4G and 5G services making the PSU greater viable and vibrant and turning it right into a profits making organization; underneath this insurance choice the government additionally merged BBNL with BSNL.



Above diagram show that how government regulations impacted on working of BSNL, in line with survey. Authority's policies trade as a consequence global modifications. Because of pandemic developing international locations like INDIA are paying steep financial cost for this worldwide financial crisis .They want to analyze how they're able to triumph over from this marvel and the manner they could stay on themselves on this turbulent agency environment. The monetary system of developing countries is lots much less functionally inexperienced than superior economies. Maximum of the growing nations are adopting reform utility for his or her financial gadget, it's far the right time to investigate that their monetary system is enough to live on or it require a few exchange in guidelines. Pandemic effects on Telecommunication organization in India.

1. Effect on manufacturing of hardware and unique structures consistent with critiques, handset and network gadget producers can be impacted due to global disruption in supply chains, a good way to result in improved expenses and shortage of availability. Beneath the MHA order dated may additionally 1, 2020, production of IT hardware has been accredited even in pink zones, but no such sports activities can be undertaken in regions unique as containment zones. In line with industry frame Indian mobile and Electronics association (ICEA), producers can also incur losses to the music of virtually INR 15,000 cror due to suspension of manufacturing. Marketplace analysts have recommended easing taxes and levies and enjoyable charges on monetary resource to ease the load on the producing region, so as to have a domino effect on the telecom industry.

2. Addition of recent subscribers given the motion guidelines sooner or later of this lockdown, there was a pointy dip with within the form of clients shopping new SIM cards (which include for migration to 4G networks). COAI has indicated that in a regular month, the not unusual internet addition is 3 million subscribers, but due to COVID-19, the range in March can be under 1 million. We

are probably to appearance impact on sales pleasant with in the first area of FY 2020-21. COAI has stated that it takes round 30-forty five days for emblem spanking new subscriptions to effect sales and consequently the effect of a dip in new subscriptions might be seen first-rate spherical April give up or early may. Additionally, the lockdown is likewise probably to postpone 5G spectrum auctions and its consequent rollout as community operators are currently targeted on meeting advanced call for without a dip in carrier first-class. due to rules on production and movement of products, this can moreover restrict the cap potential to roll out 5G enabled handsets.

3. Impact on tariffs even after the last round of tariff hikes overdue ultimate year, India continues to have the lowest tariff costs with within the global. The lower tariffs, as an end result of advanced competition due to new entrants with inside the marketplace, precipitated a state of affairs in which the sales of the incumbent BSNL were considered almost unsustainable for his or her stability sheets. reviews mean that a 2d round of tariff hikes were planned with in the April-June location of 2020, but, given (i) the effect of COVID-19 on spending cap ability (in particular of low income subscribers), (ii) the advantages required to 1be prolonged through manner of means of BSNL (as said above) and (iii) the dip in subscriptions, the deliberate tariff hikes can be no longer on time to the second 1/2 of 2020. TRAI had floated a consultation paper on the want to set floor charge (so that it will make sure reasonable cross again on capital) and the COAI had written to TRAI, inquiring for that an open residence be executed digitally to restore floor pricing. This can, whilst being with inside the authority of TRAI, be a departure from the existing regulatory forbearance maintained through manner of way of TRAI close to tariff fixation. The proposed discussions on putting in the ground tariff were deferred till the modern-day scenario eases.

4. Subscriber Retention that is most hard with respect to low ARPU (average revenue in line with user) subscribers. All through this lockdown duration, there are critiques that BSNL have

granted dispensations to their subscribers – like prolonged validity, greater talk time blessings, and so forth as attractions to keep provider.

5. TRAI, raising issues round charge discrimination, has, on April 7, 2020, written to BSNL, alleging that they were selectively growing validity of pay as you pass customers sooner or later of the lockdown. These initiatives can be toward decreasing drop-outs for low ARPU subscribers, who in any other case ought to know no longer always have be in a function to make properly timed recharges, each due to financial motives or get admission to on line recharging centers. This initiative moreover lets in toward ensuring connectivity of large loads and for tremendous information dissemination, it really is essential at this factor. That is steady with the illustration via manner of manner of the BSNL to TRAI, wherein they have got stated that if those blessings had been furnished to a extended pool. BSNL commenced out to undertake some new strategies to triumph over turbulence and financial crises to upward thrust up in to the competition.

The location of thrust of the BSNL revival focused on rural broadband bringing fiber to every village could have an extra benefit for virtual India. The persisted fulfillment of mass scale systems like Aadhar, UPI is predicated upon closely on get proper of access to internet and Broadband offerings available ubiquitously throughout India as a Public utility. A sturdy foundation for the numerous technology powered governance initiatives accelerating the transformation closer to a virtual India requires universalizing digital get right of entry to.

Its miles from those twin lenses of aatmanirbhar bharat and virtual India that we have to test the cause for infusing more than a lakh center of public price range into the nation owned telecom provider. The underlying strategic targets will handiest be observed out if the hi-tech surroundings in India is similarly advanced and nurtured with the useful resource of the usage of BSNL. This will require an entrepreneurial and innovation driven method to coping with the PSU telecom giant. Going past BSNL, the hello-tech investment philosophy of India will also must end

up snug with putting strategic bets and taking risks with improvements on the frontiers of technology. it would be pertinent to understand that from VLSI to the internet, maximum of today's ubiquitous generation were the made from strategic bets on early stage technology with the resource of the usage of government entities along with the DARPA with inside the America. The ultimate fulfillment of Aatmanirbhar Bharat in hi-tech will depend on similar risk taking and on an entrepreneurial approach to innovation that actively nurtures and grows the home hello-tech surroundings. NEW strategies followed by BSNL other modern-day collaborations with the aid of using BSNL: •BSNL and Yupp TV to launch a single subscription •BSNL and Ciena sign an MOU to prepare for 5G in India Now companions with BSNL to provide infinite movies and virtual originals •BSNL companions with Call2Action verbal exchange India to launch cellular advertising systems BSNL has many large opportunities in near future aside from cellular telephony •New brand got here up with their slogan for logo visibility, "Connecting India, quicker" •New promos on social media •New schemes had been adopted. Some of them are, •Machines for depositing cheques •smooth price offerings •All-time to be had issuer centers BSNL has to paintings greater on its promotional approach and develop as consistent with the inclinations to preserve with within the market.

Limitations :-

1. The sample size collected for the check could be very small and therefore it may now now not be taken into consideration suitable to be carried out to the complete population.
2. present examine use number one in addition to secondary records. Secondary statistics acquire from Google so can also be now no longer appropriate.
3. The time constrains is one of the quandary as researcher do now not get sufficient time to analyze at the topic.
4. Area for the statistics series was Kolhapur district simplest, so now no longer cowl the alternative motives of the India.

Conclusion :- BSNL revel in excessive turbulence business enterprise environment. Based totally at the survey to their employer unit chief, this is mainly due to competitive turbulence. There are some pointers proposed to telecommunication carriers to triumph over immoderate turbulence business enterprise surroundings,

(1) Set up cooperation with OTT carriers or different technological breakthrough to make new collaborative product innovation

(2) Decorate marketplace intelligence to discover more on market modifications and consumer's possibilities

(3) Launch of diverse new merchandise/offering intensively and speak it widely thru kind of media

(4) Strengthening cooperation with competition thru affiliation of operators and government/regulator.

(5) To cope with excessive technological turbulence employer environment, numerous hints are proposed to authorities/regulator

(6) To modify telecom regulation method with independent of generation and unbiased of company, to make it more relevant with enterprise need and sustainability of the BSNL.

(7) Provide smooth and robust pointers to avoid disturbance to the sustainability of BSNL.

(8) To inspire telecommunication companies to enhance cooperation amongst them and joint together to response to global OTT for preserving sustainability of the enterprise.

(9) To installation pointers as prison foundation for development of cooperation among telecommunication providers consisting of provider management, community sharing, radio network sharing, digital operator, and so on.

(10) Hold particular courting with purchaser as purchaser is the king of market so want to covert consumer with better conversation of body of people n particular unfastened friendly relationship too.

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Contribution of Pani Foundation in Agriculture Development in Maharashtra

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Introduction :- A people's movement has been started through the 'Pani foundation' for the creation of a drought free Maharashtra as well as for the development of rural areas. Pani Foundation is a not for profit organization. The Pani Foundation organized the Satyamev Jayate Water Cup every year since 2016 to 2019, and thousands of villages in Maharashtra have been involved in water management and watershed development. In 2020-21 Pani Foundation organized the Satyamev Jayate Samrudha Goan Competition. Besides implementing various water management schemes, villages have worked on factors like agriculture development, family income increase, soil and water conservation and have played an important role in the rural development of Maharashtra.

Objectives :-

- 1) To study the organization 'Pani Foundation'.
- 2) To study the work done by 'Pani Foundation in Maharashtra.
- 3) To study the change in the rural economy of Maharashtra due to the work done by 'Pani Foundation'.
- 4) To study the various competitions conducted in Maharashtra since 2016 by Pani Foundation.
- 5) To study the work done by Pani Foundation since 2016 in water management in Maharashtra.

Hypothesis :-

- 1) Pani Foundation has played an important role in the development of agriculture in Maharashtra.
- 2) Pani Foundation has helped drought-affected villages in Maharashtra to alleviate drought by providing training on water development.
- 3) Since 2016 Pani Foundation has played an important role in water management in the

state of Maharashtra.

Background: - Agriculture Sector :- About three fourth area of the Earth is covered by water i.e. about 71% area of the Earth is water and the remaining 29% is land of the first amount of water on Earth only 3% is available for human consumption while the remaining 97% is contained in the oceans.

India is known as an agrarian Nation. As the economy of India is based on the agriculture sector, in fact the agriculture sector is considered as the backbone of the Indian. Therefore, it is necessary to develop the agriculture sector for the economic development of the country if the agriculture sector is to be developed then a lot of efforts are needed for it. In a developing country like India the development of the agriculture sector cannot be achieved only by measures such as modern mechanism and improvement of land holding area groundwater management is also essential. one of the most important aspect of India's climate is its seasonal rainfall generally India receives 3 to 4 months of rain and the remaining 8 to 9 months are dry, especially during the summer months the water in the soil evaporates a lot and the groundwater gets depleted so it is necessary to implement water management and water conservation schemes on a large scale.

The Problem :-

Water Crisis in India :- Compared to many countries in the world, India appears to have sufficient water availability, but the amount of water in India varies from state to state. Compared to many countries in the world, India appears to have sufficient water availability, but the amount of water in India varies from state to state. Due to drought, farmers are starving in some parts of and many factories are also closing down, farmers are

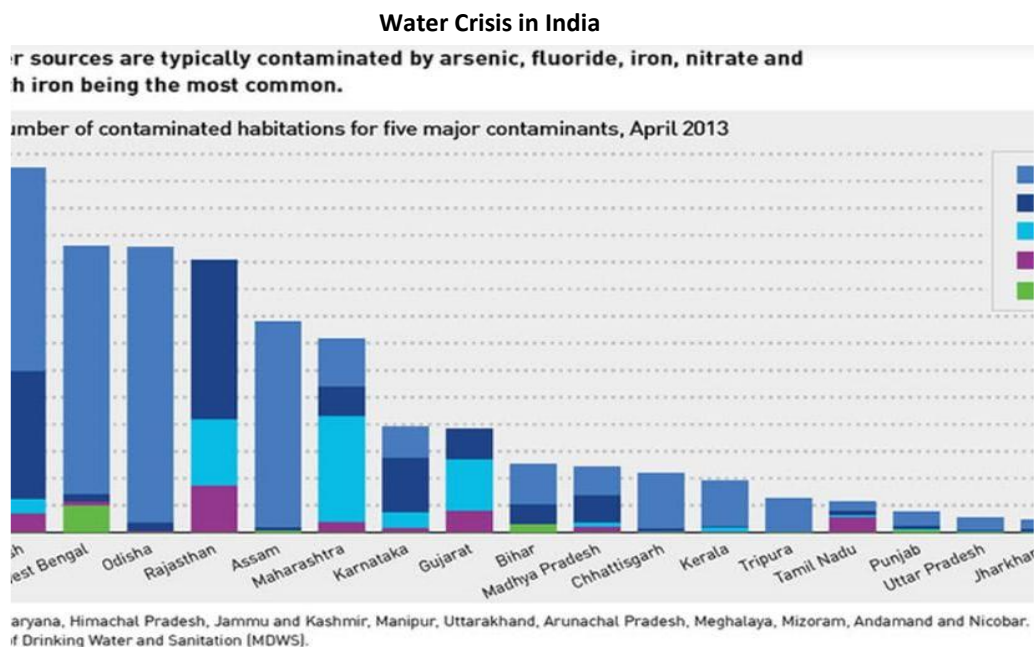
becoming miserable, overall the rural economy is deteriorating. This crisis is not natural but man-made. There are four main reasons behind the water crisis.

1. Injudicious use of Water :- Man has made injudicious use of the available water thus causing water scarcity e.g. Cultivation of water intensive crops like sugarcane in low rainfall regions

2. Pollution :- Humans have created a large amount of pollution by using the available natural resources. Humans have polluted the rivers, streams, lakes, so there has been a large amount of water pollution.

3. Excessive use of Ground Water :- Due to excessive extraction of groundwater by humans, the groundwater level has reached a catastrophic level. Due to overuse or wasteful use of groundwater without recharging it, the amount of water in the ground has decreased.

4. Climate Change :- When considering the climate of India, India has four months of rain and the rest of the time the climate is arid and dry. But India's climate is also undergoing major changes. The amount of rainfall and the duration of rainfall have varied greatly, due to which a large population of India faces drought conditions.



<https://wrytin.com/surbhishree/water-scarcity-in-india-jxfnbn11>

Solution to Water Crisis :- Due to this water crisis in the country, the rural economy has a big impact, so a proper solution plan is necessary for the water. An important solution in this is to intercept and store the rainwater runoff and thereby increase the ground water level. By this we can prevent water loss and increase water. After increasing the availability of water, it is important to draw water, then to control its demand and to use the water optimally is an important solution to the water crisis, in short, watershed development and water management is a sustainable and easy

solution.

Water is a major problem in India. Due to water scarcity, the lives of people in drought-stricken areas are literally ruined, Due to the abundance of water, many socio-economic benefits are created in people's lives.

Maharashtra State :- Maharashtra state is located in the heart of India or western part of India it has a 3,07,713 square kilometer geographical area Maharashtra is the third largest state in India. The state of Maharashtra was established on 1 May

1960. At the time of establishment, Maharashtra had 26 districts, 235 talukas and 4 administrative divisions. Presently, Maharashtra has 36 districts, 355 talukas, 535 cities, 43663 villages, 6 administrative divisions. Maharashtra state has 6 administrative divisions

- 1) Konkan (30746 sq.km)
- 2) Pune/W.Maharashtra (57268 sq.km)
- 3) Nashik/Khandesh (574426 sq.km)

- 4) Aurangabad/Marathwada (64822 sq.km)
- 5) Amravati/W.Vidarbha (46090 sq.km)
- 6) Nagpur/East Vidarbha (51336 sq. km)

Drought Prone Areas in Maharashtra :- Like other states in India, the state of Maharashtra also faces drought. Many villages in Maharashtra faces water crisis.

Year	No .of District Affected
1996	7 Districts
1997	17 Districts
2001	23 Districts
2002-03	33 Districts
2003-04	11 Districts
2009	11 Districts
2013	14 Districts

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“Pani Foundation” :- The pani foundation is an non-governmental organization which is founded by Indian actor Aamir Khan and his ex-wife, Kiran Rao which is established In 2016. Pani Foundation is a non-profit social organization. Pani Foundation has played an important role in water management, watershed development and rural development in the state of Maharashtra. Pani Foundation comprises the core team of the television program Satyamev Jayate. Satyajit Bhatkal the director of Satyamev Jayate is the CEO of Pani Foundation, while Reena Dutta is the director of Pani Foundation. Pani Foundation's Head of Training is Lancy Fernandez and Chief Mentor is Dr. Avinash Pol.

Work of “Pani Foundation” in Rural Development of Maharashtra :- To overcome the drought in the state of Maharashtra and develop agriculture, the central government has planned various measures and implemented various schemes But they are not sufficient for watershed development, resulting in agricultural sector development, unless the watershed science reaches the people, awareness of water management solutions among the masses and a mass movement is created, the drought situation cannot be overcome. Villages are to be permanently drought free, they have to

collectively decide how to use water, and for this not only government schemes are sufficient, but social institutions like the Pani Foundation are also needed.

Pani Foundation is working water problem only in Maharashtra state. Through various government schemes, the government has launched many ambitious initiatives and many NGOs, corporate companies have adopted villages and carried out water conservation work at the local level with the help of villagers. Many villages in Maharashtra state have increased water storage capacity in their respective villages.

“Satyamev Jayte Water Cup Competition”:- Thousands of villages participating in the Satyamev Jayate Water Cup competition 2016 to 2019 have created billions of liters of water storage capacity. Even though no financial assistance has been given by Pani Foundation, the villagers have created precious water for their village through their own efforts and labor.

“Satyamev Jayte Water Cup Competition 2016” :- A mass movement for a brighter future has emerged in various villages of Maharashtra from the Satyamev Jayate Water Cup competition. In the year 2016, thousands of villages in three

talukas of Maharashtra created 1368 crore liters of water storage capacity. This is 13 lakh 68 thousand tankers worth of water, worth Rs 272 crore.

“Satyamev Jayte Water Cup Competition 2017” :-

In 2017, people's movement has emerged in more than 1300 villages in 30 talukas. These villages have created a water storage capacity of 8261 crore liters. Which has a market value of 1,652 crores.

“Satyamev Jayte Water Cup Competition 2018” :-

In 2018, people's movement for water management emerged in more than four thousand villages of 75 talukas. A large amount of water conservation and watershed development work was done in those villages. Various villages in these 75 talukas have created a water storage capacity of 22,269 crore liters with a market value of Rs 4,454 crore.

“Satyamev Jayte Water Cup Competition 2019” :-

In 2019, more than 4800 villages in 76 talukas Of maharashtra had formed a mass movement for watershed development work. Various villages in these 76 talukas have created a water storage capacity of 23,194 crore liters with a market value of Rs 4,639 crore.

“Satyamev Jayte Samrudha Gaon Competition 2020-21” :-

From 2016 to 2019, the Pani Foundation has worked on water management, water conservation and watershed development and has increased the capacity of large-scale water storage in thousands of villages in Maharashtra. After the huge success of the Water Cup competition, in 2020-21, Pani Foundation organized the Satyamev Jayate Samruddh Goan Competition. In this Samruddh Goan competition, work was done on six major fronts which include water management, increase in family income, soil and water conservation, soil health, nutritious grass, protected pasture area, growth of trees and forests.

“Satyamev Jayte Farmer Cup Competition 2022” :-

After achieving great success in Satyamev Jayate Water Cup Competition and Satyamev Jayate

Samruddh Goan Competition, Pani Foundation organized Satyamev Jayate Farmer Cup Competition for the year 2022-23. In this Satyamev Jayate Farmer Cup competition, Pani Foundation has worked to prioritize group farming and improve the economic conditions of farmers. Pani Foundation works to financially empower farmers in Maharashtra and increase productivity in the agricultural sector through group farming.

Recommendations :-

1. Pani Foundation should work in other villages of Maharashtra too.
2. An organization like Pani Foundation should also work in places where many states of India are facing drought conditions.
3. The work of Pani Foundation should be further expanded in the state.
4. “satyamev Jayate Samruddh Goan Competition” and “Satyamev Jayate Farmer Cup Competition” should be expanded further as many farmers can benefit economically and socially from these competitions.

Conclusion :- Pani Foundation's contribution in the development of rural areas of Maharashtra is very important. Pani Foundation is an organization working on water management, water conservation and watershed development in Maharashtra along with other agricultural sector improvements like soil testing, composting, grass farming, group farming. Therefore, the Pani Foundation is playing an important role in the agricultural development of Maharashtra. Villages participating in various competitions conducted through Pani Foundation have achieved their own economic development.

“Pani Foundation” has played an important role in the development of agriculture in Maharashtra. Pani Foundation has made significant contributions in water management and watershed development in Maharashtra. Thousands of villages in Maharashtra have participated in “Satyamev Jayate Water cup Competition” “Satyamev Jayate Samruddh Goan Competition” and “Satyamev Jayate Farmer Cup Competition”

organized by "Pani Foundation". Villages participating in various competitions conducted through Pani Foundation have done a lot of watershed development work. Thousands of villages in Maharashtra have achieved their economic development through these competitions. A grassroots movement for water conservation has emerged in many of the villages that have participated in these competitions organized by the Pani Foundation.

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The Changing World of Financial Reporting Audit in an Online Era with Artificial Intelligence

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Abstract :- This study explains Financial Reporting Audit and its changing world due to Artificial Intelligence. This paper is a review of the latest changing technologies in the field of Audit. These are Computer-Assisted Audit Techniques (CAATs). It has become the need of this era. Big Fours are racing further with their enormous resources. Tremendous advantages flow with the use of these technologies in the performance of Audits. Because of the COVID-19 calamity, Auditing with Artificial Intelligence has become an indispensable part of the Audit process. Artificial Intelligence (AI) helped the Auditors in multi folds. It creates new opportunities for Auditors. Techniques of Data Analytics support the Auditors, and they can conduct Audits by assessing various other factors beyond the financial statements. When there are enormous benefits of Artificial Intelligence (AI), One has to pay the cost as well. Middle-level Audit Firms face many challenges in coping with the changing Audit scenarios. This paper will also help us understand those challenges. It also talks about the future of Financial Reporting Audits with everyday updation in the field of Artificial Intelligence (AI). Even though Artificial Intelligence (AI) is increasing to add some value to the Financial Reporting Audit, it still cannot replace Humans' role in Audits.

Keywords :- Financial Reporting Audit, Artificial Intelligence (AI), Changing world of Audit, Audit Technologies, Computer-Assisted Audit Techniques (CAATs)

Introduction :- Strong Tools of AI Technologies are emerging and challenging the usual traditional Audit today. It offers users enormous information

sources, thereby leaving behind the ways of traditional audits. These changes are vividly changing the essential process of Audit such as preparing, auditing, and using financial statements. Advanced Technologies offers the latest details as against the old data. In today's rapid-stridden world, past numbers are getting obsoleted. Financial Reporting Audit is growing at an unimaginable pace. Many medium and small-sized audit firms are facing issues of survival against the big shots because of the unaffordable cost of these changing technologies. To tackle this, various Accounting Bodies In India and Abroad are progressing towards recognizing Continuous Audits as against the old-style one-time Audit.

Objectives :-

1. To explain the Financial Reporting Audit and its changing world due to Artificial Intelligence.
2. To Comprehend the latest changing technologies applied by Big Fours in the field of Audit.
3. To understand the opportunities and challenges in the Financial Reporting Audit because of Changing demand for Continuous Audit with Artificial Intelligence.
4. To determine whether Human work is replaceable by the implementation of AI Techniques

Research Methodology :- This is a descriptive paper and the Secondary sources of data have been used to analyze the Financial Reporting Audit and its changing world due to Artificial Intelligence. The data has been taken from various publications, Working papers, Academic papers,

Big Fours Reports, Business newspapers reports, the Official website of Regulators, the Annual Reports of the Companies, and Audit Reports.

Findings And Discussion :-

Emergence Of Continuous Audit Vs Outdated Old-Style Audit :- The outdated old-style audit is based on mainly the books and the statements which have been prepared as hard copies. As divergence, when almost all the details of facts and figures are available on the system in the E-format then the Continuous Audit can be. The traditional audit is usually conducted once a year. Any Audit needs a commitment of time, Continuous Planning, and implementation with efficient and ongoing strategy. Reporting frequently is a task. Continuous Audit needs reporting multiple times in the given period which all the information will be kept in the electronic format. This helps the auditor to furnish reports multiple times during the given period.

Benefits Of Continuous Auditing With Ai :-

Continuous Audit adds value to the entire process as numbers taken for reporting are from the latest current information available because of IT tools. IT offers the judicious assurance of the reports which are based on the authenticated data. Any information or Reports would be available whenever required.

Considerations On Continuous Auditing :-

Continuous Audit needs high-level information in the advanced form. Which is very dearer.

It requires expert staff to handle demanding reporting. Which may further result into often misstatements, when untrained or old-system people are employed. It hampers the quality of reporting and it takes excessive time to complete the Audit in such a case.

Areas Where Ai Can Be Used :-

Contract Evaluation :- Terms of the Contracts and agreement details can be easily checked with minimal time with the help of AI and allied automatic techniques. It may compare the changes, additions, and deletions to the terms of the contract. Excessive information can also be

evaluated in no time with the aid of these advanced techniques. This will support highlighting the riskier factors with enormous ease. It will precisely provide the most vital aspects to focus on for assessment.

Entries' trailing :- New AI technologies will assess the entries of the regular operations of companies in their financial statements. It will aid in tracing the source to the end impact in the financial reporting. Mammoth value entries can be assessed with a little effort. This method benefits to detection of exceptions to the usual processes and thus will save a huge time and energy.

Assessing Inventory :- In the current online era, inventory and stocks are recorded using various ERP automated packages. Any ERP package provides a code to the respective item of inventory. AI techniques are also mainly based on codes. It becomes feasible for the auditor to check the entire inventory with the help of AI techniques. Other ways of checking inventories during the COVID-19 time and onwards is by taking advantage of innovative drone techniques. Checking the clicks and videos taken by these drones Auditor can not only save time but also it is feasible for him to execute multiple Inventory assessments at the same time, especially at the year-end.

Challenges For Ai :-

Data Privacy and Confidentiality :- Advancement comes with risks. To get the real benefit of AI or Data Analytics etc., it entails approaching the company's huge data information. AI & Data Analytics can provide tangible advantages only when the entire data would be assessed to evaluate the existing model and its allied processes. It is very much needed that sensitive and secretive records are also to be assessed to gauge the results. Companies may not be willing to make available this sensitive data information looking at many infamous cases. The auditor should ensure secrecy and confidentiality if they would be using sensitive data information for the evaluation of results.

The data is to be administered and protected appropriately. The auditor should make sure that there won't be any harm to the Company. Also, he has to assure that there won't be a misuse of the available data information.

Value Addition only through Valid Data :- There is a saying, 'Garbage in Garbage Out'. Data Analytics, Automation, and AI would be effective only when there is effective data input. Qualitative Data Input is critical for the accuracy of the information presented. E.g. When you make any variations in the data model it may result in wrong results and the overall system may flop. Also, it may have an adverse impact on the other areas of business in multiple folds.

- To assure Data Integrity of data auditor needs to check the following:
- Evaluate the data's trustworthiness for precision and comprehensiveness.
- Measure the data procurement approaches from various arrangements, especially from the structures of Clients.
- Assess the impact if there is a change in the clients' structures, controls, policies or procedures, etc. especially when there is a mid-year acquisition occurs.
- Entry to modify clients' systems should be allowed only to authorized personnel.

Explainability (The Black Box Issue) :- There is a dearth of confidence in AI because of some infamous cases. And this is the major hurdle in the process of acceptance of AI techniques in the process of audit. Coding is the main important process in the case of AI tools. The information input is to be converted into different coding languages and AI tools convert it into the required Output. Hence, the trail that how these tools are performing the conversion function is missing for the person who doesn't know the coding process and who doesn't have the access to the conversion process. If everything goes well then the results would be correct. Sometimes this may produce wrong or unexpected results. This issue is termed as, the 'Black Box issue'. This causes a further dearth of faith in these advanced AI tools.

When there is an issue management has to take extra caution to resolve the same. In the above problem also management has to devise suitable AI tools and controls which will assure that the input to the process is verified so that the AI process produces flawless results to avoid any misunderstanding and to grow the level of transparency.

AI is not the replacement for Humans' Judgement

:- AI cannot work on its own. Human interpretation and judgment are indispensable parts of this system. An auditor would be the person who will exercise his skepticism. As discussed earlier, AI is completely based and dependent on the quality of Input. There are many cases of Fraud despite there being AI in place. Machines cannot 'Judge' or 'Interpret' as a human does. Computers cannot decide what is honest or proper. These qualities have to be assessed only by human auditors.

TECHNIQUES DEVELOPED BY BIG FOUR FOR AI.

EY Report 20 Jul 2018 :- The term 'Artificial Intelligence (AI)' assumes machines that demonstrate a few human aptitudes. There are various interconnected IT technologies such as machine learning, data mining, and identification of images or speech for that matter. Another technique is a qualitative assessment. To feed the AI process, it is required to codify the transactions. With the help of a robust developed system, Auditors can detect fraud effectively. Artificial Intelligence (AI) is smart enough to evaluate unstructured data i.e. E-mails, Posts on Social Media, Conference call audio files, etc. AI offers auditors an improved and keener way to perform the audit and it also saves a lot of time. AI empowers Auditors to custom human judgment to evaluate wider and more profound information, documents, and evidence. It aids them to perform qualitative inquiries by asking enhanced queries with added discussions with those charged with the governance providing added value to the entire audit process.

Ey Canvas :- Ernst & Young has excellently converted the entire process of Audit into an automated AI platform based on Computers. The

initiative augments the perspective towards the audit function with more value-added benefits for the purpose of qualitative performance of Audit. Canvas by EY is one of its kind of initiative in the field of Audit and is revolutionary. It provides enormous benefits to the client even remotely.

Benefits of Canvas :- Everything has been brought into the same connected space. The entire team is connected through this system of advanced techniques with the same motto of performing quality audits. Quick resolving of queries saves a lot of time. All the worldwide preparation, scheduling, forecasting, and observing of Audits are feasible to happen at the center, to improve

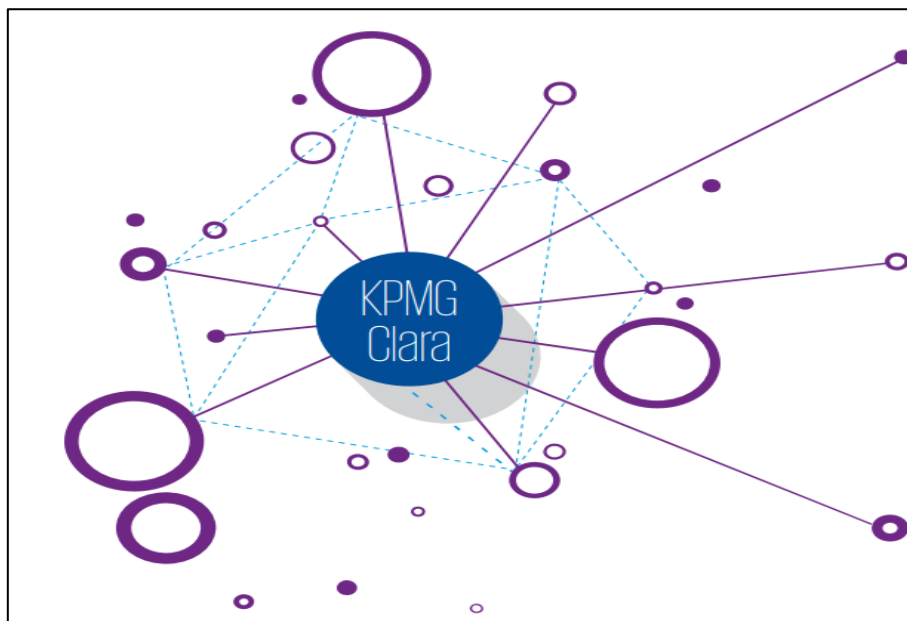
the entire process. Bringing all these functions under one roof provides faster solutions across the globe.

In the online era, it is feasible to observe remotely with the help of Canvas. Progress of the overall audit process and the Results generated all over can be discussed globally which provides additional aid in getting faster solutions to the problems as everything is connected and a query at one location can solve multiple similar queries at other locations. Efficient channelization through the portal online has been provided to transform all the benefits to the clients efficiently and effectively.

Big Fours Contribution :-

KPMG:

Figure 1: KPMG CLARA



Source: KPMG

CLARA by KPMG is an integrated AI model conceived to serve better to the client through clear and flawless communication among the members of the Audit Team. This protected unified system portal acts as a unique provider of information and the transition process also happens through the same. It also provides the effective monitoring of audit Projects. With the help of various AI techniques, it provides an effective base for the purpose of predictive forecasting by observing past data trends. This provides resourceful aid through perceptions of dangers and irregularities. This unified model springs faster and online real-time services to observe and control the entire audit process regularly. It aids the teams to figure out quick solutions for common queries with multiple minds working together. Provides better coverage, and innovative ideas with faster results. All this is to serve the best clients in the value for money manner.

Deloitte :-

Figure 2: DELOITTE GRAPA



Source: Deloitte

Figure 3: DELOITTE ARGUS



Source: Deloitte

Grapa :- From experience of previous year's audits and data trends Deloitte developed a one-of-its-kind system for improved planning of jeopardies. With this, they have brought into existence unbelievable collective talent under one model. Planning for jeopardies is tricky, but this platform provides various alternative solutions and plans for tackling the risks in a very effective manner. Enormous volumes can be tackled on this model in a short span of time with feasible planning solutions. Selecting one of the solutions is the wholesome responsibility of the Auditor despite this AI technique. This method is just the direction that may be feasible by taking into consideration similar data cases. The auditor is the person who has to draw this plan of action with the aid of this system. GRAPA is just the helping aid that cannot dispense with the need for Human interpretations with due care and diligence.

Argus :- Voluminous transactions Audit is a tedious job to perform in the Audit Process. To face this issue ARGUS has been developed by Deloitte to scan the irregularities and exceptions in the duly formed agreement with the aid of AI. This model requires basic field information and the input of standard agreement. The system will figure out the irregularities and exceptions from the given pool. Auditor has to evaluate the exception report generated by this system in the most qualitative assessment.

PwC AURA :- A to Z Audit process has been drawn with the help of this AI model. The aim is to

achieve quality output and flawless analysis in a cost-effective and fastest way. It all depends on the input data all starts with data. It provides a clever evaluation of risky areas with improved examination techniques. Unique solution provider to serve better.

COVID-19 CHALLENGES, FINANCIAL REPORTING AUDIT, AND AI

REMOTE AUDITING :-

The coronavirus pandemic necessitates advanced technological changes in the field of Audit :- Artificial Intelligence is the best solution in the COVID era offered by various Audit Firms especially the Big Four.

It helps the Audit team to feel united, inspired, and effectively driven in critical times when the teams are located at remote and various scattered locations.

Some interesting solutions and ways to work effectively are they can hold online meetings to keep the track of what's happening at multiple locations, knowledge, and notion sharing would be effective keys in this tiring time. The problems and issues faced by one team can be tackled unanimously on the online discussion platforms to get a faster and more effective solution. This will actually prove better and faster track monitoring device to perform and deliver multiple projects on time. Online meetings, Tea sessions, and family gatherings are the new era get-togethers that proved better for keeping the high spirits. The team members can relate and feel connected despite being located at separate locations. This

will boost the other teams to achieve their target earlier than scheduled. Team members stay motivated and inspired by checking that their fellow mates are also in the same boat of challenges. Connected Team work on this united platform provides better solutions in case of emergency. This revolution actually should be taken forward positively even in regular times.

The audit process qualitatively takes place as more number of documents can be assessed in a limited time with the help of scanners and AI techniques. Providing the secured, restricted access platform in the form of this AI portal was the need of the era in the days when there is a big question mark in terms of data sharing and its security. These OLRT platforms are really the revolution, especially in addition to AI techniques. An effective reporting process aids the quality of service to the client in the most cost-beneficial manner.

Issues and Limitations around Remote Auditing: :- Auditing at Remote locations but at the uniform platform is a task to keep track of the ongoing processes. There are some issues regarding the security of data information, documents, etc.

Tough to check the integrity of team members involved as people are not get to meet in person to gauge the attributes. Chances of fraud and misappropriations would be higher as people during contingency were under pressure mentally as well as financially.

In-person observations and inquiries would not be dispensed with the online processes always. Shaping and maintaining bonds with the other team members located remotely is a tough task. Defining Standard processes and following them is also difficult to monitor from the internal control perspective. There would be personal distractions in the path of the work process when people would work from home. Proper strategizing can overcome a few of these issues.

Company clients also could be under pressure for their company's condition of Going

concern because of the tight cash flow situations, this may hamper the ideal environment otherwise expected.

SMEs using AI for Auditing :- There are a plethora of Small, Medium Enterprises which are providing enormous opportunities in terms of human resources and also for the other stakeholders. For SMEs, it is very dearer to have an audit in detail and it is not at all beneficial in terms of overall audit cost. The audit process is very tedious for SMEs as most of them neither afford to have automated platforms of their own with the help of which Auditors may provide entire AI-based audits nor they can afford to have Auditors who may provide AI-based Audits by taking aid of their own models. Thus entire audit process becomes very slow and time taking. At SMEs, there would be a dearth of AI experts too which causes another hurdle in this process.

Relationship between Audit fees and AI techniques :- AI is a very expensive model to cater to small clients. It is obvious that the amount of Audit fees would go beyond the expected limits. Actually, there would be saving in terms of time and human resources for the Audit firms but the development of AI-based techniques would need more investment in terms of returns. These Audit firms would tend to recover this excessive investment from the clients.

Conclusion And The Road Ahead :- Computers though in addition to AI techniques definitely serve better to clients but they are not the alternatives to human Auditors. Of course, these surely can be the most vital aid in the process of advanced auditing. During the COVID era, these proved a revolution. In this AI and advanced technology process, the most important caution one can take would be for the privacy and safety of data information of the client without hampering their reputation. Auditor's judgment cannot be dispensed with any machine-generated analysis. AI-based technology would provide faster and unique solutions in the OLRT situation. These advancements require the next level of expertise which is an expensive affair. Detection of fraud,

performing 100% audit of transactions, and flawless results are some of the extraordinary characteristics of this AI model. The COVID era has provided new technical avenues which would be there for a long way and to cater even the newer paths with further advancements. As the sole purpose is to provide the best to the clients.

Auditing, AI, and Time to Come :- AI is actually looking forward to further advancements like the identification of attributes by marking facial expressions. Identifying speech irregularities for gauging risky areas, Extra time for responses while performing remote inquiries could be some of the newer techniques to be developed and are already in the process of getting developed. Career-wise this is an upcoming field for the auditors to gather some additional domain expertise for these AI-based advanced techniques.

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A Study on Micro, Small and Medium Enterprises Schemes in India

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Abstract :- The MSME sector is a key contributor to the national economy, the largest employer, and a hub for entrepreneurship and skill advancement.¹ The Indian government has launched numerous schemes in recognition of the needs in form of loans, training, exposure and marketing support of their product. The researcher makes an effort to draw attention on government initiatives created to support the MSME sector in India. Evaluation may be the last item on the agenda, but it is more important when considering the preparation of future plans. On the other hand, the study's conclusions will help MSMEs make use of various self-employment plans.

Keywords :- Entrepreneurs, Schemes, Government, Effectiveness.

Introduction :- Micro, small, and medium-sized businesses (MSMEs) are recognised on a global scale as the driving force behind economic expansion and social justice. The MSMEs constitute over 90% of total enterprises in most of the economies and are credited with generating the highest rates of employment growth i.e. 120 million person from 63.38 million units manufacturing more than 6000 products. MSMEs contribute around 6.11% of the manufacturing GDP and 24.63% of the GDP from service activities as well as 33.4% of India's manufacturing output and contribute around 49.4% for FY 2020-21 of the overall exports from India.²

- Classification of MSME:

If a manufacturing or service-oriented business satisfies the following composite threshold limit, it may apply to be classed as a micro, small, or

medium business. The Central Government hereby notifies the following classification of micro, small and medium enterprises, namely:

Table 1.1 Revised Classification applicable w.e.f. 1st July 2020

Composite Criteria: Investment in plant and equipment and annual turnover are combined criteria.

Classification	Micro	Small	Medium
Manufacturing and Services	Investment <1cr and turnover <5cr	Investment <10cr and turnover <50cr	Investment <50cr and turnover <250cr

Sources: <https://www.msme.gov.in/know-about-msme>³

The sector's employment potential at minimal capital cost is by far its greatest benefit. Government programmes give small and micro-scale businesses the ability to manage their operations by providing them with benefits and incentives for doing so.⁴ There are many governmental agencies who work at different level to make the scheme a successful one by making it reaches to every member. It should be mentioned that each programme is initially implemented for a set period of time, after which new programmes are created or existing programmes are examined for a new beginning, depending on the situation.⁵

The Ministry of MSME runs numerous schemes targeted at providing credit and financial assistances, skill development training, infrastructure development, marketing assistance,

¹<http://www.simadnh.org/news/booklet-on-gst-msme-sector-issued-by-ministry-of-finance-govt-of-india.html>

² <https://www.ibef.org/industry/msme>

³ <https://www.msme.gov.in/know-about-msme>

⁴ <https://www.rbi.org.in/Scripts/PublicationReportDetails>

⁵ <https://www.MSMEENGLISHANNUALREPORT2021-22.pdf>

technological and quality up-gradation and, Other Services for the MSMEs across the country².

Review of Literature :-

1. **Afshar Jahanshahi,A., et al. (2011)** highlighted the Governments frequently measures to support the expansion of regional MSMEs, which directly reduce poverty by raising income levels and generating employment. The aim is to examine the connection between government policy and the expansion of MSME-sized businesses. The operations of MSMEs have also evolved significantly along with the worldwide market. Today, firms need to be as dynamic and entrepreneurial as possible to thrive.
2. **Khanna, R. (2018)** discussed on the crucial role played by MSMEs in the Indian economy, which accounts for over 45% of the country's industrial output, 70% of its industrial employment, and almost 40% of its exports. The study provides an overview of MSMEs' existing situation and potential for the future. The study looked at several issues and obstacles that MSME faces. Government policy and programmes are outlined in detail for financial assistance, technical advancement, credit guarantee, capital subsidy, cluster, marketing, etc.
3. **Uma, M., & Umamaheswari, R. (2020)** to learn what entrepreneurs assume of MSME programmes, that are available to help in financing. Few entrepreneurs are still uninformed of the various schemes, according to 55 respondents, and the remaining entrepreneurs have a more favourable attitude of the available schemes and are aware of the benefits that are accessible to them. The ministry can setup programmes to reach rural areas by using effective advertising, improvement of programmes and subsidies.
4. **Shukla, S., & Prajapti, D. (2019)** determined that SIDBI is the key financial institution for supporting, funding, and developing MSMEs. Additionally, offers financial support to a number of organisations with SFCs, SIDCs,

SSIDCs, NBFCs, and IDBI working to advance and expand the MSME industry. SIDBI intend programmes, like Privileged Customer Program, Vendor Development Program, Equity Support, and MSME Receivable Finance Scheme.

5. **Ikhsan, M., & Wahyu,E. (2019)** This study's goal was to assess and contrast the CGS's effectiveness in Indonesia's urban and rural areas. Findings indicate that for MSMEs without a credit guarantee, this CGS performs suboptimal. Additionally, compared to MSMEs in metropolitan areas, MSMEs in rural areas have much less options to contact official institutions for finance.

Objective of the study :-

1. To study the schemes offered by Government to MSMEs.
2. To examine the performance of the Schemes offered by the government to MSMEs.

Research Methodology :-

- Research Design: This study will take a descriptive approach. The paper studies and reviews the status of MSME Schemes in India.

Data collection :-

- Sources of data: Secondary data is collected through reference books, Journal Articles, Annual Reports, Newspapers, e-sources, websites, etc.

Significance of the study :- MSME sector since the priority sector lending norms were implemented but still there is a significant gap that needs to be fulfilled when it comes to the fulfilment of the credit needs of the MSME sector. So it is necessary that this MSME enterprise is provided with government support in the form of loans, training, exposure, and support in the marketing of their products. The major problems faced by MSMEs include lack of information, financial illiteracy, entry-level policies, high cost, lack of infrastructure, lack of financial access, and technological barriers. The purpose of the study is to understand the benefits of existing Government selected schemes and their implications to enhance performance for Indian MSMEs.

Limitations of the study :-

- This study is concerned only with MSMEs perspectives towards Govt. Schemes.
- In this study, data relating to selected schemes like PMEGP, CGTMSE and ASPIRE are considered for a period of three years, i.e., from FY 2018-19 to 2021-22.
- This study has not classified MSME businesses either by type, number of assets, or employees.

Data Analysis and Interpretation :-

1. **Prime Minister’s Employment Generation Programme (PMEGP):-** The Khadi and Village Industries Commission (KVIC), acting as the nodal body at the federal level, began implementing the PMEGP plan in September

2008. The KVIC Directorates, State KVI Boards, DICs, and Banks are responsible for implementing the scheme at the State level. Through the establishment of new self-employment ventures, projects, and micro businesses, the programme seeks to create employment opportunities in both rural and urban areas of the nation. The maximum cost of the project or unit is Rs. 10 lakh for the business/service sector and Rs. 25 lakh for the manufacturing sector.⁶ The PMEGP Scheme was conducted by ARI Division with funding from the government of Rs. 2500 crore during FY 2021–22 and expenditures totalling Rs. 1785 crore up until December 31, 2021.

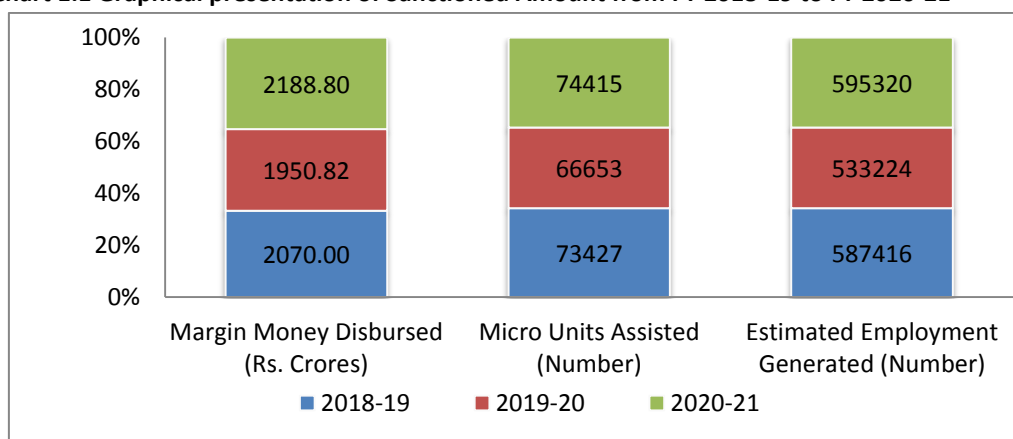
- Performance of PMEGP Scheme in India

Table 1.2 Total Sanctioned Amounts from FY2018-19 to FY2020-21

Year	Margin Money Disbursed (Rs. Crores)	Micro Units Assisted (Number)	Estimated Employment Generated (Number)
2018-19	2070.00	73,427	5,87,416
2019-20	1950.82	66,653	5,33,224
2020-21	2188.80	74,415	5,95,320

Source: <https://msme.gov.in/pmegp>

Chart 1.1 Graphical presentation of Sanctioned Amount from FY 2018-19 to FY 2020-21



Source: <https://msme.gov.in/pmegp>

From the table 1.1, it can be seen that FY 2020-21 shows increase 5.75% in Margin Money disbursed. We can observe rising trends in Micro units increased from 9.25% and similarly Employment also rises in FY 2020-21 from 9.23%. Hence, it shows the success of PMEGP scheme for growth of MSME sector.

⁶<https://www.newindianexpress.com/business/2022/jun/30>

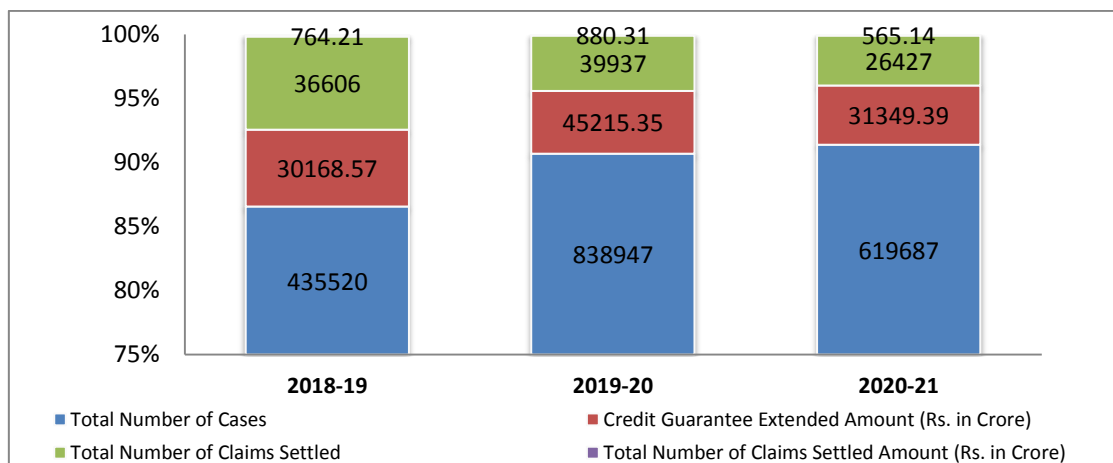
2. **Credit Guarantee Trust Fund for Micro and Small Enterprises (CGTMSE) :-** CGTMSE has been instrumental in providing guarantee cover to collateral and/or third party guarantee free credit facilities extended by eligible Member Lending Institution to MSMEs. Credit facility upto Rs. 200 lakhs for MSME, a total number 8.36 lakh guarantees working out Rs. 36,954 crore (CGSI + NBFC + CGSSD) have been accepted for use during FY 2020-21. ⁷

Table 1.3 MSMEs utilizing CGTMSE Scheme from FY 2018-19 to FY 2020-21

Year	Micro & Small Units Assisted (Number)	Credit Guarantee Extended Amount (Rs. in Crore)	Total Number of Claims Settled	Total Number of Claims Settled Amount (Rs. in Crore)
2018-19	435520	30168.57	36606	764.21
2019-20	838947	45215.35	39937	880.31
2020-21	619687	31349.39	26427	565.14

Sources: <https://dashboard.msme.gov.in/cgtmse.aspx>

**Chart 1.2 Graphical representations of MSMEs utilizing CGTMSE Scheme
FY 2018-19 to FY 2020-21**



Sources: <https://dashboard.msme.gov.in/cgtmse.aspx>

From the above chart, it can be seen that the CGTMSE sanctioned amount for MSME has been increasing year on year from FY 2018-19 to FY 2019-20, but decreasing in FY 2020-21 of 7.86%. It shows MSMEs utilize government scheme in a very optimistic way. Only in FY 2019-20 the Pandemic year shows decline and again in FY 2021-22 the rising trend has been observed.

3. **A Scheme for Promotion of Innovation, Rural Industries & Entrepreneurship (ASPIRE) :-** The ASPIRE-scheme was introduced on March 16, 2015, with the goals of creating a network of technological centres, establishing incubation centres to foster entrepreneurship, and promoting start-ups for innovation in the agriculture industry. ⁸ The scheme's main goal was to help MSMEs connect with markets and support their owners during times of need in order to spur economic development in rural areas. Livelihood Business Incubation (LBI), Technology Business Incubation (TBI), and Funds administered by SIDBI up to Rs. 200 crore make up the scheme's key components. ⁹

⁷ <https://www.slideshare.net/VibhutiPatel/prof-vibhuti-patel-on-gender-concerns-in-the-union-budget-201617-medc-dec2016>

⁸ <https://www.msmex.in/learn/aspire-scheme/>

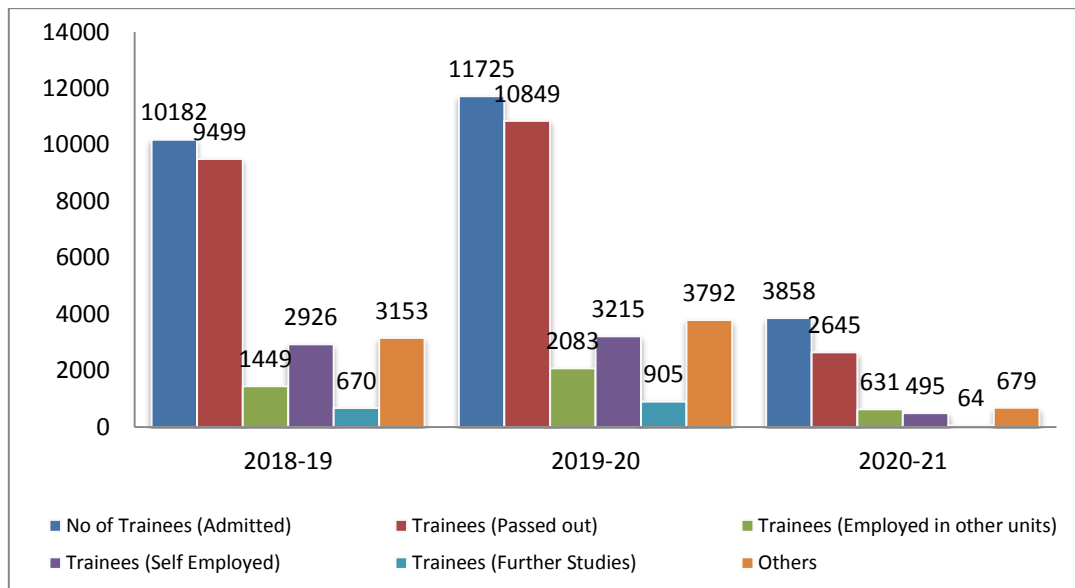
⁹ <https://aspire.msme.gov.in/ASPIRE/AFHome.aspx>

Table 1.3 Trainees Data from FY 2018-19 to FY 2020-21

Financial Year	No of Trainees (Admitted)	Trainees (Passed out)	Trainees (Employed in other units)	Trainees (Self Employed)	Trainees (Further Studies)	Others
2018-19	10182	9499	1449	2926	670	3153
2019-20	11725	10849	2083	3215	905	3792
2020-21	3858	2645	631	495	64	679

Sources: <https://dashboard.msme.gov.in/aspire.aspx>

Chart 1.3 Trainees Data from FY 2018-19 to FY 2020-21



Sources: <https://dashboard.msme.gov.in/aspire.aspx>

From the above chart 1.3, it has been seen that upto December 31, 2021, 102 LBIs and 22 TBIS had been approved, of which 54 LBIs and 9 TBIs were already in use. 50,572 people have completed LBI training, of which 14428 are self-employed and 8236 are employed by other entities. In FY 2021-22, it is suggested that 5 LBIs be granted. ¹⁰ Funds Allocated FY 2021-22 is Rs 15 crore. Expenditure Incurred FY 2021-22 (upto 31.12.21) Rs. 4.31 crore.

Finding of the study :-

1. MSME schemes that are available for financial assistance have seen a steady increase in the sanction of loans in India.

2. It can be seen that the number of loan sanctions and the sanctioned amount has been increasing year on year. The rise in the sanction of loans under PMEGP in FY 2021-22 to 9.25% in margin money.
3. Under the PMEGP scheme, Employment also rises in FY 2020-21 to 9.23%. Hence, it shows the success of the PMEGP Scheme.
4. CGTMSE sanctioned amount for MSME has been increasing year on year. We can observe a rise of 33.27% in FY 2019-20 & decline of 44.23% in FY 2020-21.
5. It shows banks are implementing government schemes in a very positive way.
6. The total amount of claims settled under CGTMSE in FY 2020-21 was 13.17% whereas in FY 2020-21 was 55.77%.
7. In the case of the Livelihood Business Incubation scheme under ASPIRE scheme 102

¹⁰ <https://msme.gov.in/sites/default/files/MSME-ANNUAL-REPORT-ENGLISH%202020-21.pdf>

Incubation centre has trained nearly 50,572 rural entrepreneurs.

8. While 14428 are self-employed and 8236 are employed by other entities. SIDBI provides grants to ASPIRE up to Rs. 200 crores, out of which Rs. 15 crores has been granted in FY 2020-21.
9. Government assistance is not reaching needy entrepreneurs. The Lengthy and complicated procedure causes delays in availing of scheme benefits.

Recommendation :- The study's outcome suggests that Government provides assistance for Credit & Finance, Skill development & training, Infrastructure support, Technological Upgrading, and Marketing support to MSMEs locally and globally. Still, the funds and support are not utilized to the full extent; therefore some of the recommendations are as follows:

1. The Government support sanctioned in the PMEGP category is less as compared to number of MSME Units and should be greater than before.
2. To develop an awareness of a scheme component that has been included for the digital empowerment of MSMEs in the country. There is also a need for several technology centers under the Ministry to assist with digital literacy through training and development.
3. To facilitate the Marketing Assistance Schemes like ASPIRE, NSIC, etc. the innovation and assist MSMEs to utilize existing Technology Centres (TCs) across the country to provide access to information on Indian and external markets.
4. State Consumer Disputes Redressal agencies should have some mechanism to address the grievances of MSMEs while availing schemes and policies.
5. Need to arrange more trade fairs, exhibitions, and technological training sector-wise for technological updates and awareness. This will ensure the maximum number of participants who are interested in technology transfer.
6. Government needs to increase the budget for some of the components of the Scheme would

enable facilitate the MSME to reap more benefits from the scheme.

7. Need for clarifications, norms, terms, and conditions for applying schemes should be clear and specific for start-ups and aspiring entrepreneurs.

Conclusion :- Even though the MSME sector in India acts as the instrument of inclusive growth empowering the most vulnerable and marginalized groups. MSME sectors make up more than 80% of all industrial firms and promote industrial development in the nation; they struggle to receive financial assistance and other forms of assistance from the government. Realizing the need of these sector government has drafted several schemes, CGTMSE, PMEGP, and ASPIRE are major initiatives of the Government of India providing credit to millions of unfunded micro units in the country. More funding must be allocated for MSME development in order to promote employment generation, particularly at the village level, and to speed up global GDP growth.

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Comparative Financial Analysis of Selected Public and Private Sector Banks

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Abstract :- Economic development and growth of country depends on the sound financial system. In India financial system consists a group of sub-systems of financial markets, institutions that help in the formation and distribution of capital. It has a significant part in the economic growth of country through banking industry. The banks are the prime participator of financial system. The banking sector is the spine of modern economy as plays it a major role in economic growth and development. Banks mobilizes deposits and allocation of credit to various other sectors of the economy.

Financial performance indicates the performance of the fiscal institution at the end of the year. This information give consideration to the bank's profitability and return on investment of the business. Evaluation of financial performance enables to measures the overall financial conditions of the financial institution for a given period. The motive of financial performance is for decision making through analysis and interpretation. Comparative financial Performance of the banks gives information regarding the development of the banking sector for a particular period. It also points out the favorable and unfavorable condition of the banking sector. The current study is mainly focused on "comparative performance analysis of selected public sector and private sector banks". It helps to take proper decision on Deposits, Interest rate, Bank rate, long-term loan and short-term loan CRR, SLR etc. This will also help the customers to take various decisions on financial aspects. Hence, the outcome of this research will help the governing bodies to chalk out various policies with respect to performance of public and private bank.

Introduction :- Banks performs major role in the Indian economy. The primary characteristic of the banks is accepting deposits from the public and furnishing credit score to folks that want a few

extra cash for short-time period and also for long-time period requirements. The Indian banking system has come from completely regulated environment to a deregulated market economy. There are many banks nowadays merging and going bankrupt. The financial performance of banks is the result of activities for managing banking transactions. It is reflected through profit and loss account and balance sheet. The extension of the banking sector in the nation has developed variety of techniques to measure the financial performance. The financial performance of a bank is crucial to the management of banks as well as for stakeholders. With this background, this study is an attempt to examine the performance of banks in both public and private sector banks by computing and comparing various ratios. This study covers the period of five years from 2017-18 to 2021-22. It delivers up-to-date financial analysis regarding the performance of these selected banks in India, helping in making decisions with regard to investment.

Key Words :- Indian banking sector, financial analysis, non-performing assets

Literature Review :-

1. Balaji and Kumar (2017) "Performance Evaluation of Selected Public & Private Sector Banks" stated there is a significant contrast in the capital adequacy of private and public sector banks. There is difference in the earning quality of the private and public sector banks. Private sector banks earn better return on assets comparing to public sector banks. Reduction in operating cost of the functions increase return on investments.

2. Priyanka Jha (2018) studied "Financial Performance (2011-2018) of Public Sector Banks (PNB) and Private Sector Banks (ICICI)". Study shows that customers have high trust in public

sector banks. They preferred PNB to get loans and advances as compare to ICICI bank. However, PNB bank has less operational efficiency compared to ICICI bank. In case of dividend pay-out ratio, debt-equity ratio and Interest expended to interest earned, ICICI bank has performed better compare to PNB bank.

3. Sujit K Chauhan (2019) concluded, a prominent change can be seen in the Indian Banking Sector because of better supervision, financial performance, and credit rating measures followed by RBI. According to CAMEL index, Indian Bank, Andhra Bank, SBI hold the top position in the public sector on the other hand Bandhan Bank, IndusInd Bank Ltd, Axis Bank Ltd hold the top position in the private sector.

4. Nishant Ghuge (2020) made “fundamental analysis of the selected public sector and private sector banks using key financial Indicators”. The study indicates that the profitability position of the public sector banks is low compared to the private sector banks. Short-term liquidity position of the public sector banks is good but the long-term solvency position is not so good compared to the private sector banks. Also the asset quality of private sector banks is very much superior to the public sector banks.

5.Sharma and Mathur (2020) discussed financial performance, NPAs and employee morale. Research discovered that private sector banks earn more profit assets compared to the public sector banks. The bank’s capital adequacy improved after the merger in public sector banks, however the

assets quality declined. Because of strong credit rating, NPAs of private sector banks found less. Loans are provided by banks without absolute rules enforced to get it withdrawn by the person. People are not able to repay the loan, leading to increasing NPAs.

Objectives And Need For The Study :- The objective of the study is to examine and compare the financial situation and performance of public sector banks and private sector banks in India. For the purpose of this study, SBI and Bank of Baroda from public sector and HDFC and ICICI bank from private sector are selected as they have the large market share. The research is completely based on Secondary Data obtained from published Annual Reports which covers a Five-year period (2017-18 to 2021-22).

1. To evaluate financial performance of the private and public sector banks.
2. To perform a comparative analysis of the performance of the private and public sector banks.
3. To analyze the profitability of selected Banks.
4. To examine the selected financial ratios of Banks.

Data Analysis, Findings & Interpretation :-

Casa Ratio

Meaning :- CASA is current and saving account. It is the ratio of deposits in current and saving accounts to total deposits. A higher CASA ratio means a lower cost of funds.

Formula :- $CASA\ Ratio\ (\%) = \frac{CASA\ Deposits}{Total\ Deposits}$

YEAR	SBI	BOB
2018	44.48	35.81
2019	45.16	35.03
2020	44.12	35.28
2021	45.39	40.15
2022	44.51	41.45

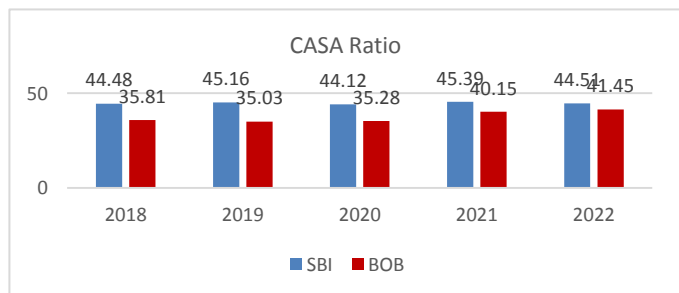
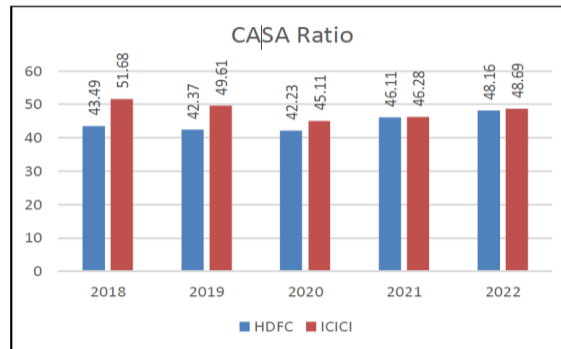


Table 1

Source - <https://www.moneycontrol.com>

YEAR	HDFC	ICICI
2018	43.49	51.68
2019	42.37	49.61
2020	42.23	45.11
2021	46.11	46.28
2022	48.16	48.69



Source - <https://www.moneycontrol.com>

CASA has the features of both current and savings account. These accounts are flexible regarding withdrawal and thus has a lower interest rate than a term deposit. They are low-cost ways for banks to raise funds than issuing term deposits which has higher interest rates for customers. Financial institutions encourage use of CASA as it helps generate a higher profit margin. CASA Ratio compares banks deposits in current and savings account with its total deposits. For public sector banks, SBI's CASA ratio is more than BOB. BOB's CASA ratio is lower than SBI but it is increasing over the years. In case of private sector banks, ICICI bank's CASA ratio is more than HDFC bank for initial three years. From year 2021, the ratio is nearly same for the both banks. Higher CASA ratio indicates better operational efficiency as these are the cheapest source of funds for banks. Hence for public sector SBI is better and for private both HDFC and ICICI banks are good.

Net Interest Margin :- Net interest margin (NIM) discloses the money that a bank is earning in interest on loans compared to the amount it is paying in interest on deposits. It is one indicator of a bank's profitability and growth. NIM will be higher for the bank with higher low-cost deposits (CASA) or high lending rates.

Formula :- $NIM = (\text{Interest Received} - \text{Interest Paid}) / \text{Average Assets}$

YEAR	SBI	BOB
2018	2.16	2.15
2019	2.4	2.36
2020	2.48	2.37
2021	2.44	2.49
2022	2.42	2.55

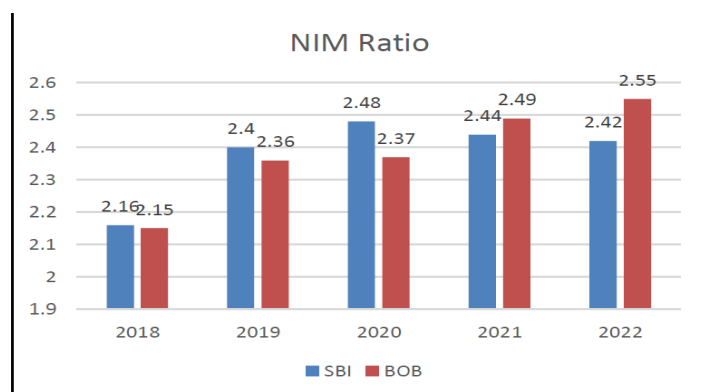


Table 3

Source - <https://www.moneycontrol.com>

YEAR	HDFC	ICICI
2018	3.76	2.61
2019	3.87	2.8
2020	3.67	3.02
2021	3.71	3.16
2022	3.48	3.36

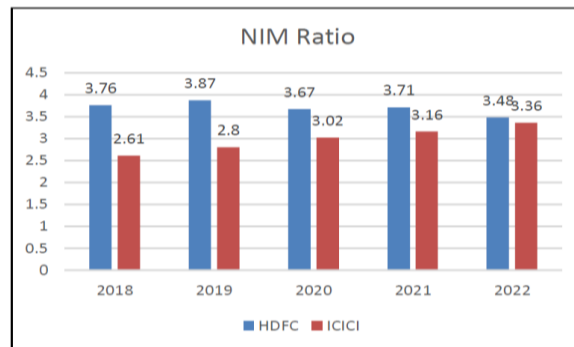


Table 4

Source - <https://www.moneycontrol.com>

Net interest margin compares the net interest income bank generates from credit products like mortgages and loans, with the outgoing interest it pays holders of certificates of deposit (CDs) and savings accounts. It helps potential investors decide whether or not to invest in a given financial services firm by providing insight to the profitability of their interest income versus their interest expenses. As seen in the graph, in public sector SBI has NIM ratio more than BOB for the years 2018-2020. It starts to fall since year 2021 and for BOB it is increasing in last two years. For private sector, HDFC bank's NIM ratio is more than ICICI banks. Even though NIM ratio for ICICI bank is lower it is showing steady increase over the years. Higher NIM ratio indicates the bank is operating efficiently. Hence BOB and HDFC are more profitable considering NIM ratio.

Non Performing Assets :- The interest bank gets on loans given is the primary source of income for them. Hence these loans are classified as assets. When borrowers cannot repay the amount, these assets are categorized as "Non-performing Assets".

Formula:

$$\text{Net NPA (\%)} = \text{Net NPA} / \text{Total Loans}$$

YEAR	SBI	BOB
2018	5.73	5.49
2019	3.01	3.33
2020	2.23	3.13
2021	1.5	3.09
2022	1.02	0.02

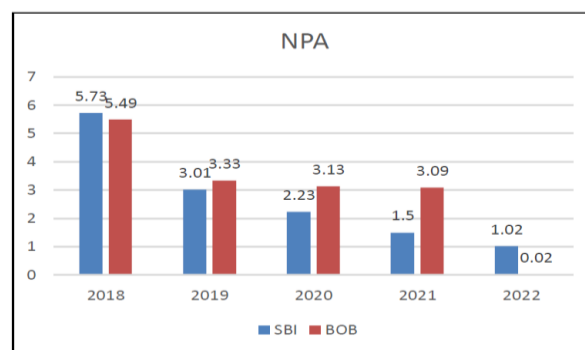


Table 5

Source - <https://www.moneycontrol.com>

YEAR	HDFC	ICICI
2018	0.4	4.77
2019	0.39	2.06
2020	0.36	2.41
2021	0.4	1.14
2022	0.32	0.76

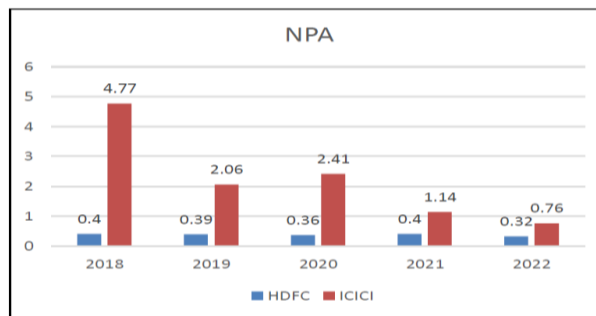


Table 6

Source - <https://www.moneycontrol.com>

Banks provide for some loans going bad. They do not generate any income for the bank. The bank gives borrower 90 days to repay the loan. If the borrower does not repay within that time frame, the assets (loans) are declared as non-performing. Banks do not want an NPA on their books, but sometimes it is inevitable when economic cycle worsens. Still anything less than 1% would be considered good management. As seen in the graph, in public sector SBI has high net NPA ratio. It falls down over the years. The net NPA ratio of BOB also falls down over the years and becomes 0.02 in 2022. As for private sector HDFC bank's net NPA ratio has remained below the 0.50 throughout the years. The ratio for ICICI bank was high in year 2018. It has fallen in years after that. High Net NPA ratio means banks have too many loans that have become non-functional and are not generating any interest income for the banks. Therefore lower NPA ratio is desirable. Hence BOB and HDFC are good banks in this regard.

Cost to income ratio :- The cost to income ratio is a key financial estimate. This is mostly used when valuing banks. It shows a bank's costs as a proportion of its income. The lower ratio indicates high efficiency.

Formula :- Cost to Income ratio (%) = Operating Cost / Operating Income

YEAR	SBI	BOB
2018	47.52	48.92
2019	44.68	43.41
2020	42.57	43.13
2021	43.34	48.69
2022	41.00	45.26

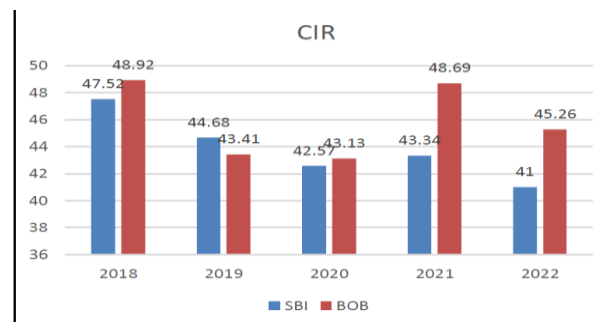


Table 7

YEAR	HDFC	ICICI
2018	39.62	46.51
2019	38.41	48.98
2020	38.52	45.79
2021	40.37	42.57
2022	41.05	40.65

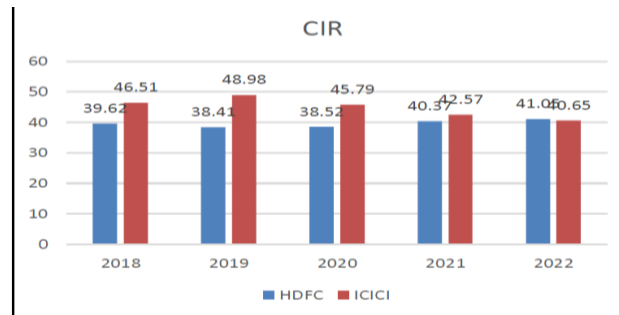


Table 8

Source - <https://www.moneycontrol.com>

The ratio gives investors a clear picture of how efficiently the bank is being run. It shows how much input (cost) the bank needs to generate one rupee of output (profit). The lower the ratio, the more productive, profitable and competitive the bank will be. As seen in the graph, for public sector the cost to income ratio of SBI has decreased over the years. It was very high in the year 2018. While the ratio of BOB has fluctuated over the years. In the year 2022 it is more than ratio of SBI. In private sector, ratio of HDFC bank is showing increasing trend and ratio of ICICI bank is showing decreasing trend. Hence it is concluded that SBI and ICICI banks are more efficient.

Credit deposit ratio :- Credit-deposit ratio indicates of how much a bank lends out of the deposits it has. RBI has not stipulated a minimum or maximum level for the ratio. But a very low ratio shows banks are not making full use of their resources.

Formula:

CD Ratio (%) = Total Loans / Total Deposits

YEAR	SBI	BOB
2018	72.47	67.95
2019	73.94	72.87
2020	74.04	73.13
2021	69.75	73
2022	67.86	73.7

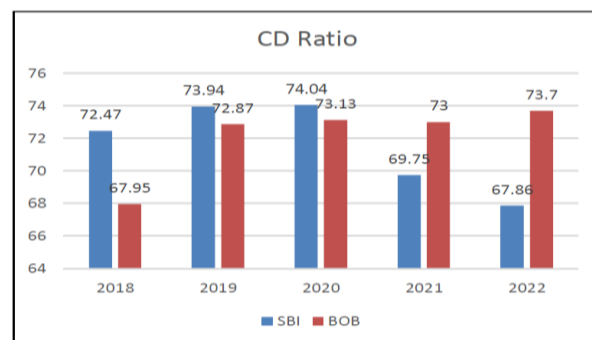


Table 9

YEAR	HDFC	ICICI
2018	84.68	92.92
2019	86.32	90.54
2020	87.56	86.52
2021	85.66	80.95
2022	86.43	79.75

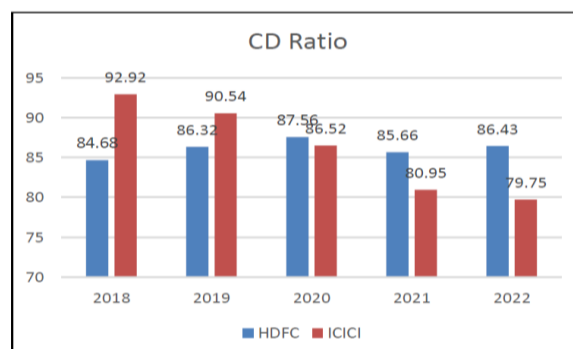


Table 10

Source -

<https://www.moneycontrol.com>

CD ratio shows money raised by banks in deposits and deployed as loans. A low CD ratio suggests relatively poor credit growth rate compared to deposit growth. A high CD ratio would mean soaring demand for credit in situation of relatively slower deposit growth. The ratio of BOB has increased throughout the years. Whereas for SBI it was high in initial three years and has fallen down in past two years. For private sector banks, ICICI bank's CD ratio has majorly dropped over the years. On the other hand for HDFC bank it has altered but remained higher than ICICI bank's ratio in past two years. Hence BOB and HDFC banks has good CD ratio.

Return on equity: ROE on equity is a financial ratio that shows how well a company is managing the capital that shareholders have invested in it. It compares the financial performance of the companies within the same industry.

Formula:

$$ROE = \text{PAT} / \text{Equity}$$

YEAR	SBI	BOB
2018	-3.37	-5.6
2019	0.39	0.94
2020	6.95	0.76
2021	8.86	1.07
2022	12.33	8.46

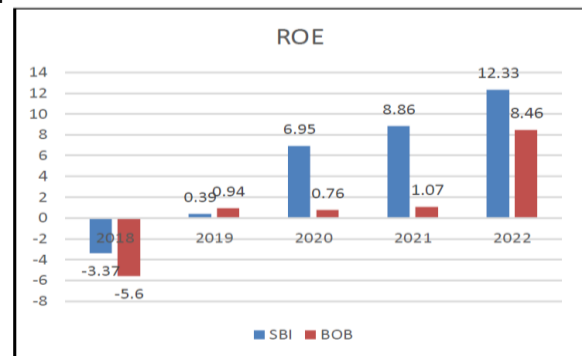


Table 11

Source

<https://www.moneycontrol.com>

YEAR	HDFC	ICICI
2018	16.45	6.63
2019	14.12	3.19
2020	15.35	6.99
2021	15.27	11.21
2022	15.39	13.94

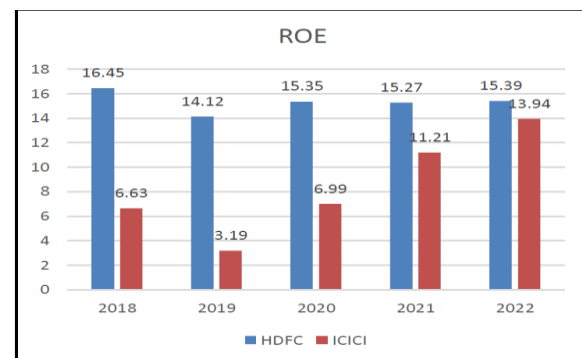


Table 12

Source - <https://www.moneycontrol.com>

ROE shows the ability of management to generate income from the equity available to it. It measures annual return of the company. High ROE means bank is using its equity financing efficiently to convert into profits. Above graph shows that in public sector ROE of both banks is in negative for the year 2018. Over the next years SBI's ROE has increased steadily. For BOB, there is no significant increase in ROE until year 2022. In private sector, HDFC bank has more ROE ratio. ICICI bank's ROE

fell in year 2019 and since then it has increased continuously.

Findings :- Higher CASA ratio shows the availability of the less costly funds. SBI and ICICI banks have favorable ratio. Hence, they are able to raise funds at lower cost. BOB and HDFC bank have higher net interest margin ratio. Meaning these two banks are more efficient in earning interest on loans given. The bad loans within 3 per cent is

considered to be manageable by the banks. BOB and HDFC bank have managed to keep their NPA as low as possible. The banks are doing thorough investigation before extending the loans. This has reduced the risk of NPAs. Low cost to income ratio suggests that the banks are operating efficiently. They are able to reduce the cost incurred to generate an income.

SBI is relatively poor in credit creation compared to BOB. Whereas demand for credit from HDFC bank is more than ICICI bank. Even though ROE of SBI is more than BOB, it is not satisfactory. ROE of HDFC bank can be considered good.

Conclusion :- In public sector, SBI is more profitable than BOB. The bank is better in terms of CASA, CIR. BOB has been able to keep NPA as low as possible. HDFC bank is leading in private sector. Private sector banks are in quite comfortable position in maintaining profitability in business compared to public sector banks. Overall performance of private sector is much better in generating profit against assets invested by banks as compared to selected public sector banks. Earnings per share for private sector banks is more as compared to public sector banks with less fluctuation in trend during the period of the study. Selected banks of public sector are lending more to corporate sector because of lower operating cost while private sector banks focused on retail lending. So public sector banks working more efficiently compared to private sector. The performance of private sector banks increasing year after year by utilizing resources efficiently. The private sector is more stable in terms of the profitability and return on equity.

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A Study on the Impact of GST on Pharmaceutical Companies

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Abstract :- Goods and Services Tax was introduced in India on 1st July 2017. The implementation of the Goods and Services Tax was the biggest tax reform in India's taxation system which subsumed 17 different indirect taxes. The implementation was not immediately compulsory in Indian industries but gradually every Industry was obliged to adopt GST. As each coin has two sides GST implementation had positive as well as negative impacts on each industry of India. In this research paper, the impact of Goods and Services Tax on Pharmaceutical companies in the Mumbai region is analyzed. To analyze the impact the technique of Ratio Analysis is adopted. Net Profit Margin Ratio, Return on Capital, Return on Equity, and Earning Per Share is analyzed with the help of statistical techniques that are Mean and Standard deviation. Five Pharmaceutical companies listed on National Stock Exchange are selected for the study.

Keywords :- GST, Profitability, Pharmaceutical Companies.

Introduction :- Goods and Services Tax has brought the largest structural changes to the Indian Economy. India has a federal structure where the Central Government and State Government have the right to impose taxes on the public. India has three-tier federal structures in the country which include Union or Central Government, the State Governments, and Local Bodies. These authorities impose taxes on the public. It is said that the first planned tax system was introduced in British rule.

There were numerous Indirect taxes in the Indian Taxation System before the implementation of the Goods and Services Tax. Some taxes were levied by the Central Government and some by the State

Government. France was the first country who adopted the Goods and Services Tax. This implementation was to reduce tax evasion. Since then, more than 160 countries have adopted GST. There are two GST models one is the Single Model and the other is Dual GST Model. India has adopted dual model of GST.

The pharmaceutical industry of the country was recognised as the "sunrise sector" for India's economy in the recent Union Budget of 2022. It is anticipated that this industry will grow by a factor of three over the course of the next decade. According to the Economic Survey of 2021-2022, the market size of the pharmaceutical industry in India is anticipated to reach \$65 billion by the year 2024. The dominance of domestic manufacturers in providing generic formulation to a variety of markets across the globe is one factor that can be credited with the enormous growth experienced by the industry.¹⁴

Review of Literature :-

1. Chahal (2017), The current research paper focuses on the analysis of Liquidity, Solvency Position, Profitability, and Returns of two pharmaceutical companies with the help of Ratio Analysis. It also focuses on the performance of both companies. The study is based on secondary data which is collected from the Annual Reports of both companies. From the study, the researcher found that the selected companies' performances vary from each other. One company's liquidity position is strong whereas others are weak. Ratio analysis is also performed by the researcher which shows variations in results.

¹⁴<https://timesofindia.indiatimes.com/blogs/voice/s/indian-pharmaceutical-industry-pillar-of-indias-growth/>

2. Kumar (2018), In this research study, the researcher has adopted a fundamental analysis of the top 10 pharmaceutical companies with the objective to analyze the performance with the help of Ratio analysis. With the help of various ratios, the researcher has shown the performance of selected companies. The researcher has compared the actual ratios with standard and provided the conclusion.

3. Dr. Ashok Kumar Panigrahi (2018), In this research article, researchers have tried to show the Liquidity and Profitability Trade-off of selected Indian Pharmaceutical Companies. This study was conducted to find the relation between liquidity and profitability and working capital management. The researchers have stated after detailed analysis that highly liquid companies earn profit. The focus is on the liquidity of companies and researchers are of the opinion that all companies do not suffer losses due to high profitability or liquidity.

4. Deswal (2019), This research paper is set with the objective of understanding concept of GST and how GST is beneficial after implementation. The study is based on secondary sources of data. The researcher has presented basic information like what is GST, what are the rates applicable under GST, GST rates of other countries and how GST is advantageous. In the end the researcher has concluded that the GST will be advantageous for the economy in the long run.

5. Bhattarai (2019), In this research paper, the researcher has analysed and presented level of efficiency in resource allocation, level of growth

and income redistribution after the introduction of GST. The study is based on secondary data. The researcher has used CEG model to analyse the data. The researcher has compared and presented data in graphical form and discussed the growth and decline of various factors of Indian economy. After the detailed analysis the researcher concluded saying in the prospects of growth, investments, formation of capital, employments, the GST introduction is positive. According to the researcher, income distribution has become equal after the introduction of GST. GST has also eliminated the effect of cascading and problem of red tape from the tax administration.

Objectives of the study :-

1. To study the impact of GST on selected Pharmaceutical Companies Listed on the National Stock Exchange.
2. To examine the Profitability of selected Pharmaceutical Companies Listed on the National Stock Exchange.

Research Methodology :- This research paper is based on secondary data. The data is collected from money control and other websites. Data also collected from reference books, magazines, newspapers, research articles, periodicals & e-sources.

Research Design:- For this study, five pharmaceutical companies that are listed on National Stock Exchange have been selected. The period for the study is from 2017-18 to 2021-22.

Analysis and Interpretation of Data :-

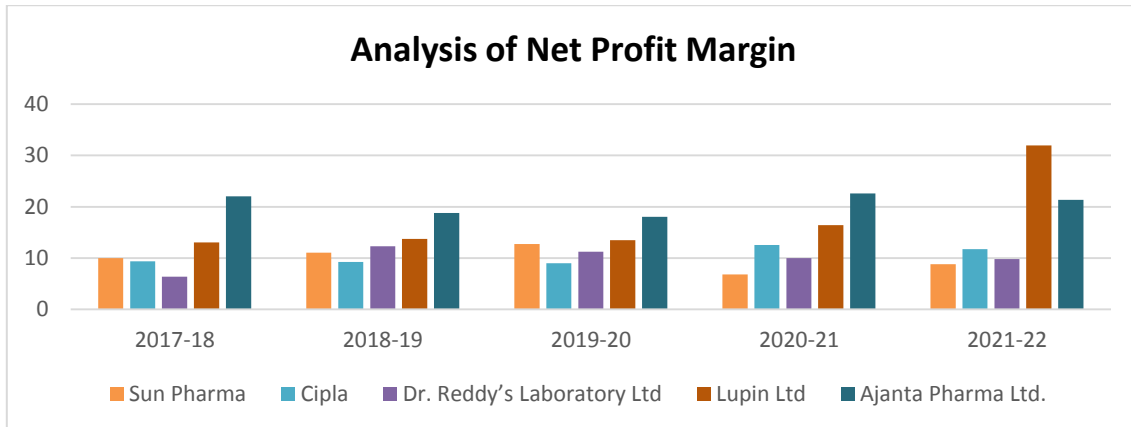
Table 1 - Analysis of Net Profit Margin

Financial Year	Sun Pharma	Cipla	Dr. Reddy's Laboratory Ltd	Lupin Ltd	Ajanta Pharma Ltd.
2017-18	9.97	9.36	6.38	13.08	22.04
2018-19	11.04	9.22	12.33	13.73	18.82
2019-20	12.75	9.02	11.24	13.48	18.07

2020-21	6.82	12.53	9.99	16.45	22.62
2021-22	8.81	11.76	9.80	31.94	21.33
Mean	9.88	10.38	9.95	17.74	20.58
Std. Deviation	3.32	3.04	3.35	3.71	4.34

Source-<https://www.moneycontrol.com/>

Chart-1- Graphical Presentation of Analysis of Net Profit Margin



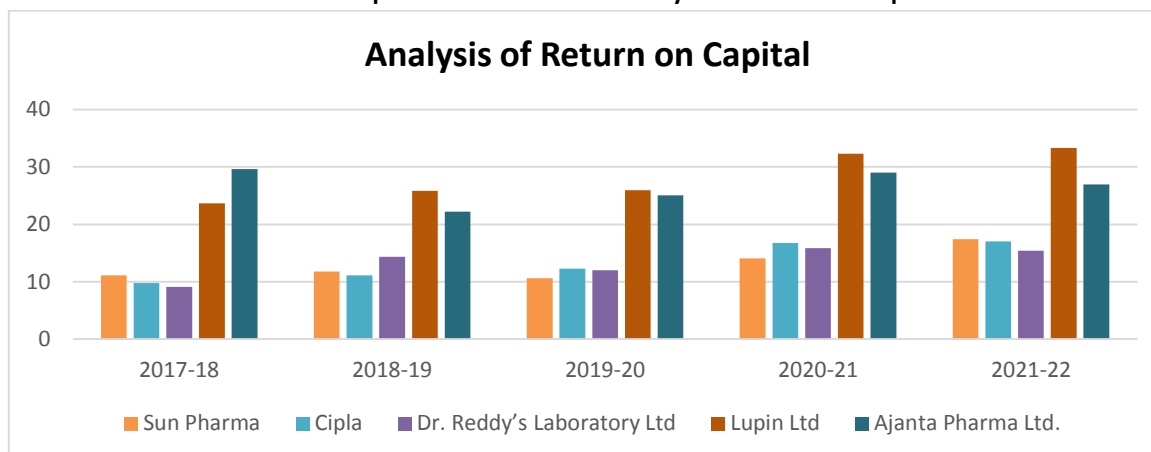
Source :- Created by the Researcher with the help of secondary data on moneycontrol.com

Table-1 and Chart-1 represents the Mean and Standard Deviation of the Net Profit of Five Companies. The mean of Ajanta Pharma Ltd. is higher as compared to other companies. The mean of Sun Pharma is lower which reflects poor performance compared to other companies. Lower the standard deviation better the position. The standard Deviation of Cipla is lower compared to other companies. Ajanta Pharma has high standard deviation which shows less stability of the company.

Financial Year	Sun Pharma	Cipla	Dr. Reddy's Laboratory Ltd	Lupin Ltd	Ajanta Pharma Ltd.
2017-18	11.13	9.78	9.13	23.69	29.62
2018-19	11.78	11.13	14.37	25.86	22.23
2019-20	10.60	12.32	12.04	25.95	25.06
2020-21	14.06	16.78	15.84	32.29	29.02
2021-22	17.44	17.04	15.44	33.32	26.98
Mean	13.00	13.41	13.36	28.22	26.58
Std. Deviation	3.43	3.51	3.79	5.09	4.71

Source- <https://www.moneycontrol.com/>

Chart-2- Graphical Presentation of Analysis of Return on Capital



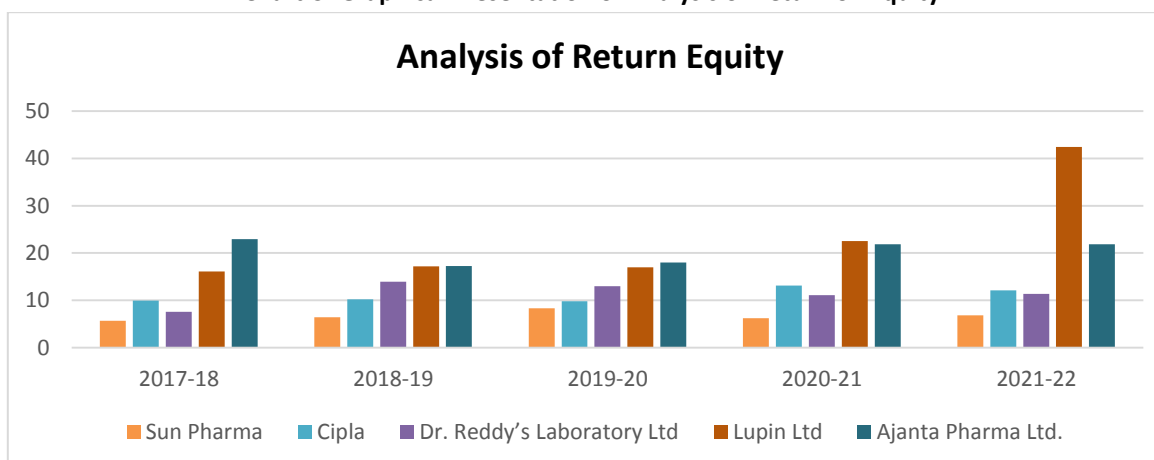
Source :- Created by the Researcher with the help of secondary data on moneycontrol.com

Table 2 and Chart 2 represents the analysis of the Mean and Standard Deviation of the Return of Capital Employed of five companies. The mean of Lupin Ltd. is better and Sun Pharma is lower compared to other companies. The standard deviation of the Return on Capital of Sun Pharma Ltd. is lower which shows better stability of Sun Pharma whereas Lupin Ltd has the highest standard deviation which shows less stability of Lupin Ltd.

Financial Year	Sun Pharma	Cipla	Dr. Reddy's Laboratory Ltd	Lupin Ltd	Ajanta Pharma Ltd.
2017-18	5.67	9.91	7.53	16.08	22.95
2018-19	6.43	10.17	13.90	17.15	17.23
2019-20	8.31	9.81	12.98	16.95	17.99
2020-21	6.24	13.12	11.06	22.53	21.82
2021-22	6.81	12.07	11.35	42.43	21.83
Mean	6.69	11.02	11.36	23.03	20.36
Std. Deviation	2.88	3.13	3.73	4.18	4.15

Source- <https://www.moneycontrol.com/>

Chart-3- Graphical Presentation of Analysis of Return on Equity



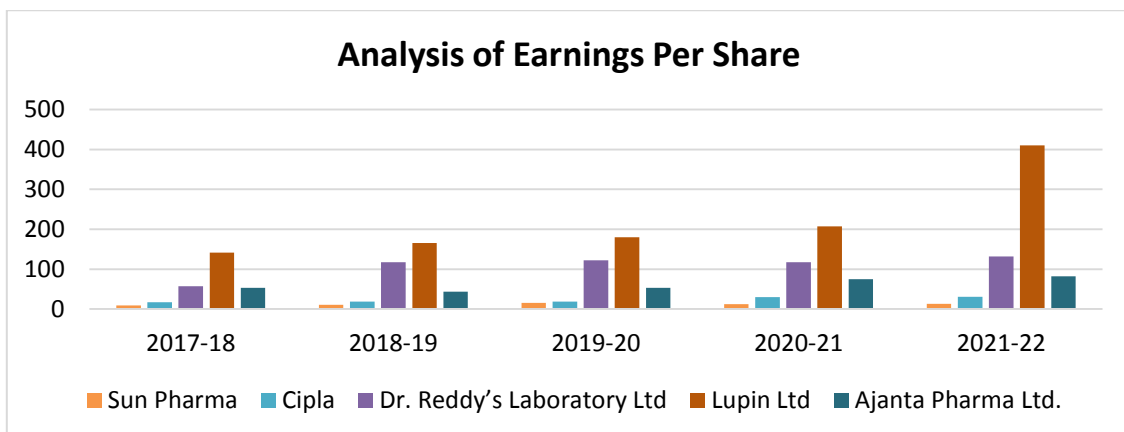
Source- Created by the Researcher with the help of secondary data on moneycontrol.com

Table 3 and Chart 3 represents the Mean and Standard Deviation of the Return on Equity of Five Companies. The mean of Lupin Ltd. is higher as compared to other companies. The mean of Sun Pharma is lower which reflects poor performance compared to other companies. The Standard Deviation of Sun Pharma is lower compared to other companies. Lupin Ltd. has high standard deviation which shows less stability of the company.

Financial Year	Sun Pharma	Cipla	Dr. Reddy's Laboratory Ltd	Lupin Ltd	Ajanta Pharma Ltd.
2017-18	9.00	17.53	57.08	141.74	53.26
2018-19	11.10	18.97	117.53	165.48	43.97
2019-20	15.70	19.19	122.22	179.85	53.60
2020-21	12.10	29.82	117.67	207.38	75.09
2021-22	13.60	31.20	131.57	410.06	82.45
Mean	12.3	23.34	109.21	220.90	61.67
Std. Deviation	3.96	4.19	11.06	12.86	6.63

Source- <https://www.moneycontrol.com/>

Chart 4 - Graphical Presentation of Analysis of Earnings Per Share



Source :- Created by the Researcher with the help of secondary data on moneycontrol.com

Table 4 and Chart 4 represents the analysis of the Mean and Standard Deviation of the Earning Per Share of five companies. The mean of Lupin Ltd. is better and Sun Pharma is lower compared to other companies. The standard deviation of the Earnings Per Share of Sun Pharma Ltd. is lower which shows better stability of Sun Pharma whereas Lupin Ltd has the highest standard deviation which shows less stability of Lupin Ltd.

Conclusion of the Study :- The Goods and services Tax has either positive or negative impact on every industry. In this research study the impact of GST on five Pharmaceutical Companies located in

Mumbai is studied. The Mean and Standard Deviation of Net Profit Margin, Return on Capital, Return on Equity and Earnings Per Share is analysed. Period considered for the study is taken from 2017-18 to 2021-22. GST was introduced in India in the year 2017. To study GST impact data collected from the year 2017. After the analysis, it is clear that the GST has either positively or negatively impacted on performance of selected companies. The Net Profit Margin of all the companies have improved in all the years except 2020-21 as in this period Indian Economy is negatively influenced by COVID-19. Lupin Ltd., Dr. Reddy's Lab., and Ajanta Pharma has better performance compared to Sun Pharma and Cipla.

In the case of Standard Deviation, Sun Pharma has better performance as compared to other companies which show Sun Pharma has better stability.

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COVID-19: An Opportunity for Indian Higher Education to Redesign itself

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Abstract :- COVID-19 pandemic has affected all of us and had a major impact all around the world. It has affected not only individual but also society at large. Health, economic, cultural and social crises evolved quickly over the entire world. This pandemic had immediate effect on higher education too, and significantly disrupted the higher education system, which is critical determinant of an Indian economic, social, cultural figure. It is a crucial time for higher education sector- as all exams, admission, entrance tests, results are held during COVID-19, there is no immediate solution to stop the outbreak of pandemic hence; there is no certainty when they will become normal. During COVID-19 online education has grown very fast. Online learning, teaching, faculty development program (FDP), webinar, research course works were held online. There was no need to attend anything physically. There were lots of things which happened for the first time happened in higher education during COVID-19 which is

1. There was no need of large-scale infrastructure to learn and teach
2. All universities, colleges had gone digital.
3. It was an opportunity of time and money saving.
4. Technology becomes the mediator.

Hence, researchers think that before COVID-19 there were several problems in higher education system in India like- lack of infrastructure, less transparency, decline of the quality of teaching, No stimulus to students' innovation and imagination. Hence this research paper focuses on the COVID-19 as an opportunity for Indian higher education to redesign itself.

Keywords :- COVID-19, higher education, pandemic, redesign.

Introduction :- COVID-19 is the new virus which is infectious. The first outbreak began in Wuhan, China in Dec.2019. The common symptoms of COVID-19 are fever, tiredness and dry cough. India

reported the first confirmed case of the corona virus infection on 30 January 2020 in the state of Kerala and further it has been spread to all over the country. Due to that Central and state government were forced to shut down all educational institution as a precautionary measure UNESCO has estimated that around 1.26 billion or 70% of children around the world have had their educationally interrupted because of the pandemic. The International Association of universities (IAU) global survey on the impact of COVID-19 on higher education around the world found that

1. At almost all higher education Institutes affected by COVID-19. Classroom teaching has been replaced by virtual.
2. At the same time higher education moved towards distance teaching and learning, it offered an important opportunity for more flexible learning possibilities, explored blended or hybrid learning and mixed synchronous learning with Asynchronous learning.

In India over the year's higher education facing lots of problems and challenges such as related to Enrolment, equity, quality, infrastructure, faculty, accreditation, unemployment, no intellectual property rights policy for content development of digital information, our universities doing rigid examination. We have needed experimental learning allowing a student to educate her or himself by interacting with the world outside the classroom. There is need to improve quality, reputation, innovation and transformational approach, hence this COVID-19 situation is an opportunity to redesign the higher education in India.

Objective :-

1. To study the structure of Indian higher education.

2. To study the higher education during COVID-19
3. To study the various emerging approaches in India for higher education during COVID-19.

Literature review :-

1. Dr. Shakila Shamsu :- The author explained the context behind the surge of online education in India. Online teaching along with the requirements of tools such as online platforms, trained teacher, changing the mind-sets of the teacher as well as student is must. There is a need to provide learner centric approach while designing and conducting online courses. She also suggested that 'higher education institutions should begin to construct an academic plan of action. There for there is a need to guide institutions, faculty and students to repurpose e-content in a manner that fits into the curricula.

2. Dr. Aswin Fernandez :- The author pointed out that COVID-19 brought a "second wind to higher education." in India firstly it increased the use of technology in various areas, especially for education has "instilled confidence for users". And secondly, India has tried to follow the footsteps of UK, US, and UNESCO models of online education.

3. Pravat Kumar jena :- Tried to showed Covid -19 and its impact on Indian higher education under the research paper titled "Impact of Covid-19 on higher education in India" the present research paper aimed to study the impact of Covid- 19 on higher education in India and elaborated various emerging approaches in higher education during Covid-19 and also described the post Covid 19 trends of higher education institutes. Whole research paper based on the secondary data collected from various reports on Covid -19 pandemic, websites, Journals, newspapers etc. Researcher detail described the impact of Covid - 19 on Indian higher education i.e., destabilized all educational activities, negative and positive impact on research, educational assessment system severally affected, reducing employment opportunities related to Indian higher education. Researcher showed some emerging approaches in higher education during Covid-19 which was e-GyanKosh, Gyandarshan, Gyandhara, Swayam, e-

Adhyayan, NDCL, e-Pathya, SAKSHAT etc. Researcher concluded that the pandemic helps to change the pedagogical approach in education. it helps to redesign the higher education system in India .and suggested that the along with offline, online education system is need of hour.

4. Sidesh Tari & Gautami Amonkar (2021) :- in their research paper titled "Impact of Covid on Higher Education in India." It has described the problem faced by the student who were pursuing higher education and also tried to showed the positive and negative impact on higher education, from the outbreak there was sudden shift made from traditional face to face classroom method to online mode of education, internet plays very vital role during the pandemic, but in India there is lot of distraction for this like lack of technical skill, network issue, equipment cost etc. during covid 19 E-gyankosh, Gyandhara, Swayam helps student and learners also. Researchers concluded that Covid 19 pandemic helps to change the Indian higher education system.

Methodology :- To study the Indian higher education during COVID-19 and this is the best time and opportunity of Indian higher education to redesign. Therefore, qualitative research method is used. The Present Research paper primary as well as secondary data was used. With the help of Google form, created and collected primary data through closed ended questionnaire. Secondary data collected through books, Magazine, Newspapers, Research articles etc. both the data collected and analysis done. Analysis was done using tables and graphs. The information is taken from the questionnaire. The data was collected from 63 respondents. All the respondents are from the field of higher educational. Convenience - non probability sampling method is used for collection of data.

Structure of higher education in India :- The Indian higher education system is the third largest in the world followed by USA and China. India has a long history of higher education, originality by teaching of traditional element, such as Indian religions, Mathematics, Indian logic etc. early Hindu and Buddhist centers of learning like

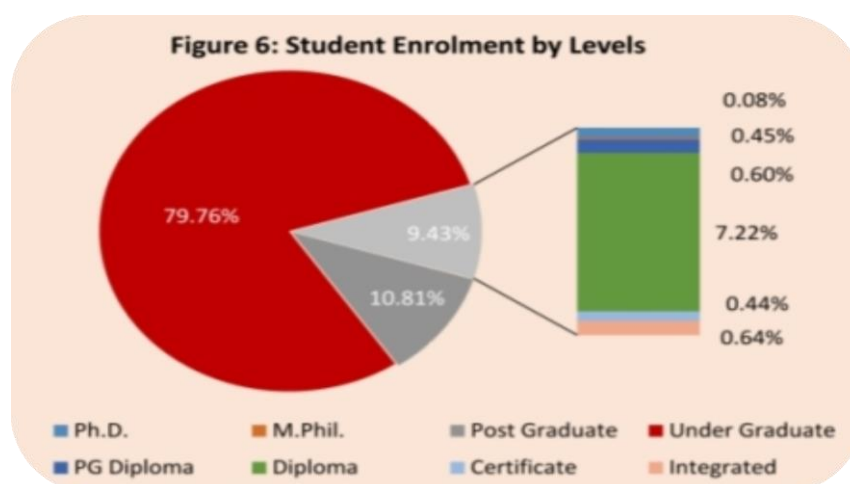
Takshashila and Nalanda. Modern universities were established during British rule; Wood dispatch in 1854 was the first policy measure regarding higher education in India and according to Charles wood's suggestion in 1957 three universities such as, University of Madras, University of Calcutta and University of Bombay was established.

In 1902 Indian university commission was appointed and it recommended the formation of The Indian University Act 1904. It was the first assessment of the condition and prospect of the universities. After independence Radhakrishnan commission in 1948-49 was the first commission on education also known as university education commission. In 1986, the government led by Rajiv Gandhi introduced a new National policy on education which was in various aspect of higher education i.e. equality of opportunity in

education, student can understand of diverse cultural and social system of the people living in different places in the country.

According to AISHE (All India Survey of Higher Education) reports 2018-19 there were in India 993 total universities, 385 universities are privately managed and 394 universities are located in rural. 16 universities are exclusively for women. Distance learning and open education system is also a feature of the Indian higher education. Indira Gandhi National Open University (IGNOU) is the largest university in the world by number of students having approximately 3.5 million students across the world and regulated by the Distance education council of India (DEC), New Delhi which maintain the standards, encourages and organize the activities of open and Distance learning in India.

Level Wise Enrolment in 2018-19



Sours: (AISHE report 2018-19) :- Total student enrolment has been classified in 8 levels. Percentage share of level- wise enrolment are shown in above figure. The highest number of students (79.76%) are enrolled at under graduate level across India. on other hand, second to Under Graduate, 10.8% students are enrolled in post-graduation which is approximately 40.42 lakh. there are 3,880 students enrolled in integrated Ph.D. in addition to 1,69,170 students enrolled at Ph.D. level. there is a small share of 1.62 lakh and 2.24 lakh students are enrolled each at certificate and PG Diploma levels, respectively, constituting approx. in the state wise enrolment, Maharashtra

tops in the enrolment of student in universities with 9,48,955. this is followed by Tamilnadu with 7, 85, 841 students and Delhi with 7, 66,213 students.

Indian Higher Education During Covid-19 :- The government of India has in first time in March, 2020 allowing universities to offer fully online course. In the past Indian universities and colleges were not permitted to offer more than 20% of a degree courses online, but now these restrictions are starting to lift during COVID -19 pandemic. Before COVID-19, ICT based initiatives in higher education is very helpful. during pandemic for

teacher as well as learner. There are several ICT initiatives of the MHRD, UGC and Inter university centers (ICUs) - Information and Library Network (INFLIBNET) in the form of digital platforms which can be accessed by anybody; from anywhere with the help of this many universities, colleges, students and teachers are broadening their horizon of learning. Some of these are as follows.

SWAYAM- online course :- It is an initiative by Government of India and designed to achieve access, equity and quality. This provides access to best teaching, learning resources which were earlier delivered on the SWAYAM platform. Swayam uses the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students and enable all students left behind due to any reason to join the mainstream of the knowledge economy. It is an interactive mode of education available free of cost to all learners. The course content is prepared using 4 quadrants – (1) video lecture, (2) specially prepared reading material that can be downloaded/printed (3) self-assessment tests through tests and quizzes and (4) an online discussion forum for clearing the doubts.

e – PG Pathshala :- It is a high quality, curriculum based, interactive content of different subject for

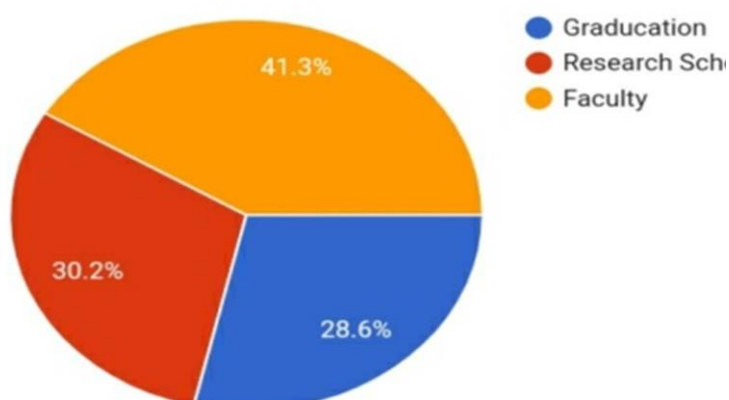
post graduations student. It works under National Mission on Education through ICT (NMEICT) and contain four quadrants i.e., e-text, e-tutorial, web resources, self-assessment. Student and teacher can use this e-content as an open educational resource (OER) or as a flipped classroom model.

YUKTI portal :- It is a Young India combating COVID with Knowledge Technology and Innovation. It aims to cover challenges of COVID-19 in a very holistic compressive way and keep the academic community healthy both physically and mentally. It is launched by MHRD's innovative cell and AICTE jointly. It includes both qualitative and quantitative parameter.

VIDWAN :- It is an Expert database and National Researcher Network. It provides information about expert's background, content address, experience, scholarly publications etc. and its database is developed by INFLIBNET.

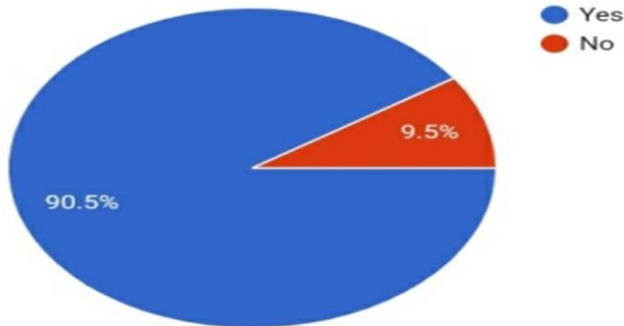
Shodhganga :- It is a preserver of Indian thesis provides platform for research students to deposit their PhD thesis and make it available to the entire scholarly community in open access. It has the ability to capture, index, and store, disseminate and preserve thesis submitted by the researchers.

Figure -1, Education:



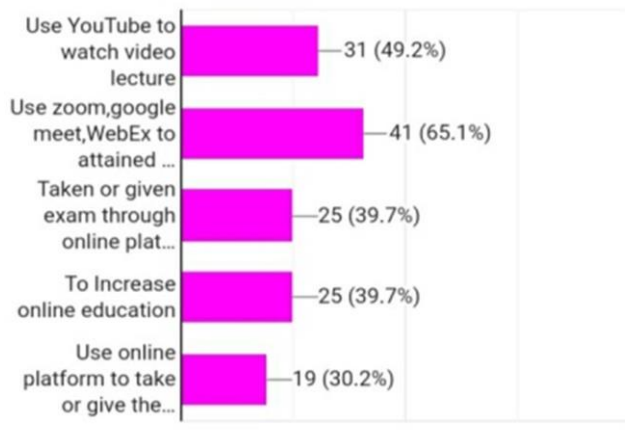
DATA ANALYSIS :- Present research paper primary data collected through questionnaires', in which 41.3% are faculty, 30.2% are Research scholar and 28.6% are graduate students for related to higher education sector.

Figure -2
COVID-19 is opportunity to redesign higher education in India



Above figure shows that in India majority 90.5% are think that COVID-19 is an opportunity for changes the higher education in India and 9.5% think otherwise.

Figure -3
CHANGES OF HIGHER EDUCATION DURING COVID-19



During COVID-19 lots of changes took place in higher education. This pandemic pushed India into expanding its higher education sector online. As per data 49.2% use YouTube, 65.1% use Zoom, Google meet, WebEx, 39.7% use online platform for examination during COVID-19 and also agree with increase online education.

Figure -4
Satisfaction of the higher education through online during COVID-19

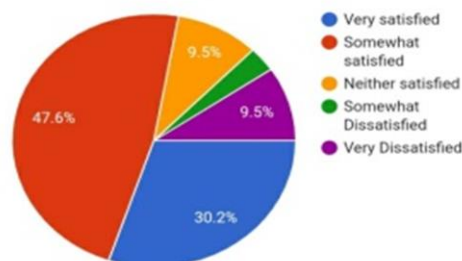
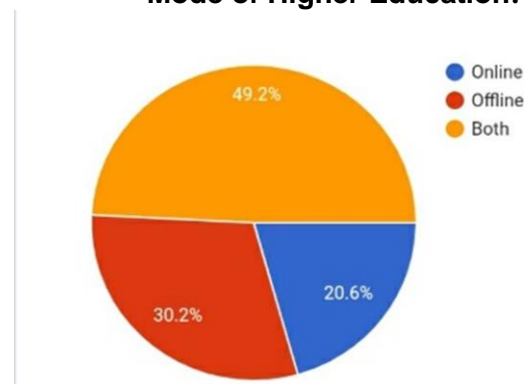


Table -1, Composition of respondents for satisfaction for online education system

Satisfaction level	Frequency	Percentage
Very satisfied	19.02	30.2%
Somewhat satisfied	29.98	47.6%
Neither satisfied	5.98	9.5%
Somewhat Dissatisfied	2.01	3.2%
Very Dissatisfied	5.98	9.5%
Total	63	100%

(Scours: Primary Data)

**Figure -5
 Mode of Higher Education:**



During COVID-19 pandemic lots of higher education institutes going through online, there are 49.2% responses agree that there were both online and offline medium is need of education.

Conclusion :- COVID-19 Pandemic has changed the landscape of higher education sector in very short period of time. It has not just changed the size, shape and form of classroom, but also changed how it is taught and how it will be a taught. The opportunities created by COVID-19 will definitely lead to a bright tomorrow or a bright future. Policymakers of a higher education may welcome out-of-box initiatives at a time when they too grapple with uncertainty. In higher education methods of evaluation, admission process, determination of merit, nature of governance all need to be put to scrutiny. This pandemic created an opportunity for change in the assessment system, traditional teaching and learning, pedagogical approaches and introduction of virtual education in higher education sector. UGC and MHRD have also launched many virtual

platforms with online learning, e-book, online teaching-learning materials, and the combination of traditional technology like T.V. radio with mobile / broadband network-web technologies that would enhance better accessibility to higher education.

The National Education policy -2020 aims for Universalization of education from per-school to higher level and to raise Gross enrolment ratio in higher education to 50% by 2035. The policy also proposes phasing out of all institutions offering single streams and that all universities and colleges must aim to become multidisciplinary by 2040. And it will also help redesign the structure of higher education. During COVID -19 pandemic difficulty period online/virtual platform is being successful in removing the doubt and negativity of students mind about education. In future combination of traditional and virtual platform is the best way of higher education in India and it also will fulfil the aims of National Education policy-2020.

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A Study of Customer Care Service Effectiveness in Solving Queries Related to Online Purchasing

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Abstract :-

Purpose :- The main object of the study is to review customer care service effectiveness in solving queries. The paper also explores the various problem and challenges faced by customer during online purchasing.

Design/methodology/approach :- This research investigates empirical studies on customer care service effectiveness in solving queries to online purchasing. The study reviews the literature to gain a better understanding of the prospective of customer care service and online purchasing problem and challenges. The paper uses primary data and secondary data for the review of customer care service.

Findings :- The study focused on online purchasing problems and challenges and how the customer care service effectively working to solve the queries during online purchasing. Through a systematic review, it was concluded that customer are facing problem and challenges during the search for shopping site and during product return service stages. Further proven that customer care service are approachable and have many option to contact customer care service and the provided service by customer care is also effective.

Practical implications :- Customer care service is the most important area in any business and especially in online purchasing. The only way to attend the customer queries and concern, if it work effectively it increase business growth. Every business customer care service should operate very effective to retain the customer and gain a goodwill for the business.

Keywords :- Online Purchasing, Customer care services, effectiveness in solving queries.

Introduction :- Customer is king—an age old saying that shows how important the customer is in every business. To sustain business, every organization needs to take care of customer queries and problems and give them a timely solution. Customer care service is a process of providing customer satisfaction before, during and after sale service.

1.1 Why customer care service is important :- Customer care service is needed in every business. It is the only place where customers can coordinate for any purchases or other types of queries and problems in online business. On the other end, it is very much required for the growth of business.

Customer perspective: why is customer care service important?

- Customer queries can be handled effectively
- Outstanding Customer care service builds a positive approach towards customers.
- Customer care service can provide customers with product-related, Payment related and delivery related updates.
- Excellent customer care service provide customer satisfaction
- Effective customer care service makes an organization unique and creates a positive approach among customers.

Now a days, customers are very well informed about the product as well as their rights; hence, the business should involve itself in providing an effective customer care service to meet their challenges and problems in all manners to retain the customer.

Rationale And Significance Of The Study :-

Customer care service is very complex in nature. Moreover, handling the customer and providing

service to them is very sensitive. Because customer care service and sales have a direct link. Nowadays, the public prefer online purchasing, through which they can save time, energy, as well as money and get a wide variety and wide ranges of products at their own convenient time. E-commerce platforms even provide lots of offers and discounts, which influence the customer and motivate the online purchase. The most common concerns for online purchases are product quality, payment security, and logistical service, with the majority of customers encountering issues in these areas. This led a scholar to look deep into the aspect of customer care service effectiveness in solving queries related to online purchasing. The online purchase process starts from the selection process to making payment, and from the payment process to delivery and from delivery to handling queries and return service if any, and to check its customer care service effectiveness. And to find out the challenges and problems of online purchasing. Such phenomena raise the need for scientific research to find out the effectiveness of customer care service in online purchasing. The precise application of the research will help the online retailer how to handle customer queries and the public how efficiently online purchase queries can be solved by online retailers and even for other researchers, and this study will add a great deal to the literature on the topic. The finding may prove useful in understanding the topic in the bigger picture.

Review of Literature :-

Prashant Raman- 2019:- attempted to identify the female customer's intention to shop online and its customer service. A conceptual model is proposed that explains the theory of reasoned action with three constructs, namely: trust, convenience, and customer service. This empirical study demonstrates that attitude has a significant influence, with customer service playing a critical role in influencing the attitude of female customers. The detailed study stresses the need for online retailers to have effective customer service in online shopping.

Paulo Rita a, Tiago Oliveira al.(2019) The study examined the quality of the e-service and the impact on customer satisfaction, customer trust, and consumer behaviour. The study focused on four dimensions of e-service quality. The finding showed that three dimensions of e-service quality, namely website design, security/privacy, and fulfilment, affect the overall e-service quality. It further says that customer service is not significantly related to overall e-service quality. The study found that overall e-service quality is statistically significantly related to consumer behaviour.

Yingxia Cao, Haya Ajjan, Paul Hong (2018) the study address the role of post purchase logistic services on customer satisfaction. It focused on post purchase logistic activities related to shipping, return and tracking for e-commerce with cross-regional comparison. It indicated that customer service is the most significant factor among the examined antecedents for online shoppers While, return service is more important for shoppers.

IV Objectives of The Study :-

- To find out the challenges and problem of online purchasing
- To measure the customer care service effectiveness on online purchasing

V Hypotheses :-

1. H0- There are no challenges and problems with online purchasing.
H1- There are challenges and problems with online purchasing.
2. H0- Customer care services are not effective.
H1- Customer care services are effective.

VI Research Methodology :-

Sources of Data: - The study based on Survey method. The data is obtained from both primary and secondary sources. The primary data is collected through questionnaire method whereas the secondary data is collected from the newspapers, magazines, research journal, websites etc.

Sample Size: - The sample size 87 taken for analysis.

Sampling Technique: Convenience sampling technique is used for the current study.

Tools Used for Data Analysis: - For Data Analysis - Excel, Mega Stats, Power Query, Pivot table and other tools. Data is represented through Pie chart, Bar graph, Percentage & Chi-square test.

Limitation of the Study: The study is limited to Mumbai city because of time constraints. Sample size used for the study is limited. Limited to only customer queries handling effectiveness.

VII DATA ANALYSIS & INTERPRETATION

Table 1: Demographic Profile: - Socio- Economic Status of the Respondents

Variables	Classification	Frequency	Percentage
Gender	Male	44	44%
	Female	56	56%
	Total	100	100%
Marital Status	Unmarried	35	35%
	Married	65	65%
	Total	100	100%
Education	Post- Graduation	48	48%
	Graduation	35	35%
	10 + 2	9	9%
	Matriculation or below	8	8%
	Total	100	100%
Age Group	Below 20	13	13%
	21 - 30 Year	26	26%
	31 - 40 Year	42	42%
	41 - 50 Year	12	12%
	51 years and above	7	7%
	Total	100	100%
Annual Income:	Below 1 Lakh	28	28%
	Rs. 1 Lakh to 3 Lakh	22	22%
	Rs. 3 Lakh to 5 Lakh	26	26%
	Rs. 5 Lakh and above	24	24%
	Total	100	100%

Source: Primary Data

Table 1:- The percentage of Males and Females respondents are almost the same. 65% are married 35% and 83% are post graduate and graduate Majority of the respondents are from the age group above 31-above 50 year who is an active online purchaser and belong to the Annual Income above 3 lakh.

Table 2

Do you find e-commerce websites easy to navigate for online purchasing?	
Category	Responses
Yes	90
No	10
Total	100

Source: Primary Data

Figure 01



Source: Primary Data

Interpretation of Table 2:- 90% of the respondents are finding e-commerce website easy to navigate for online purchasing. Hence almost majority of the respondent are purchasing online. Hence the collected Sample is appropriate to study about customer care effectiveness in solving customer queries for online purchasing.

Table 3

Do you feel online purchasing is convenient?	
Category	Responses
No	18
Yes	82
Total	100

Source: Primary Data

Figure 02



Source: Primary Data

Interpretation of Table 3:- 82% of the respondents find online purchasing is convenient. Since online purchasing is convenient, the majority of people are approaching online purchasing for their day-to-day purchases.

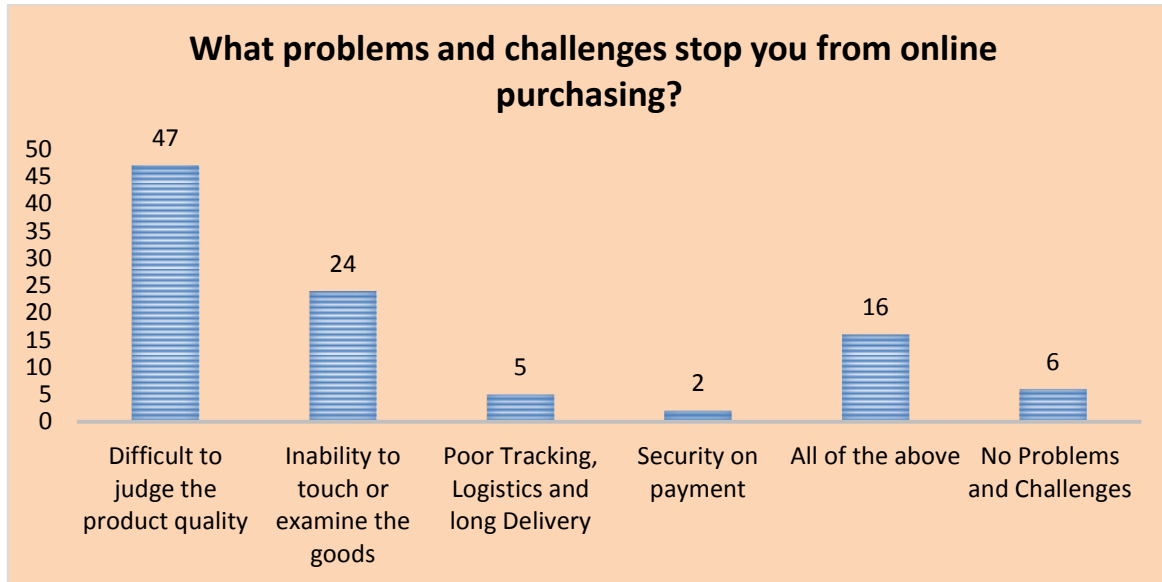
Table 4

What problems and challenges stop you from online purchasing?	
Categories	Responses
Difficult to judge the product quality	47
Inability to touch or examine the goods	24
Poor Tracking, Logistics and long Delivery	5

Security on payment	2
All of the above	16
No Problems and Challenges	6
Total	100

Source: Primary Data

Figure 03



Source: Primary Data

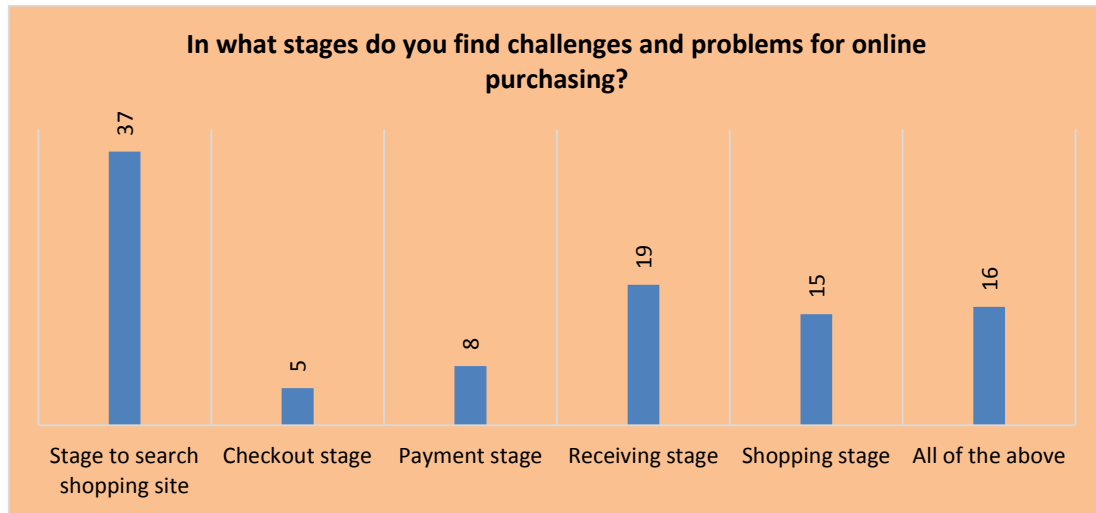
Interpretation of Table 4: The maximum respondent, i.e., 47%, having problems judging the product quality in online purchasing and some 24% of the respondent reporting that they can't touch and examine the goods before purchasing are the major problems and challenges that stop the respondent from stopping online purchasing

Table 5

In what stages do you find challenges and problems for online purchasing?	
Categories	Responses
Stage to search shopping site	37
Checkout stage	5
Payment stage	8
Receiving stage	19
Shopping stage	15
All of the above	16
Total	100

Source: Primary Data

Figure 04



Source: Primary Data

Interpretation of Table 5: Almost 37% of respondents find problems and challenges in searching or finding the shopping site for their online purchases; further, 19% of the respondents find challenges during the receiving stage, and 16% find problems in all stages.

Hypothesis Testing 01

1. H0- There are no challenges and problems with online purchasing.
H1- There are challenges and problems with online purchasing

Table 6

Categories	Observed	Expected
Difficult to judge the product quality	47	16.66666667
Inability to touch or examine the goods	24	16.66666667
Poor Tracking, Logistics and long Delivery	5	16.66666667
Security on payment	2	16.66666667
All of the above	16	16.66666667
No Problems and Challenges	6	16.66666667
Total	100	100
P-Value	0.000000000000000039034575646594	

Source: Primary Data

Table 7

In what stages do you find challenges and problems for online purchasing?		
Categories	Observed	Expected
Stage to search shopping site	37	16.66666667
Checkout stage	5	16.66666667
Payment stage	8	16.66666667
Receiving stage	19	16.66666667
Shopping stage	15	16.66666667
All of the above	16	16.66666667
Total	100	100
P-Value	0.000000377323913873249000000000	

Source: Primary Data

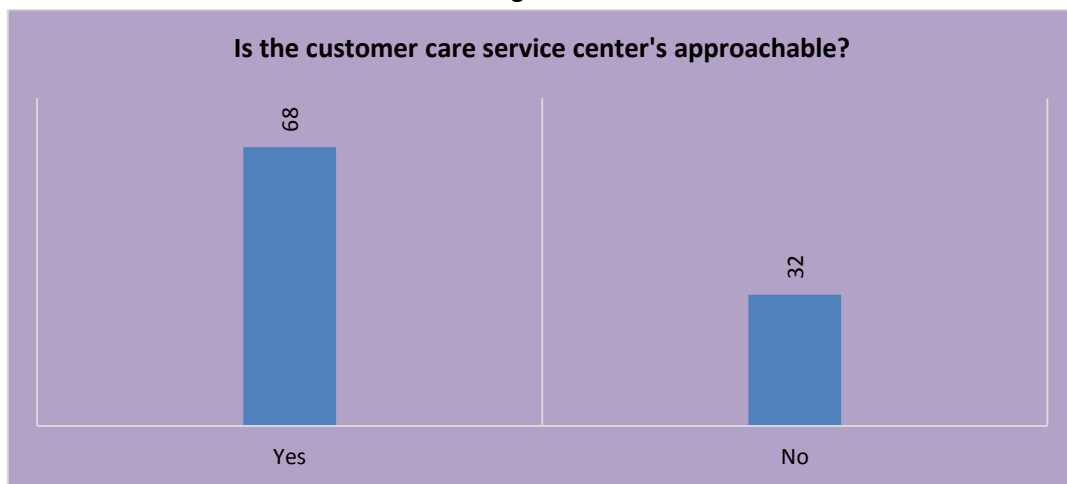
Interpretation of Table 6:- X² (chi-square) at 0.05 percent level of significance. The calculated value of X² is less than 0.05 significance level, confirming that there are challenges and problems with online purchasing. Thus, the null hypothesis is rejected and the alternative hypothesis is accepted.

Table 7

Is the customer care service center's approachable?	
Category	Responses
Yes	68
No	32
Total	100

Source: Primary Data

Figure 05



Source: Primary Data

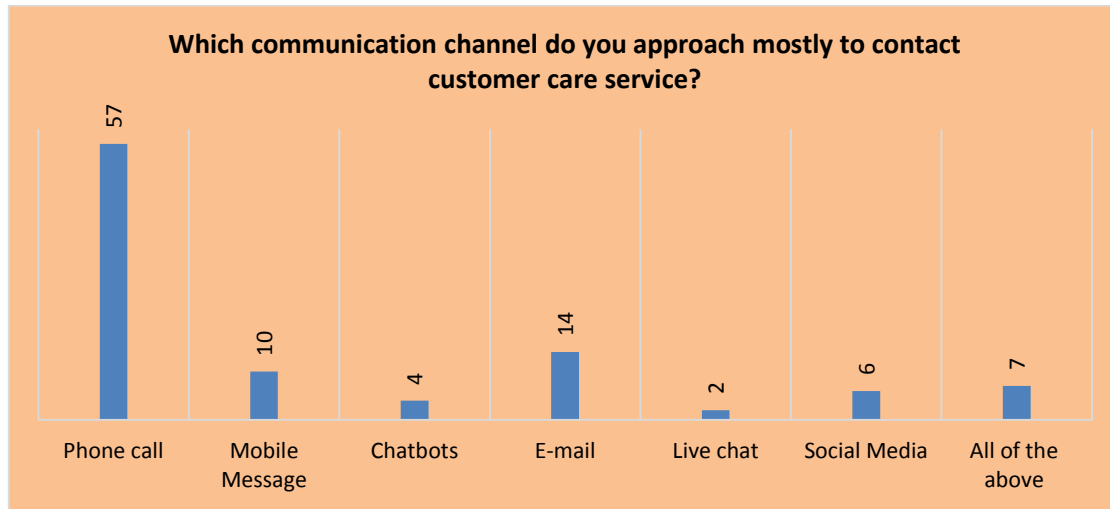
Interpretation of Table 7: - From the responses, it is clear that 68% of respondents agree that customer care service centers are approachable. And rest feel that the customer service center is not approachable.

Table 8

Which communication channel do you approach mostly to contact customer care service?	
Category	Responses
Phone call	57
Mobile Message	10
Chatbots	4
E-mail	14
Live chat	2
Social Media	6
All of the above	7
Total	100

Source: Primary Data

Figure 06



Source: Primary Data

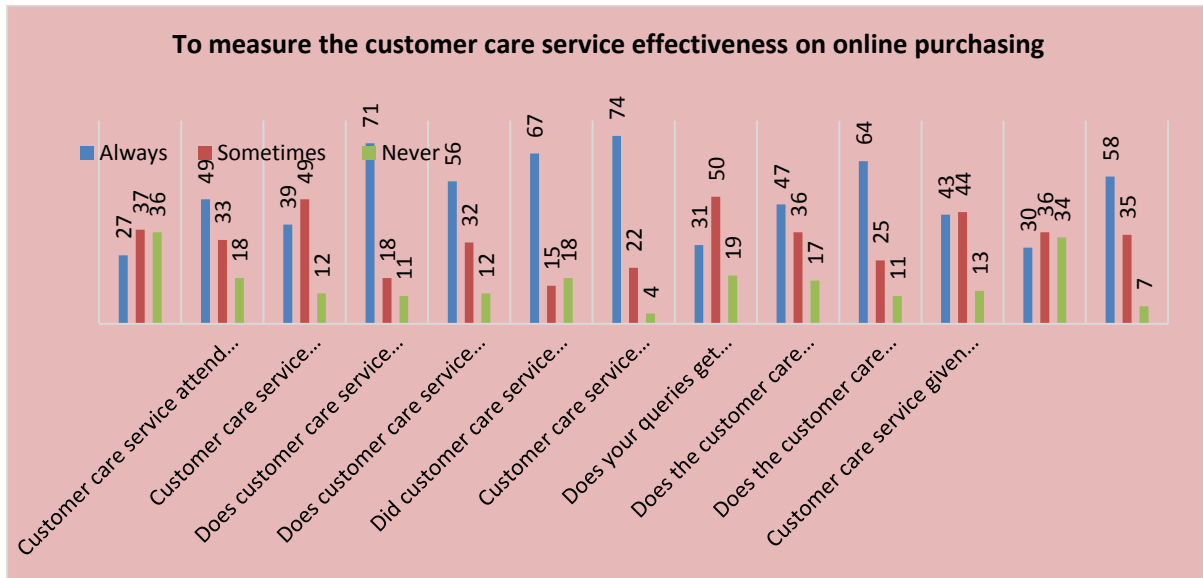
Interpretation of Table 8: - The collected information says that the maximum number of respondents, i.e., 57%, are communicating with the customer care service through a phone call. And 14 % Customer are approaching customer care service through E-mail.

Table 9

To measure the customer care service effectiveness on online purchasing					
Sr.No	Questions	Always	Sometimes	Never	Total
1	Do you have more than one contact point to contact customer care service?	27	37	36	100
2	Customer care service attend the queries fast	49	33	18	100
3	Customer care service resolve the queries fast	39	49	12	100
4	Does customer care service have a knowledgeable staff	71	18	11	100
5	Does customer care service provide a clear message?	56	32	12	100
6	Did customer care service spend adequate time listening to your issue?	67	15	18	100
7	Customer care service employee are friendly and polite	74	22	4	100
8	Does your queries get handled on the first call?	31	50	19	100
9	Does the customer care service functionality meet the requirements?	47	36	17	100
10	Does the customer care service agent quickly address customer service problems?	64	25	11	100
11	Customer care service given a satisfactory solution	43	44	13	100
12	Does the customer care service call back, when they offers to call back for solving your issues	30	36	34	100
13	Does Customer care service agent treat you as a valued customer?	58	35	7	100
Total		656	432	212	1300

Source: Primary Data

Figure - 07



Source: Primary Data

Interpretation of Table 8:- To measure customer care effectiveness 13 questions are posed and data is gathered. 74% of customers say that customer care service staff are polite and friendly, 71% of customers feel that the staff are knowledgeable, 64 % of customers say the staff quickly address the problem. 58% say staff treat customers as valued customers, and 56% say staff give a clear message as a solution. As a result, almost all customers consider customer care service is effective.

Table 10

Hypothesis 2 - H0- Customer care services are not effective.
H1- Customer care services are effective

To measure the customer care service effectiveness on online purchasing		Observed				Expected			
Sr.No	Questions	Alwa ys	Some times	Never	Total	Always	Sometime s	Neve r	Total
1	Do you have more than one contact point to contact customer care service?	27	37	36	100	50.46	33.2308	16.31	100
2	Customer care service attend the queries fast	49	33	18	100	50.46	33.2308	16.31	100
3	Customer care service resolve the queries fast	39	49	12	100	50.46	33.2308	16.31	100
4	Does customer care service have a knowledgeable staff	71	18	11	100	50.46	33.2308	16.31	100
5	Does customer care service provide a clear message?	56	32	12	100	50.46	33.2308	16.31	100
6	Did customer care service spend adequate time listening to your issue?	67	15	18	100	50.46	33.2308	16.31	100
7	Customer care service employee are friendly and polite	74	22	4	100	50.46	33.2308	16.31	100
8	Does your queries get handled on the first call?	31	50	19	100	50.46	33.2308	16.31	100

customers are the ones who are called the base, from which the business foundation can be developed for any business. Any online business makes it difficult to handle customers because customers are not seen by the retailers; hence, to keep them happy, customer care service should be effective, and day-to-day problems and challenges should be handled appropriately. It is concluded that customers are facing problems and challenges in all stages of online purchase, yet they feel comfortable doing online purchasing. It is measured that the customer care service agents are knowledgeable, approachable, polite, and even friendly to deal with them and treat them as a valued customer. But when we talk about the queries being handled and giving a satisfactory solution, it sometimes takes time.

Suggestion and Recommendation :-

- Solving customers' queries and helping them do their online shopping should be the first concern for any e-commerce business. Hence, proper strategy and techniques need to be developed for any e-commerce organization.
- Customer care services need to be more effective in all stages of an online purchase, so agents need to be given proper and appropriate training to handle and attend to the customer in a mannered way, and more effort needs to be made to resolve the queries in a minimum time period.
- There are many ways to communicate with the customer care agent, like phone calls, chatbots, e-mail, etc., but it should be understood in which mode of approach the customers are most comfortable and provide that mode for further communication with the customer and the customer care agent to make the service center more effective and productive.

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To Study the Importance of Innovations in Healthcare Services and its Impact on People Residing in Mumbai Western Suburbs

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Abstract :- It is has been observed that All human development and improvements in quality of life stem from innovations. It should be noticed that they also question societal various norms, solutions, and standards at the very same time. Generally Innovations always helps encourage us to us treat previously incurable diseases or make better use of limited resources, especially when we talk in the field of health care. However, we need to understand they also render outdated current medical technologies, need costly expenditures, and demand specialists to master basically entirely complete new procedures. As a result, social we create a conceptual framework model for the creation, uptake, and dissemination of innovations in healthcare in this research. Applying the concept to three innovations—personalized medicine, new methods, digital health, and implants—we examine barriers to and boosters of innovation, focusing on meta-stability, work approaches costs, innovative ability, and leadership terms. We get to the conclusion that especially healthcare strategic innovation management is Mostly Advancements are the wellspring of each and every human turn of events and improvement of personal satisfaction. Simultaneously, they challenge existing dealing guidelines, arrangements and cultural examples. In some medical care specifically, advancements empower us to treat beforehand hopeless illnesses or to utilize scant assets. Bethat as it may, they likewise make existing special medical services innovations out of date, force experts to advance totally new strategies and require high ventures. Subsequently, in this paper we try to foster a reasonable system model for the turn of events, social reception and dispersion of developments in medical care. We purposely dissect boundaries and advertisers of

advancements, supplement specifically meta-steadiness, costs, creative capacity and initiative and apply the system to three developments: also customized medication, computerized wellbeing, and inserts. We spur reason that essential development the board in medical care is an essential of the quick turn of events and reception of developments and the improvement of personal satisfaction of the (maturing) populace.

Keywords :- Reception, dissemination, computerized wellbeing, e-wellbeing, embed, development, advancement the board, customized medication.

Introduction :- The terms "development" and "creative" are popular expressions that are broadly utilized in various fields, including medical services. Until this point, be that as it may, there is no far reaching and by and large acknowledged meaning of development and development of various sciences (e.g., financial matters, general wellbeing, topography, humanism) apply marginally maturation various ideas. Schumpeter was perhaps the earliest financial expert to perceive the high pertinence of developments to each monetary framework going from a solitary specialty unit to whole economies, and to the world economy. He depicted development as health any social adjustment of the method of creation, academic innovation production broaden of new items, organization designs or section into another market and as the "imaginative obliteration" that underlies all advances in an entrepreneur market system .

In the medical care area, the developments are the wellspring of any improvement in the nature of various

administrations and personal satisfaction, yet we can see in addition a consistent test to the now existing medical care suppliers and frameworks. Progress in medication requires new advances (e.g., medications, inserts and gadgets), methodology (or types of association). The enormous increment of the personal level of satisfaction and the length of the throughout recent years can be easily credited to advancements in medical care or related fields, like cleanliness and nourishment.

Few reasons we want advancement in medical services :- Significance of development that can make medical services better-

- a) It is Buyer centered: Zeroing in on the manner in which the customers can use medical services.
- b) It is innovation based: Growing new ideas, technology items and medicines.
- c) Plan of action: Spotlight on incorporating various different medical services associations.

Here are famous 10 medical services advancements :-

- Cutting edge sequencing: Uses of the hereditary sequencing to distinguish in danger populaces or target treatments to every patients who are probably going to answer
- Immunotherapy: Therapies with the possibility to altogether expand endurance and care for disease patients, without the negative secondary effects and related medical services expenses of conventional chemotherapy
- Computerized reasoning: The capacity of PCs to think like and complete organized assignments right now performed by people with more noteworthy speed, exactness, and lower asset usage
- Place-of-care diagnostics: Consider helpful, opportune testing at the mark of care (e.g., doctor office, online consultation emergency vehicle, home, or medical clinic), bringing about quicker, more durable patient consideration
- Computer generated reality: Re-enacted conditions that could speed up the conduct

change in patients in a way that is more secure they feel, more helpful, and more open

- Utilizing web-based entertainment to on the work on quiet insight: Tapping information from virtual entertainment and online networks to empower wellbeing to follow buyer experience and populace also wellbeing patterns continuously
- Biosensors and trackers: Innovation empowered action trackers, screens, and sensors integrated into attire, extras, and gadgets that permit customers and clinicians to screen wellbeing without any problem
- Helpful consideration: Retail facilities and critical consideration communities that give more helpful and cheaper consideration to patients for various medical problems
- Telehealth: A more helpful way for the customers to access and increment and taking care of oneself while possibly decreasing office visits and travel time; may likewise forestall entanglements and the trauma Center visits
- Also the accompanying segments portray and how new advances and new models are helping the medical care area:

Wearables and Cell phone based preventive consideration :- can a distinct advantage The Indian wearable market is developing. There is were around 3.5 million wearables sent, making India the Must third-biggest market after China and the US. Wearables and cell phone based medical services very will be very genuine major advantage and on how patients will get the essential and preventive very consideration in India. This is also development will actually want to assist often patients with having be a steady track on their vitals.

In the event that you own a cell phone, you basically can convey a cutting edge portable PC in your pocket. This is being utilized as influence by tech organizations to make cell phones and applications that can easily change your cell phone into a clinical gadget.

Regardless of being able to supplant a lot bigger, more costly hardware. Subsequently, medical services often innovation is more prudent

with this strategy since there is compelling reason need to race to the clinic for a cold or influenza.

Digital wellbeing record to empower esteem based care :- Taking into account our populace and the drives of computerized wellbeing record, India is having the must capacity to become and one of the world's biggest medical the care server farms. This will very much help for some examinations and man-made intelligence's to construct prescient models.

Government is thinking of ABHA, the Ayushman Bharat Wellbeing Record (ABHA), which was prior known as Ayushman Bharat Wellbeing ID was sent off by the Indian government in 2021 and is pointed toward giving a computerized wellbeing ID to the populace.

His was sent off by the Public Wellbeing Authority (NHA), which is essential for the Service of Wellbeing and the Family Government assistance. Now according to the public authority, ABHA is the 'most vital move away towards making more secure and effective computerized wellbeing records for yourself as well as your loved ones.

Telemedicine :- Now we can easily understand Telemedicine is a technique for far away off clinical discussion that frequently involves talking with a clinical master via telephone or by means of video. The field here is as yet developing. North of 1,000,000 patients have supposedly involved telemedicine administrations in the beyond a year. There are a few benefits to telemedicine. Frequently, it is more affordable than in-person arrangements. It doesn't request that debilitated often individuals risk jeopardizing others by going out openly. Furthermore, it must can possibly work on homebound people's admittance to medical services. Moreover, occupants of segregated areas. To the people who don't have basic admittance to clinical consideration. Despite the fact that telemedicine can possibly further develop medical care, it is presently distant from ideal. The Individuals should use telemedicine very for it to diminish generally medical care consumptions.

Emergence of resource light and Newage SurgiTech organization, cost-effective and patient experience centered approach :- A resource light model medical care supplier doesn't possess the land and the structure which diminishes its capital the consumption and necessity for low speculation for extension. In 2020, we have seen numerous new businesses arise here. This empowers a shift to esteem based care diminishing the expense of Medical services conveyance. Better should understanding results and reasonable every expense, more significant and yields on speculation for suppliers and guarantors are expected in this worth driven medical services framework, which will in any case often incorporate also more noteworthy information driven help for policymakers.

Impact of innovations of medical services on individuals :- However further develops the proficiency The medical services area here is encountering steady advancement. As spending has expanded lately, numerous medical care financial plans are being directed towards wiping out hindrances often working on the deliverability of administrations. Clinics and other clinical associations tremendously are putting generally in embracing new innovation to handle such issues.

However, going past innovation, associations will likewise have to highlight more reasonable strategies for working on the availability of cutting edge demonstrative and treatment methodology. For sure, the here innovation are ought not be the main solution for the medical services area's most squeezing of the issues as a significant number of them must have a great deal to do with the human side of medical care and innovations.

Further develops viability and efficiency :- Here the Medical care productivity is a correlation of conveyance the framework yields, for example, doctor visits, relative worth units, or wellbeing the results, with inputs like expense, time, or material. Proficiency can be accounted for then as a proportion of results to inputs or a correlation with ideal efficiency utilizing stochastic outskirts

for investigation or information every envelopment examination. An elective methodology is to see the dormancy times and must defer times between a consideration request and culmination of complete work, and expressed achievement corresponding to assessed exertion.

Innovation is making medical care reasonable and available :- Accessible medical services offices and fast, easy reasoning new arrangements must be end up being a surprisingly positive development. Individuals here is in immature nations as of now often battle to pay for the most essential medical care administrations because of their unequal financial circumstances. Here Utilizing these state of the art tech-based answers for further developing human existence can be their ideal use, given the persistent presence of innovation in almost everything around us helps us to be easy and affordable.

4. Literature Review: -(Lenore Manderson2021),In their study Foundation Social development has been applied progressively to easily accomplish social objectives, including the further developed medical services conveyance, regardless of an absence of reasonable clearness and agreement on its definition. Past its unmistakable relics to address the cultural and the underlying necessities, social advancement often can best be perceived as development must in friendly relations, in power elements and in administration changes, and may incorporate institutional and frameworks and changes. Strategies A checking survey was directed of experimental examinations distributed in the beyond 10 years, to be able to recognize how social development in medical services has been simply applied, the empowering influences here and other hindrances influencing its activity, and holes in the ongoing writing.

(Eneyi E Kpokiri 2021), and authors in their studies the Social developments in wellbeing are comprehensive answers for address the medical care which conveyance hole that address the issues of end clients through a multi-partner, local area connected with process. While social developments for wellbeing have shown the

guarantee in shutting the medical care conveyance hole, more exploration is expected to assess, increase, and support social advancement. Research agendas can be normalize and further the develop detailing of examination discoveries, advance of the straightforwardness, and increment replicability of study results and discoveries.

Objectives of the study :-

1. To understand the importance of innovations in healthcare services.
2. To study the impact of innovations of healthcare services on people .
3. To study the perception of people related to innovation in healthcare services.

Hypothesis :-

H1- That there is no importance of innovations in healthcare services
H0- That there is an importance of innovations in healthcare service

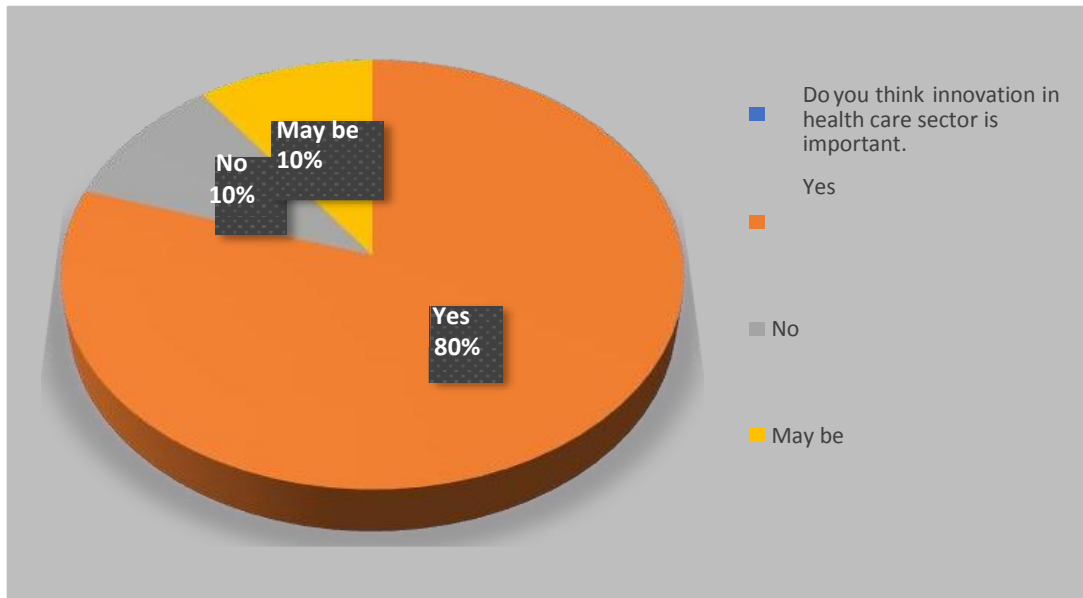
H1- That there is no impact of innovations of healthcare services on people
H0- That there is an impact of innovations of healthcare services on people

Research Methodology :- The present study is different in many respects. The concept of innovations and health care are taken into consideration for data collection In process to attain an objectives regarding the study; essentially the subject survey method used was adopted. The self-structured questionnaire was made and was forwarded among people residing in Mumbai western suburbs

- Primary Data: Primary Data is collected through pre-tested questionnaire from the respondents residing in between Mumbai suburbs
- Secondary Data: The researcher shared questionnaire with people using health care services conceptual statistics is done via petty source beyond unique libraries. Various journals, magazines, web sites associated after study is reviewed.

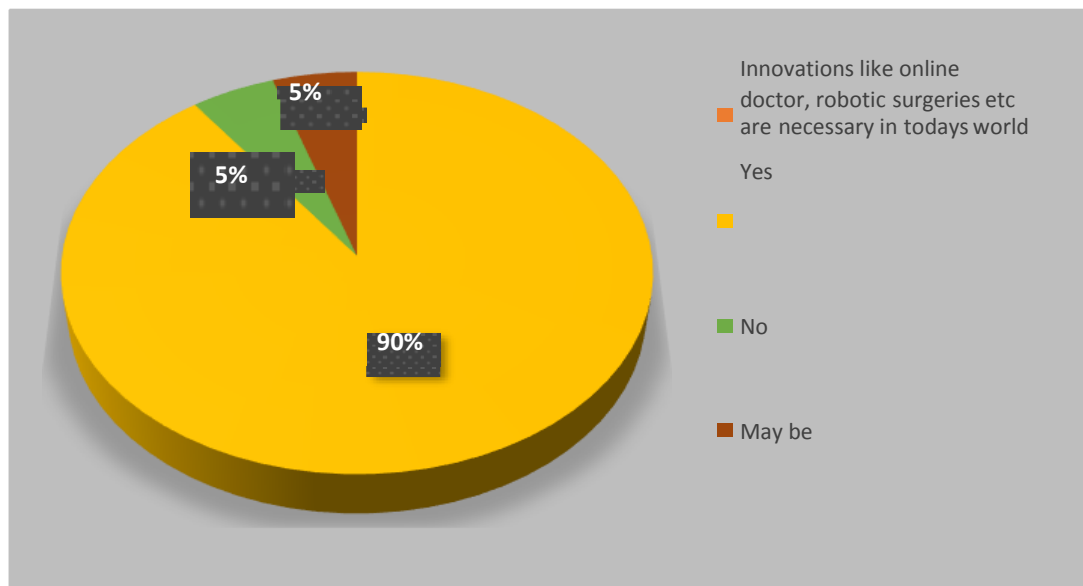
6. Data Analysis and Interpretation

Source: The below data is a primary data collected through self-administered questionnaire total number of respondent is 110 the entire response is a usable data.



110 respondent took the survey 80% of the respondent feels the Innovation is the need of an hour and 10% were not in favour rest 10% were not sure about their opinion

Source: The below data is a primary data collected through self-administered questionnaire total number of respondent is 110 the entire response is a usable data.



110 respondent took the survey 90% of the respondent feels that Innovations like online medicine, robotic surgeries is the need of an hour and 5% were not in favour rest 5% were not sure about their opinion.

Hypothesis Testing

Source: The below data is a primary data collected through self-administered questionnaire total number of respondent is 110 the entire response is a usable data

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Do you think innovation in health care sector is important	111	210	1.89189189	0.0972973		
Innovations like online doctor, robotic surgeries etc are necessary in today's World	111	196	1.76576577	0.18099918		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.88288288	1	0.88288288	6.34490877	0.01248281	3.88407468
Within Groups	30.6126126	220	0.13914824			
Total	31.4954955	221				

Hypothesis testing was done using Anova single factor test where in p value is 0.012 This signifies that the null hypothesis is rejected and

H1- That there is no importance of innovations in healthcare services
H0- That there is an importance of innovations in healthcare service/

Null Hypothesis That there is no importance of innovations in healthcare services is rejected and
That there is an importance of innovations in healthcare service is accepted/

H1- That there is no impact of innovations of healthcare services on people
H0- That there is no impact of innovations of healthcare services on people/

Null Hypothesis that there is no importance of innovations in healthcare services is rejected and that there is no impact of innovations of healthcare services on people is accepted.

Social Implications :- In view of hypothetical writing, the social advancement can possibly prepare institutional and frameworks change, yet research in wellbeing here has not yet completely investigated this aspect. Up to this point, social development has been applied to broaden often populace and monetary inclusion, new standards inborn in widespread wellbeing and inclusion and fundamental to Be that as it may, restrictions which exist in conceptualizing social development and applying its hypothetical and the multidisciplinary underpinnings in the wellbeing research.

Conclusion and Suggestion :- In this study the results uncover that there is a need for innovations in healthcare for people Development fundamentally brings about items and administrations through advancement organizations. We likewise recognized obliging

elements for open development in medical care, including the complicated associations of medical services, the need to lay out schedules for catching information from patients and clinicians, guidelines and medical services information the regulations as well as the positive result patient strengthening. Patients also are looking for the technological advancement this will help for overall development.

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A Study of Customers Perception towards Mobile Lending Applications in Suburban Mumbai Region

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Abstract :- Reserve Bank of India recently has received numerous complaints that individuals and small businesses are falling prey to the growing number of unauthorised digital lending platforms and mobile applications to get quicker loans. Prime Minister Narendra Modi's government has made financial inclusion has been made a priority as part of its Digital India Mission by Prime Minister Narendra Modi's government. Mobile lending apps in India, which give small micro loans for short periods, have been quickly utilised by the newly employed, college students, private sector employees and others who are below the income levels which are required by the banks to grant loans. Whether it is last-minute rent payment, utility bills or an impromptu vacation, even a flash online sale, or any kind of necessity in terms of medical emergencies, loss of job and salary, deductions, etc., India is currently on the verge of digitization in lending. At the same time Unsecured loan Mobile apps, which promise quick loans to even those without a credit history or collateral, have been criticised for their excessive interest rates, aggressive recovery methods, short and uncertain repayment schedules and misuse of borrowers' personal data. This research paper throws light on the scope of mobile lending apps, identifies major benefits, related challenges and the precautionary measures for successful use of such mobile lending apps by better understanding of customers perceptions and problems.

Keywords :- Credit worthiness, Online Loan Apps, Fintech, Mobile micro-lending, digital lending.

Introduction :- Digital Lending is a process of lending through web platforms or various mobile applications utilizing the Information Technology for loan application, authentication, credit assessment of customers and the disbursal of

Loans. The entire process starting from application for loan to the final disbursement is fully digital and online.

According to the World Bank Report, there are about 190 million unbanked adult people, out of which the India has the most number of people who are outside the formal financial sector. A majority of Indians do not qualify for loans from banks, because of a lack of collateral and a poor understanding of the loan process. It is reported that among the 220 million Indians who are eligible for loans from legal financial institutions, merely 33% of them have access to a bank account

According to a recent News Report, about a third of India's population is forecasted of owning a smartphone by the end of 2022. In recent years as the smartphone use surged, the Mobile lending apps have mushroomed all over India as well as the world and the financial technology (fintech) companies have rushed to fill the gap in access to banking services.

This magnificent growth of Mobile Communications Technology is creating tremendous opportunities for grassroots innovation, economic growth and social empowerment in India and other developing countries. This can make a great potential impact on the economy as the mobile applications can make a great contribution to micro financing sector by providing access to customers information, new markets, and innovative services to millions of population in India.

As a part of the Digital India Mission, financial inclusion has been made a priority by Prime Minister Narendra Modi's government. The newly salaried youth, college students, irregular employees, housewives, small business men are quickly embracing the Mobile lending apps in India. India is currently on the verge of digitization in lending. This quick mobile app loans are used for

last-minute rent payment, paying utility bills or an impromptu vacation, even a flash online sales, or any type of necessity in terms of medical emergencies, educational obligations, payment of EMIs, loss of job and salary, deductions, etc., specially when many people lost their jobs in the aftermath of COVID-19. Lending apps have great potential to generate financial inclusions benefits, but require strong recognised lender institutions, efficient Regulatory Authorities, code of ethics and financial literacy among the customers.

As per news report there are many popular mobile lending apps in India like Buddy Loan, Navi, Pay Sense, MoneyTap, Dhani, Nira, CASHe, Home Credit, PayMe India, India Lends etc. At the same time some Unsecured loan Mobile apps, which promise quick loans to even those without a credit history or collateral, have been criticised for their drawbacks like excessive interest rates, short repayment cycles, aggressive recovery methods and misuse of borrowers' data. The RBI said in a statement said that Digital lending has the potential to give the untapped customer base an access to financial products and services which are more fair, transparent, efficient and inclusive. RBI further stated that lending apps have raised certain serious concerns and so the specially formed working group of RBI will identify the risks and suggest measures for greater consumer protection, effective data governance, efficient data privacy and strong data security standards.

This research paper throws light on the scope of mobile lending apps, identifies major benefits, related challenges and the precautionary measures for successful use of such mobile lending apps by better understanding of customers perceptions and problems.

Objectives of the Study :-

- The main objective of this research is to find out the perception of customers towards Mobile Lending Applications.
- To find out the benefits and the challenges faced in using the Mobile Lending Application
- To suggest ways to effectively avail the facility of borrowing through the Mobile Lending Application.

Review of Literature :-

1. Fleming, R., & Fielding, J. (2015). Retail banks wake up to digital lending. The findings revealed that the economic factor has a significant effect on the use of mobile credit in Kenya. The research was done on some 600 individuals in Nairobi County and its environs. Practical implications– The findings offer FinTech providers, financial institutions and the government with a better understanding of what contribution digital credit brings to the improvement of individuals' livelihoods. The research contributes to the application of new mobile technology in the financial sector. The findings also help financial institutions consider mobile technologies when aiming to improve financial access to the unbanked individuals.
2. Lee, S. (2017). Evaluation of mobile application in user's perspective: case of P2P lending Apps in FinTech industry. *KSII Transactions on Internet and Information Systems (TIIS)*, 11(2), 1105-1117. This paper discusses user acceptance of the mobile P2P lending apps, guided by the Technology Acceptance Model. We conclude that the users' acceptance of mobile P2P lending apps are significantly influenced by perceived ease of use, perceived usefulness, and user satisfaction. These in turn influenced their attitude towards using mobile P2P lending apps and intention to use.
3. Kaur, K., & Ilavarasan, V. (2021). Digital Loan Sharks in India & Regulatory Framework: An Assessment. In 14th International Conference on Theory and Practice of Electronic Governance (pp. 544-547). The purpose of this paper is to explore the risks posed by digital lending model in India, identify the factors leading to financial consumer vulnerability and assess the regulatory & supervisory framework to protect financial customer from digital loan sharks for reliable digital lending space.
4. Yadav, M., & Shanmugam, S. Fintech lending in India (2021): the changing paradigm of banking. This study comprises research

papers, reports, opinion papers, speeches, and news articles. In this paper, the researcher explained the challenges from three perspectives i.e., from financial institutions, customers, and regulatory points of view. The study reported privacy issues, financial illiteracy, lack of awareness, lack of trust from a customer point of view, the rise of non-performing assets, poor connectivity of the internet, and an increase in credit risk from a financial institution's point of view as major challenges faced while adopting digital lending and there is a need for a full-fledged regulatory framework that can contain risks.

Research Methodology :- The Research is based on secondary as well as primary data. The Secondary data includes various Newspapers, journals, articles, internet sources etc. The primary data is collected through structured questionnaire in Google form through survey of customers in Suburban Mumbai Area. The Collected information is classified and presented in form of tables and diagram Sample size and sampling method.

Total 115 customers responses were collected from the respondents comprising of current customers from different suburban areas in Mumbai city by using purposive sampling and snowball sampling method.

Data Analysis :-

- 1. Demographic Information:** The researcher collected basic demographic details to study the perception of customers towards Mobile Lending Applications which is shown in Table 1.

Table 1(A) : Frequency Table for Age

Variable	N	%
Age		
20 to 30	25	21
30 to 40	47	40
40 to 50	32	29
50 to 60	9	8
60 and above	2	2
	115	100

Table 1(B): Frequency Table for Gender

Gender		
Male	73	63
Female	42	37
	115	100

Table 1(C) : Frequency Table for Occupation

Occupation		
Private employee	52	45
Government employee	05	4
Self employed	25	22
Business	05	4
Professional	02	2
House wife	23	20
Unemployed	03	4
	115	100

Table 1(D): Frequency Table for Education

Education		
Up to HSC	41	36
Graduate	63	55
Post graduate	9	8
Professional	02	1
	115	100

Table 1(E): Frequency Table for Income

Monthly Income		
Less than 10000	33	29
10000 to 25000	61	53
25000 to 50000	19	16
More than 50000	2	1
	115	100

Source: Primary Data

Frequencies and percentages were calculated for age, gender, occupation, education and income. Table 1 reveals that 23 % of the respondents were from the age group of 20 years to 30 years and 37 % were from the age group of 30 to 40 years and 28 % were from age group of 40 to 50 years. About 64 % of the respondents were Male and 36 % were Female. Nearly 36 % of the respondents were private employees, 24 % were self-employed and 20 % were housewives. However, 4% were unemployed, 2 % were professionals and 4 % were businessmen. It is also found that 55 % customers were graduates, 36 % were up to HSC, 8 % post graduates and only 1 % were professionals. It is also found that 29 % of the customers were having income of less than Rs. 10000, 53 % up to 25000, 16% up to 50000 and only 1 % had income more than 50000.

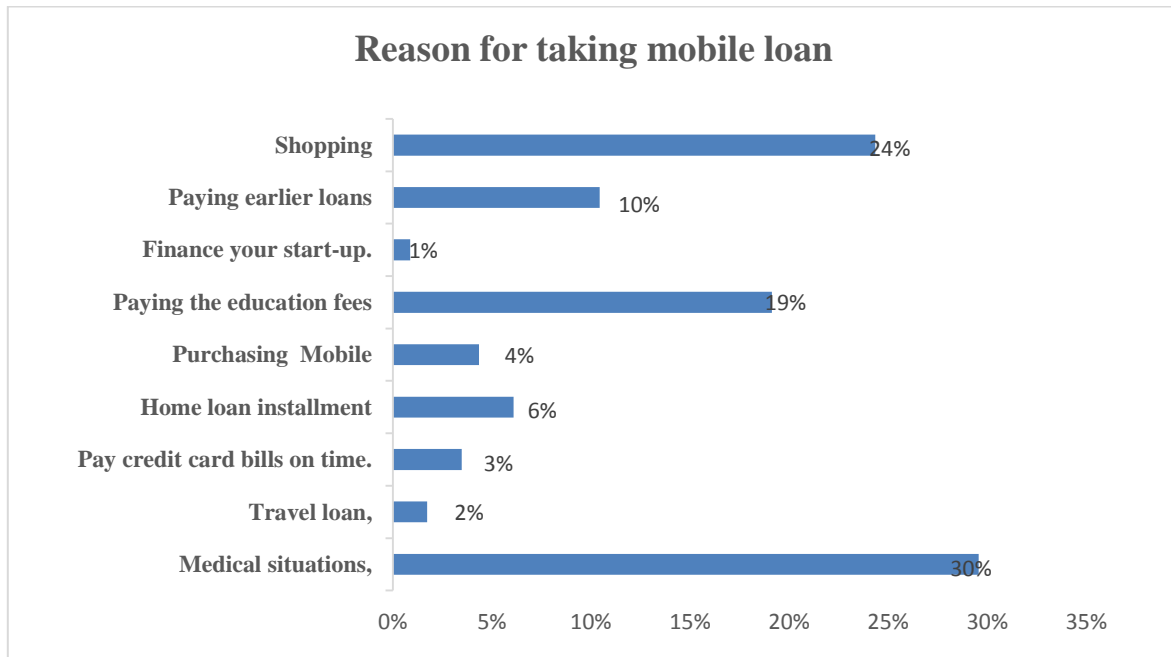
- Reasons for taking Mobile Application Loan :** The researcher was keen on knowing the reasons for which the loans were taken through mobile loan app.

Table 2: Reason for taking mobile loan

Variable	N	%
Reason for taking mobile loan		
Medical situations,	34	30%
Travel loan,	2	2%
Pay credit card bills on time.	4	3%
Home loan installment	7	6%
Purchasing Mobile	5	4%
Paying the education fees	22	19%
Finance your start-up.	1	1%
Paying earlier loans	12	10%
Shopping	28	24%

Source :- Primary Data

Figure 1 :Purposes for which the loans were taken through Mobile Lending App.



Source:- Primary Data

Table 2 and figure 1 indicates that 30% respondents used mobile App Loan for Medical situations, 24 % used for Shopping purpose, 19% used for paying the education fees, 10% for paying earlier loans, 6% for paying home loans instalments, 4% for purchasing new mobiles, 3% for paying credit cards outstanding amounts, 2 % for travel loans and only 1 % for financing start-ups.

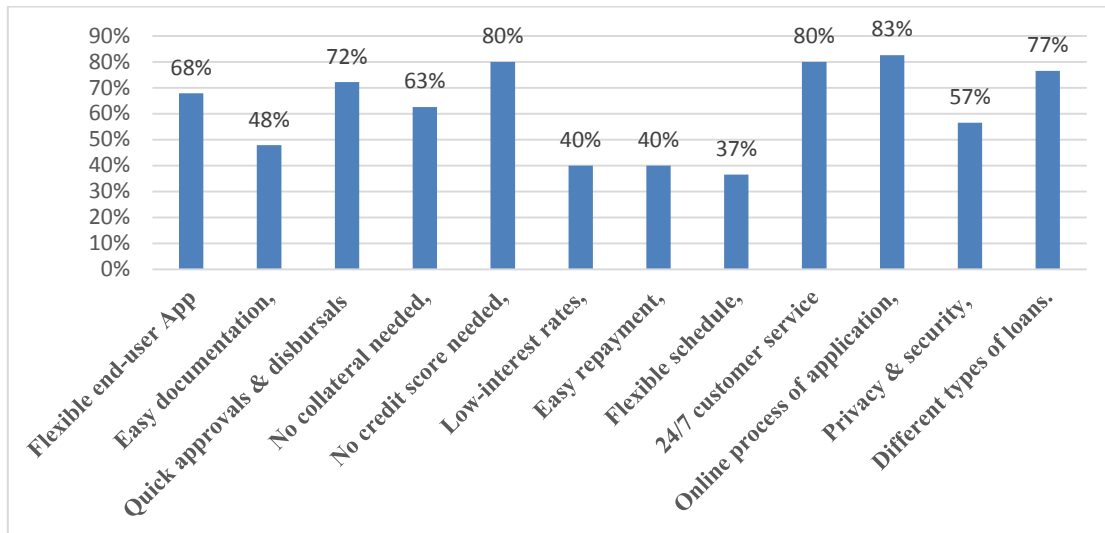
3. Perceived Benefits of taking Loan through Mobile Lending App.: The researcher was interested in knowing the Benefits of taking Loan through Mobile Lending App

Table 3 : Benefits of taking Loan through Mobile Lending App

Variable	N	%
Flexible end-user App	41	54 %
Easy documentation,	62	83 %
Quick approvals & disbursals	65	86 %
No collateral needed,	55	73 %
No credit score needed,	56	73 %
Low-interest rates,	24	32 %
Easy repayment,	26	35 %
Flexible schedule,	27	36 %
24/7 customer service	56	75 %
Online process of application,	70	93 %
Privacy & security,	21	28 %
Different types of loans.	52	69 %

Source: Primary Data

Figure 2
Benefits of taking Loan through Mobile Lending App



Source: Primary Data

Table 3 and figure 2 reveals that 68 % of the respondents feel that the Mobile Loan App was flexible and user-friendly, 48 % experienced easy documentation, 72 % appreciated quick approvals and disbursements and 63 % appreciated about no requirement of collateral security. 80% customers were happy that no credit score is required and 40 % for low interest. Nearly 40 % respondents thought that there was easy repayment and 37 % about flexible schedule. Similarly 83 % respondents appreciated about the online process of verification and disbursement and 80 % experienced 24/7 customer service. 57 % customers also thought that there was privacy and security and 77 % customers opined that there were different types of loans that were made available through Mobile Loan Application.

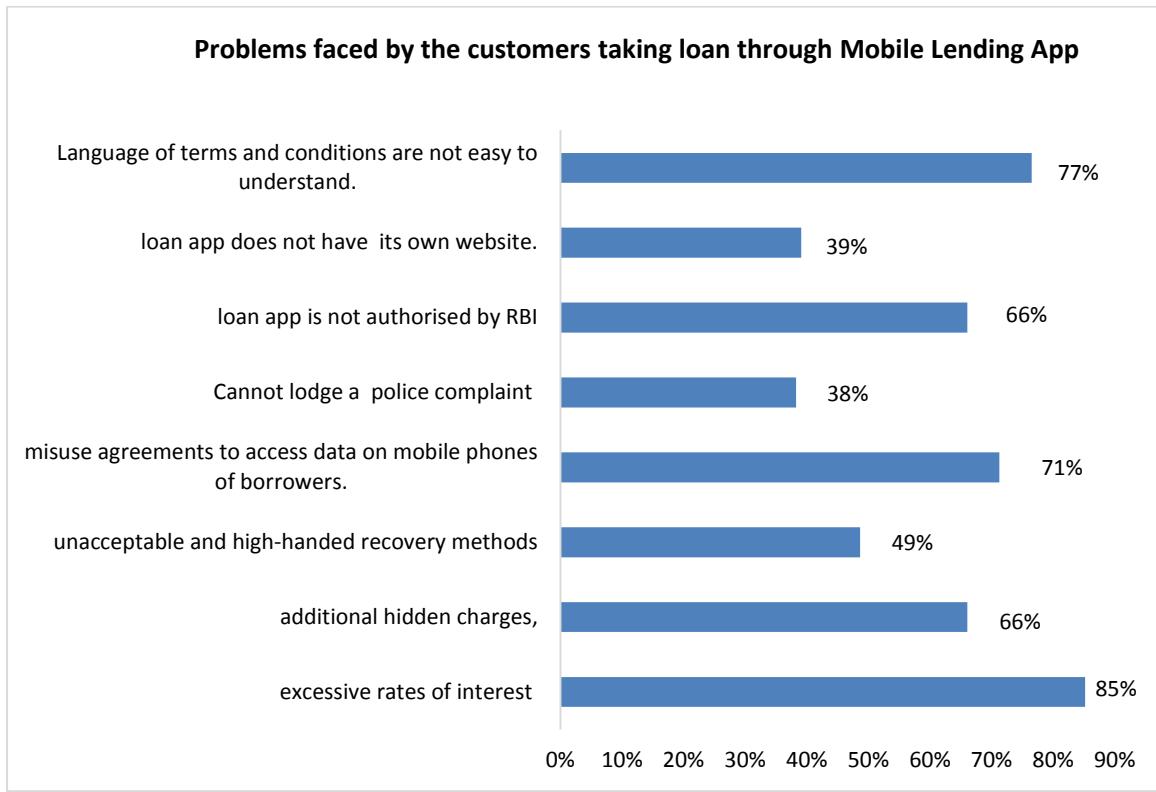
4. **The issues faced by the customers taking loan through Mobile Lending App:** The researcher felt that it was essential to examine the problems and challenges faced by the customers taking loan through Mobile Lending App.

Table 4 : Problems faced while using mobile lending app

Variable	N	%
excessive rates of interest	98	85%
additional hidden charges,	76	66%
unacceptable and high-handed recovery methods	56	49%
Misuse agreements to access data on mobile phones of borrowers.	82	71%
Cannot lodge a police complaint	44	38%
loan app is not authorised by RBI	76	66%
Loan app does not have its own website.	45	39%
Language of terms and conditions are not easy to understand.	88	77%

Source: Primary Data

Figure 3
Problems faced by the customers taking loan through Mobile Lending App



Source: Primary Data

Table 4 and figure 3 indicates that 85% of the customers complained of excessive rate of interest and 49% complained about unacceptable and coercive method of Loan recovery. According to 77% customers the language of terms and conditions was ambiguous and 66% experienced that there were hidden charges too. It was found that 66% respondents complained that the loan apps were not authorised by RBI and 39% searched and found that there was no separate website for many Mobile Loan Apps. According to 71% customers there was scope for misuse of personal confidential information of the customers. Nearly 38% respondents were unhappy that police cases could not be lodged against these Mobile Loan Apps.

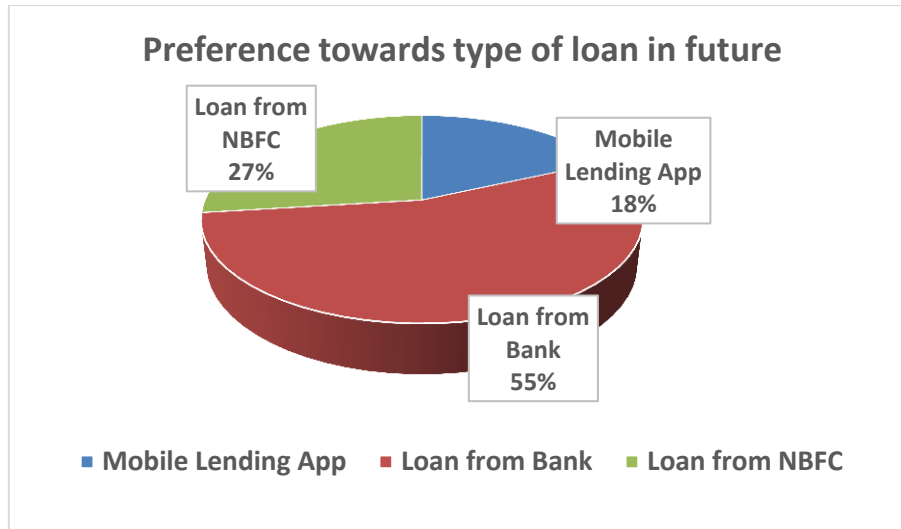
5. Customers preference towards the Type of Loan : The researcher wanted to examine the preference of customers towards Mobile Lending Application. Hence the respondents were asked to give their views on the same and are as shown in Table 8.

Table: 5
Customers preference towards the Type of Loan .

Variable	N	%
Mobile Lending App	21	18%
Loan from Bank	63	55%
Loan from NBFC	31	27%
	115	100

Source: Primary Data

Figure 4
Customers preference towards the Type of Loan.



Source: Primary Data

Table 5 and figure 4 clearly indicates that 55 % of respondents strongly prefer to take loan from traditional authorised Banks. Nearly 27 % customers has favoured the Non-Banking Finance Companies and only 18 % customers would like to avail the Loan through Mobile Loan Applications.

Conclusion :-

1. It is found that nearly 69 % respondents taking mobile application loan were from age group of 30 to 50 years and only 10 % respondents were above age of 50 years. The number of male customers taking mobile app loan (63%) is more than the female customers(37%). It can be seen that the facility of mobile loans application is taken by private employees, self-employed persons and housewives is to the extent of 87 %. It can be seen that mostly HSC and graduates (91%) have availed the loans through Mobile Apps. 82 % customers taking Mobile Apps loans have income of less than Rs. 25000.
2. From the study it was observed that nearly 73 % of the Mobile app loans were utilised for medical situations, shopping of essential commodities, education etc. and 26 % loans were used for paying earlier loans, credit card outstanding bills, EMIs, travel loans, new

mobiles but only 1 % for starting new business.

3. During the study the researcher found that the customers appreciated many plus points of the Mobile Lending App. Maximum respondents feel that the Mobile Loan App was flexible and user-friendly, with easy documentation, quick approvals and disbursements. Many customers also appreciated about no requirement of collateral security and no credit scores. Many customers were satisfied about the easy repayment and flexible schedule, the online process of verification, disbursement and 24/7 customer support service. Some customers also thought that there was privacy and security with facility of different types of loans that were made available through Mobile Loan Application.
4. The respondents participated in the survey also criticised the Mobile Loan Applications for various wrong things. It was found that many customers complained about the excessive rate of interest, hidden charges and unacceptable and coercive method of Loan recovery. According to many customers the terms and conditions of loan were not easy to understand and there was scope for misuse of personal confidential information

of the customers. Similarly it was also found that the Mobile Loan Apps were not authorised by RBI and there was no separate website for many Mobile Loan Apps. Many respondents were unhappy that police cases could not be lodged against this mobile loan App.

5. It was found during the study that majority of the respondents, has given preference to taking Loans from Banks, in spite of Traditional Bank loans being time consuming and have tedious documentation process. Similarly the number of customers wishing to take loans from Non-Banking finance companies was also significant. In spite of many perceived benefits, a very few number of customers have shown interest in taking the loans through Mobile Lending App.

Suggestions :-

1. First of all, the customers should not trust any Mobile App or digital platform that is not approved by RBI
2. Secondly, when threatened, the borrowing customers should not panic and reach out to the concerned authorities.
3. Thirdly, If customers are installing the App and the Mobile Loan App asks for unreasonable permissions, they should not grant the suspicious permissions
4. Fourthly, If the customers somehow end up in any embarrassing situation, they should reach out to the nearby police station and register a FIR.
5. Lastly preferably one must approach a bank first even if it involves paperwork or takes a bit of time.

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Contribution of IPL to Indian Economy

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Abstract :- New era demands entertainment within a cut corners span of time. Good paradigm is a Hi tech availability of things which has flourished the business industries. Sports field is not untouched with modern technology is a biggest myth. Sports have attracted huge stardom. In India, Cricket is one of the most applauded sports as there is a massive fad of it in every peer group of population. It's not wrong to state that cricket runs through the blood stream of Indian without considering the caste and creed. The lucrative entertainment affects the economy of the country. IPL has scale up the business to a next level. Sports have consistently been prime content throughout the world. Impact of IPL is undeniable in the Indian economy. This paper deals with the opportunities created by IPL to new generation and its contribution to Indian Economy.

Keywords :- Mastermind Schedule, Revenue & Brand.

Introduction :- A sport intrinsically is a gigantic business; the IPL is treated as a creator of economic movement and biggest vehicle for growth in business within India. Eight new teams were composed of world class players at a venue for this mega event in Indian's biggest cities which was a created by BCCI. Lalit Modi is the man behind the plan of IPL. The motto was enticement for the new generation of cricket fans across the country. Also, the big idea of franchise-based leagues was acquainted with the support of IPL which brought a new revolution in the game of cricket. Immurgence of IPL attracted Bollywood big celebrities to buy eight city based franchises. Inception of franchises was around \$400 million and ceased by spending US\$723.59 million. Commercial value and its popularity have increased within 15 years. (Rasul, 2011)⁵ highlighted the strong connection of IPL with

Bollywood industry and its stalwarts. IPL is a global brand but still many feels that IPL has strong nexus only with Bollywood industry of the country.

Any spectators or cricket lovers demand entertainment which will last in their memories, and IPL is a cricket league that has brought a cutting edge in the field of sports and entertainment. The prerequisite for any transformation was need of an hour to make the game more popular. IPL has lived up the expectation.

Objectives :- The research paper is descriptive in nature. The main objective of this paper is to highlight the strategies which have made IPL one of the popular yearly sporting events. The contribution towards Indian economy, the employment opportunities and revenue generated through the organisation of this mega block buster event.

Literature Review :- Amit Gupta. (2009)¹. Discussed in his paper 'India and the IPL: Cricket's Globalization,' Non-western nations is tending to examine rebellious of the west sporting monopoly. IPL has given a global outlook to media, fans and a huge marketing platform to Indian economy.

Umar Rashid Dar. (2016)⁸. In this paper, 'Indian Premier-Boon or Bane'. Cricket has two side of coin. One the negative aspect that is controversies, gambling and allegation and positive side is the strategies and policies which made IPL so popular and successful in the entire sports entertainment world.

Kadapa, S. (2013)⁹. The research scholar in his paper, 'How sustainable is the strategy of the Indian Premier League –IPL? A critical review of `10 key issues that impact the IPL strategy', as highlighted on the mega event a source of income

to high earnings to the players, franchises, a perfect model to run a successful business.

Indian economy has risen from 2008 and will be reaching to the height in the business in the near future. How IPL has set a benchmark by using the following strategies which are listed below.

Masterstroke of scheduling :- According to a KPMG survey report, the 60-day tournament contributed INR 11.5 billion (US\$182 million) to the Indian economy in 2021, while a report submitted by the UN General Assembly for Peace and Development highlighted an economic value of US\$3.2 billion. Indian economy earns revenue in several ways through the league. IPL is played in India during the month of April and May since 2008 among eight city based teams, currently it has increased to 10 teams.

A short span of two months between April and May were the talented and superstars in the cricketing globe have been taken a jointly pause from international and domestic cricket to participate in the IPL. Additional benefit was that the tournament does not confront with domestic schedule of most cricketing nations during that period. Alignment with the summer vacation breaks for the school and colleges gave a perfect edging to IPL. It was in this milieu that the T20 format seized the millions of cricket fans imagination. Practically cricket played during a six-month window across the world in various nations. Temperate Zone countries which are not affected by rainy season for this countries cricket is a summer time sport (April-September in England and October-March in Australia, South Africa and New Zealand). On the other hand, monsoon season is in a full swing were playing cricket is next to impossible in the Asian countries which is situated in the Northern hemisphere. The tropical West Indies deals with scorching hot weather through the year. This is in every respect why the IPL is said to be a scheduling masterstroke which gives a new outlet to commercial business.

Communication Industry :- In 2019, data collection stated that T20 broke all the previous record. 462 million viewers watched T20 match in

TV. From this it is clear that the biggest weapon to bring the people and country closer is media. (Gupta, 2011)² explained the importance of IPL getting more popular due to contracts signed with foreign Players. This statement may be true for some. The importance and need for innovation is to nail the emerging competition in the game of cricket.

A television right to Sony was a billion-dollar sale owing to IPL. SONY MAX, a channel mainly broadcasting Hindi movies but the strategy of broadcasting IPL in the initial stages worked well which increased viewership on Non-sports channels also. Big break of HD (high Definition) channels for sports, even viewers took the privilege of watching IPL in regional language was an instant boom in media. Streaming on OOT platforms was a huge success for IPL and providing better experience without the advertisement break. This has been a big achievement, fetch lot of income and exposor to media. India proved to be dominating the sporting market by virtue of IPL.

The figure below indicates the media ranking in this year. This year consolidated digital rights is won by Viacom18 and along with it TV, Disney Star has be a successful winner of TV broadcast rights.

Figure : 1



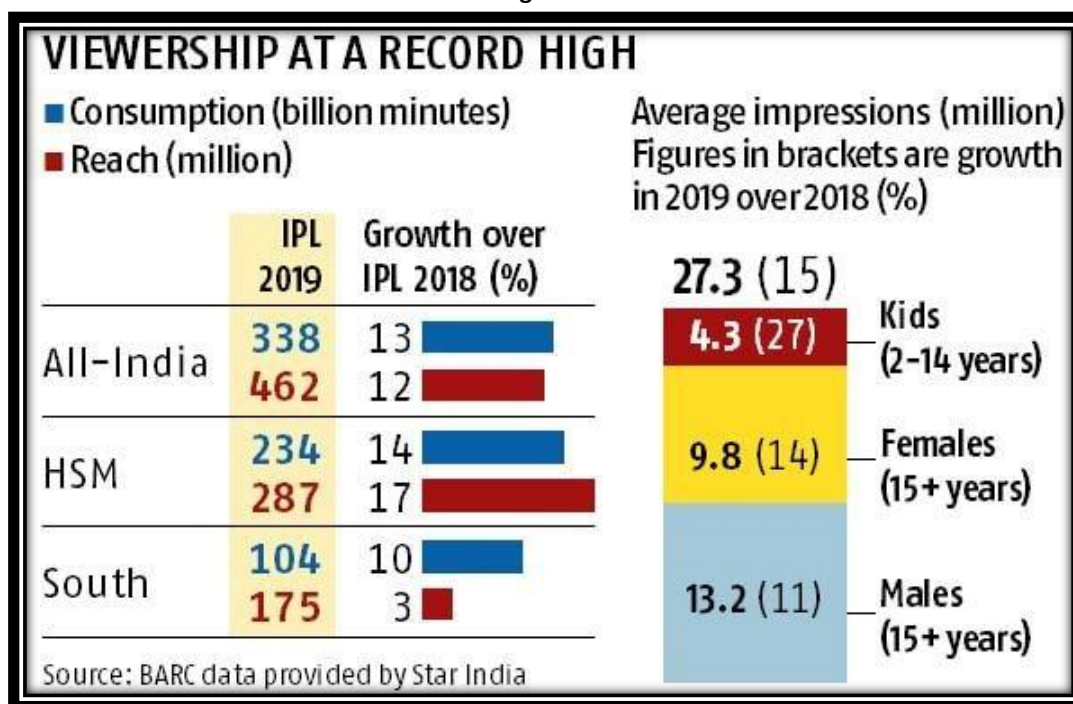
Source: <https://www.moneycontrol.com/news/trends/sports-trends/story-in-charts-the-rise-of-ipl-to-the-worlds-second-most-valuable-sports-league-8728321.html/amp>¹⁰

Viewership Inflated :- Viewers have increased due to the entertainment and excitement it carries till the last moment. Cricket is a game that is popular among all the age group. The viewership among school and college is more and in addition to it female’s viewership gradually increased over the years. The timing of the matches is an additional reason to increase the viewership which is around 7.70-8pm and get over before 12. It’s the time when the people are at their home surfing the channel for entertainment after along working day. Increase in viewership is indirectly affecting the GDP of the country and IPL is not only watched in India but also abroad. Knowledge and interest in sports is raised in the youth which is a good sign of

fit India. Observing and implementing the same in real life after seeing the potential of great Indian players. Youth are encouraged to take sports as their career. (Kadapa, December 2013)⁹ Moreover being one of the most popular Leagues of sport World, it serves as a great source of entertainment to millions.

The figure below indicates the different age group religious attracted towards the IPL. Kids between the 2 to 14 years are the viewers and females increasing day after day to watch the spectacular mega event and males are the main viewers throughout their life time as cricket runs in to the Indian blood.

Figure: 2



Source: <https://www.kreedom.com/analysis-of-growth-in-ipl-viewership-a-case-study/?amp>¹²

Brand :- Attraction of the sports has been successful to capture the audience and sponsorship from branded sports accessories and drinks. But need to be careful with the other side of the media if not handled properly. It has noted time and again that media like sports columnist can influence the readers and people in presenting the controversy. Controversy part can ruin the carrier of the sportsman. Brand of IPL grow off the field and on the field exponentially. Tata Group is the sponsor for IPL which one of the foremost industrial house in India, Umpires and match officials are sponsored by PayTM and others Dream!!, Upstox, UnAcademy, Rupay, Swiggy etc pay BCCI for airing ads in between the match. Strategic Time Out is sponsored by CEAT tyres.

The figure given below indicated that Chennai Super Kings, Brand Value is the highest among the eight IPL teams and following is Mumbai Indian which is all in crores.

Figure: 3

Brand Value of 8 IPL Teams	
Chennai Super Kings	Rs 2700 crore
Mumbai Indians	Rs 2500 crore
Kolkata Knight Riders	Rs 543 crore
Royal Challengers Bangalore	Rs 536 crore
Sun risers Hyderabad	Rs 442 crore
Delhi Capitals	Rs 370 crore
Punjab Kings	Rs 318 crore
Rajasthan Royals	Rs 249 crore

Source: <https://www.mykhel.com/cricket/ipl-2022-brand-value-and-market-value-of-mi-csk-rcb-srh-kkp-pbks-rr-dc-check-amazing-numbers-189224.html>¹¹

Employment Opportunities :- IPL has taken the credit of creating thousands of job opportunities in various fields. This comprises of professionals from sports areas, such as, nutritionist, physiotherapist, video analysts, commentators, coach's, editors, graphic operators, designers, media manager, medical teams, cheerleaders, security and, support staff, to stadia related employment, such as stewarding are the unsung heroes who plays a major role in the success of the team and IPL. IPL cricket players are also teeming with member (umpires, scorers, grounds men and other workers) having various roles. Significant role is to affix employers with jobseekers builds ancillary work for crew in the recruitment space.

Revenue :- BCCI has argument that the revenue coming from IPL going in promoting Cricket. BCCI was once a charitable organisation which was exempted from taxes. Arrival of IPL which is commercial activity and huge amount of tax for government comes in the form of revenue through the league of IPL. Professional services are taxed under the section 194 of Income Tax Act,1961 whether it is anchors, coaches, commentators, event managers, Nutritionist, sportsperson, umpires, referees, trainers, etc. Special cell officers are appointed by IT department in Mumbai to monitor the revenue generated from IPL. Indian Premier League contributes a huge share to increase the GDP of India.

IPL has a turnover in multimillions which direct effects the GDP of the country. Higher GDP indicate the nation is flourishing in many sense. Growth in business and services due to mega event organised in three states gives a nation a clear picture of raise in sales and services at its best. Tickets sales, sponsorship, advertisement, broadcasting rights lot of money is generated by IPL which is a revenue to government and a straight way to increase India's GDP. The league graph has shown a persist increase within public and merchandising enthusiasm which may cross the total revenues of US\$7.6 billion in the upcoming five year cycle. The league has widespread in generating income for the country.

The below figures give a clear picture about the revenue generated by Chennai Super Kings (253.70 crores and profit after tax 40.26 crores) and Mumbai Indians (336.26 crores and profit after tax 428.99 crores) which is remarkable achievement for the developing country like India.

Figure : 4



Source: <https://www.moneycontrol.com/news/trends/sports-trends/story-in-charts-the-rise-of-ipl-to-the-worlds-second-most-valuable-sports-league-8728321.html/amp>¹⁰

1. **Tourism** :- Foreign players participate in IPL in one or the other team. Fans visit India for watching their matches which is a boost to a tourism sector. It generates income through flight, travelling, staying in the hotel, restaurant, purchase of tickets, shopping, etc. Sports encourage social life. International visitors from United Kingdom, South Africa and Australia are prime tourist during the season of IPL. (Maguire, 2006)³ stressed the importance of sociological factors playing an important role in influencing the people in patronizing sports and games. Cricket fans from all the corner of the world travel to watch IPL matches in different states and cities of India. India possesses 11th position in

the Asia Pacific region. World Economic Forum has reported India as one of the most tantalizing travel destinations worldwide which has bagged 34th place in the list tourism.

Conclusion :- This paper has pinned on how Indian Premier League matches which commenced from 2008 and astir successful as a sporting event business which has gone far beyond expectation. BCCI was once a charitable organisation is now considered as mega block buster event organisation due to IPL which is captivating millions of heart. Full credit goes to mastermind of scheduling the event which has victoriously given a way to business world, a new opening and never the less recognition to the players and country, employment opportunities and raising the GDP of

Indian economy. Unfavourable aspect need to be taken care or freeze out completely is controversies, gambling and allegation which have pointed on the players and nation. (Naha, 2013)⁴ highlighted that various cricketing controversies took place in the past and damaging the credibility of the sports. Cricket has been identified as gentleman's game and let the team participate with true sportsman spirit. Country like India can lay hand on other businesses also which can contribute the GDP of the Indian Economy.

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A Study of Performance of Pradhan Mantri Mudra Yojana (PMMY) from Maharashtra Perspective: Financial Support for MSMEs in Global Turbulence

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Abstract :- The Micro, Small and Medium Enterprises (MSME) sector contributes significantly in the economic and social development of the country by generating employment opportunities at comparatively lower capital cost for skilled and unskilled labour and enhancing entrepreneurship. The MSMEs serve as ancillary units to large companies and produce a diverse range of products and services to meet demands of domestic and global markets. In spite of the major role of MSMEs in the economic and social growth of the society in the different regions in India, MSMEs in states like Maharashtra are facing various challenges such as lack of finance, sub-optimal scale of operations, technological obsolescence, supply chain inefficiencies, skill development, increasing domestic and global competition, fund shortages, change in manufacturing strategies and turbulent and uncertain market scenario. Entrepreneurs of MSMEs in Maharashtra have been facing difficulties in accessing financial resources and lack of sufficient finance at affordable interest rates. Government of India has launched Pradhan Mantri Mudra Yojana (PMMY) to provide financial assistance for MSMEs growth and development. The objective of this study is to describe features and products of Pradhan Mantri Mudra Yojana (PMMY) for MSMEs and to analyse the performance of Pradhan Mantri Mudra Yojana (PMMY) in the growth of MSMEs in Maharashtra for the period of 2015-16 to 2020-21.

Keywords :- Micro, Small and Medium Enterprises (MSMEs), Pradhan Mantri Mudra Yojana (PMMY), Compound Annual Growth Rate (CAGR).

Introduction :- Pradhan Mantri Mudra Yojana (PMMY) is a scheme launched by the Hon'ble Prime Minister on 8th April 2015 for credit assistance up to 10 lakh to different sectors, especially focus on the micro, small and medium enterprises

(MSMEs) including non-corporate, non-farm small/micro enterprises. Mudra loans under PMMY are given by Commercial Banks, RRBs, Small Finance Banks, MFIs and NBFCs. Mudra yojana has classified under three products namely 'Shishu', 'Kishore' and 'Tarun' to signify the stage of growth of MSMEs. MUDRA yojana is an integrated financial support services provider with global best practices to achieve their comprehensive economic and social development in the global turbulence. As per NSSO survey (2013), Around 5.77 crore small/micro units in the country and directly and indirectly engaging around 12 crore people, most of them are individual proprietorship/Own Account Enterprises. As per survey report, over 60% of units are owned by individuals belonging to Scheduled Caste, Scheduled Tribe or Other Backward Classes. Most of the proprietors under such caste categories are forced to borrow from informal sources or use their limited owned funds but Mudra Loan Scheme has been proposed to bridge this gap. MUDRA Loan Scheme will aim to increase the confidence of the aspiring young person to become first generation entrepreneurs or start-up and also of existing small businesses to expand their activities.

Objective :-

1. To understand features of Pradhan Mantri Mudra Yojana (PMMY).
2. To study the major products and schemes offered by the MUDRA bank.
3. To analyse the performance of Pradhan Mantri Mudra Yojana (PMMY) in the state of Maharashtra for the period of 2015-16 to 2020-21.
4. To give recommendation to improve Pradhan Mantri Mudra Yojana (PMMY).

Review of literature :-

1. Binija George and Dr. J Nalini (2017), observed that a large number of schemes have been taken in the past few years which is a step in the right direction. It is believed that creating a bank like MUDRA Bank will hugely benefit small manufacturing units and self-employed individuals in rural and urban areas with financing requirements up to Rs. 10 lakh and existing small businesses will be able to expand their activities.
2. Book titled "A Journey of nurturing the aspirations of the informal sector" implementing the success of Pradhan Mantri Mudra Yojana (PMMY) 2017, it covers success stories of MUDRA scheme. This book concluded that Mudra loan objective of 'funding the unfunded' has twin purposes of seeding new enterprises and expanding existing units. Out of a total of 3.49 crore enterprises supported under PMMY during 2015-16, nearly 36 per cent (1.25 crore accounts) were first time borrowers (new entrepreneurs). Out of a total of 3.49 crore accounts a whopping 79 per cent (2.76 crore women) were funded under PMMY. A total of 1.84 crore accounts—nearly 53 per cent of the total financed under PMMY belonged to SC/ST/OBC category.
3. Gade Surendar (2018), studied MSMEs' role in economic growth in India. Objectives of the study are growth and performance of the MSMEs. The MSMEs are very helpful to remove the regional imbalances, utilize the natural resources and provide more employment per unit. This study concludes that Mudra scheme contribution is to be sustained, then MSMEs uniqueness needs to be nurtured in an overt and explicit manner.
4. Jadhav Radhyesham,(2020), 'Tamilnadu women top the list of MUDRA loan scheme beneficiaries', this article published in the hindu business line, this article observes that over Rs.15 crore loans amounting to Rs.4.78-

lakh-crore have been disbursed to women borrowers since the inception of the Pradhan Mantri Mudra Yojana (PMMY) with Tamil Nadu. Loans under this scheme are extended to eligible borrowers for manufacturing, processing, trading, services, and activities allied to agriculture. It helps in creating income-generating activities and employment opportunities.

5. Mahammad Shahid, Mahammad Irshad (2016) focuses on descriptive study on Pradhan Mantri Mudra Yojana (PMMY). This paper observed the objectives, products and performance of this yojana in Karnataka. It observed that this scheme is performing well in the state of Karnataka.

Research Methodology :- The study will be both qualitative and quantitative in nature. Secondary sources will be explored for data collection. The secondary data will be collected from journals, Magazines, Publications, and Reports of industries, books, periodicals, articles, research papers, working papers, thesis, websites, manuals and booklets.

A. Features of Pradhan Mantri Mudra Yojana (PMMY) for MSMEs :-

- Mudra loans are covered under the Credit Guarantee Schemes from Govt. of India.
- Mudra loans are extended in three categories such as Shishu (upto Rs.50,000), Kishor (above Rs. 50,000 and upto Rs. 5 lakh) and Tarun (Above Rs.5 lakh and upto Rs. 10 lakh).
- Scheduled Commercial Banks, RRBs and Cooperative Banks wishing to avail of refinance from MUDRA and to peg their interest rates, it is advised by MUDRA Ltd.
- Banks are mandated not to accept collateral any security sanction the loans upto Rs.10 lakh extended to units in the Micro Small Enterprises (MSE) Sector under this scheme.
- Eligible borrowers are individuals, private ltd. company, proprietary concern, partnership firm, public company and any other legal forms.
- All non-farm enterprises of small or micro

firms engaged in the income generating activities can avail Mudra loan.

- Mudra loan can be availed through Mudra cards.
- Mudra support funding are classified in two types, those are Micro Credit Scheme (MCS) for loans up to Rs. 1 lakh finance through MFIs and Refinance Scheme for Commercial Banks / Regional Rural Banks (RRBs) / Small Finance Banks / Non-Banking Financial Companies (NBFCs).

B. Products and schemes offered by the MUDRA bank -

1. **Sector / Activity Focussed Schemes:** To maximize coverage of beneficiaries to meet requirements of business activities such as Social & Personal Service Activities, Land Transport Sector, Community, Food Products Sector, Textile Products Sector etc.
2. **Micro Credit Scheme:** Under this scheme financial support gives to Micro finance Institution (MFIs) for lending to individuals/groups of individuals / SHGs specially for creation of qualifying assets, setting up / running micro enterprises as per MSMED Act and non-farm income generating activities.
3. **Missing Middle Credit Scheme:** Financial support to financial intermediaries for lending to individuals for setting up / running micro enterprises as per MSMED Act and non-farm income generating activities.
4. **Refinance Scheme for RRBs / Co-operative Banks:** It helps banks to refinance loans extended to micro enterprises as per MSMED Act with beneficiary loan size up to Rs.10 lakh per enterprise / borrower for manufacturing and service sector enterprises.
5. **Mahila Uddyami Scheme:** financial support to the Micro finance Institution (MFIs), for

on lending to women / group of women / JLGs/ SHGs for creation of qualifying assets as per RBI guidelines towards setting up / running micro enterprises as per MSMED Act and non-farm income generating activities.

6. **Business loans for Traders and Shopkeepers:** Financial support for lending to individuals for running their shops / trading & business activities / service enterprises and non-farm income generating activities with beneficiary loan size of upto Rs.10 lakh per enterprise / borrower.
7. **Equipment Finance Scheme for Micro Units:** Mudra scheme helps to lend finance to individuals for setting up micro enterprises by purchasing necessary machinery / equipment with per beneficiary loan size of upto Rs.10 lakh to expand their production capacity.
8. **Innovative offerings:** MUDRA scheme specially focus on the innovative ideas like a pre-loaded MUDRA card, portfolio credit guarantee, creation of resources for credit enhancement, underwriting for intermediaries, banking correspondent model.

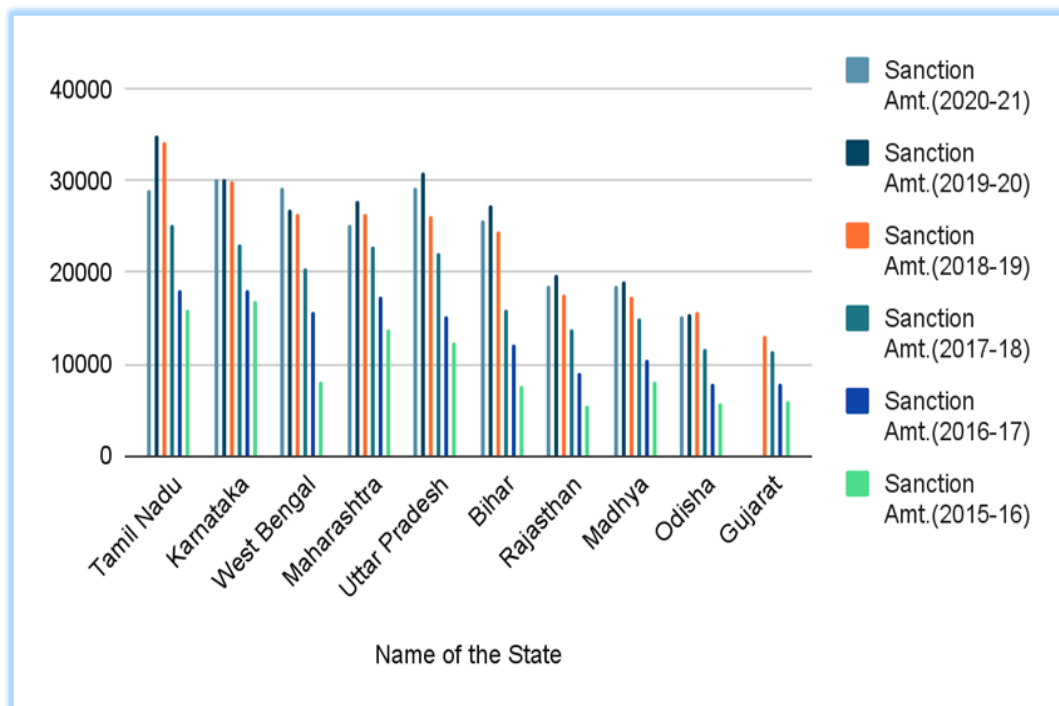
C) The performance of Pradhan Mantri Mudra Yojana (PMMY) in the state of Maharashtra: The performance of the Pradhan Mantri Mudra Yojana (PMMY) in the state of Maharashtra is analyse on the basis of sanction MUDRA loan in India and Maharashtra and number of accounts opened for MUDRA loan in Maharashtra for the period of 2015-2020.

Table-1: State-Wise Performance of Top 10 States –PMMY for the period of 2015 – 2020 (Total Sanctioned Amount) [Amount Rs. in Crore]

Name of the State	Sanction Amt. (2020-21)	Sanction Amt. (2019-20)	Sanction Amt. (2018-19)	Sanction Amt. (2017-18)	Sanction Amt. (2016-17)	Sanction Amt. (2015-16)	CAGR %
Tamil Nadu	28,967.97	35,017	34,260.05	25,331.68	18,052.68	15,846	10.58
Karnataka	30,199.18	30,188	29,995.35	23,009.73	18,002.55	16,861	10.20
West Bengal	29,335.98	26,790	26,462.13	20,552.19	15,695.01	8,034	24.09
Maharashtra	25,208.63	27,903	26,438.94	22,751.40	17,286.66	13,806	10.56
Uttar Pradesh	29,231.35	30,949	26,190.58	22,077.89	15,282.61	12,276	15.56
Bihar	25,589.31	27,442	24,405.99	15,919.40	12,190.60	7,554	22.55
Rajasthan	18,571.38	19,662	17,506.39	13,862.55	9,024.71	5,485	22.54
Madhya Pradesh	18,474.24	19,060	17,407.92	14,886.15	10,506.45	8,097	14.74
Odisha	15,328.63	15,419	15,770.28	11,558.91	7,891.34	5,695	17.94
Gujarat	-	-	13,216.78	11,386.52	7,781.94	6,035	21.65

Source: <https://www.mudra.org.in/>

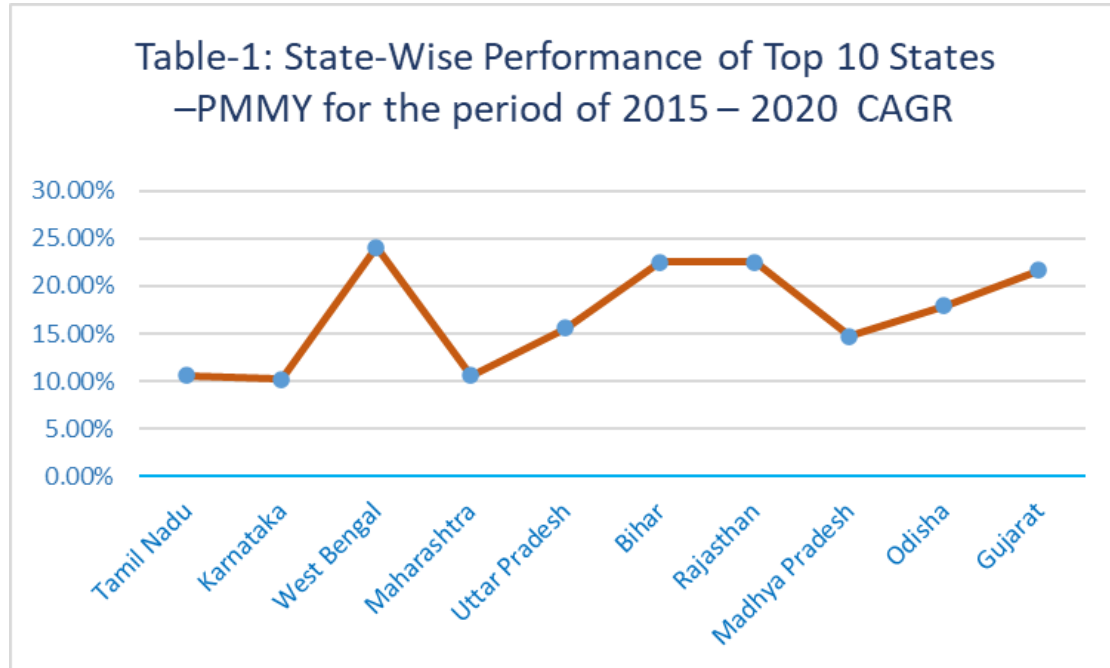
1.1.1 State-Wise Performance of Top 10 States –PMMY for the period of 2015 – 2020 (Total Sanctioned Amount) [Amount Rs. in Crore]



Source: <https://www.mudra.org.in/>

It is observed that in the graph 1.1, total sanction amount of PMMY is increasing in Maharashtra over the period of time but it is comparatively less than the states of Tamil Nadu, Uttar Pradesh, West Bengal and Karnataka.

1.1.2 State wise performance of top 10 states- PMMY for the period 2015-2021 CAGR



Source: <https://www.mudra.org.in/>, CAGR:- compound annual growth rate

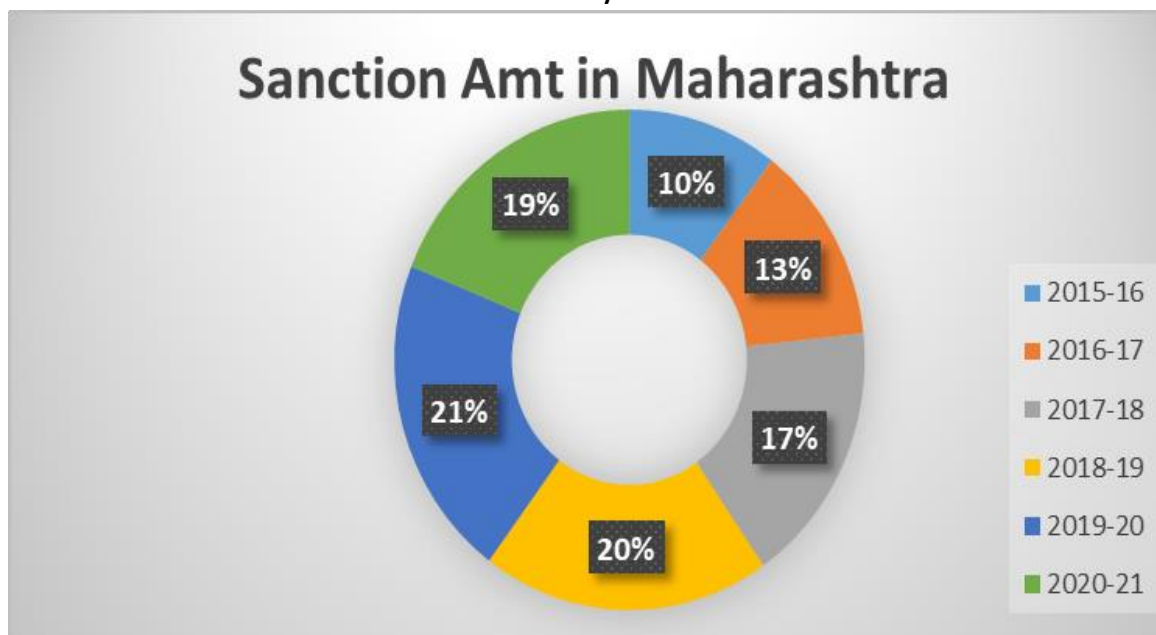
In the above graph it is observed that compound annual growth rate of total sanction amount of PMMY for the period of 2015-2020 is **10.56 % which is comparatively lower than the** West Bengal, Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Odisha and Gujarat.

Table-2: Total Loan Sanctioned year wise of Maharashtra State: [Amount Rs. in Crore]

Sr. No	Years	Total Sanction Amt in India	Sanction Amt in Maharashtra	Share of Maharashtra in total Amt sanctioned in (%)
1	2015-16	1,37,449	13,806	9.95
2	2016-17	1,80,528	17,286	10.44
3	2017-18	2,53,677	22,751	11.15
4	2018-19	3,21,721	26,439	12.16
5	2019-20	3,37,495	27,903	12.09
6	2020-21	3,21,759	25,208	12.76

Source: <https://www.mudra.org.in/>

Chart 2.1.1 Total Loan Sanctioned year wise of Maharashtra State:



Source: <https://www.mudra.org.in/>

From the chart, it can be observed that the amount of loan sanctions and growth rate of sanctioned amount has been increasing in diminishing ways after 2017 in Maharashtra state. It shows, banks are implementing government schemes in a very positive way but need to expand scale of the amount of loan sanctions and growth rate of sanctioned amount.

Table-3: PMMY -Performance according to category in Maharashtra from 2014-2021.

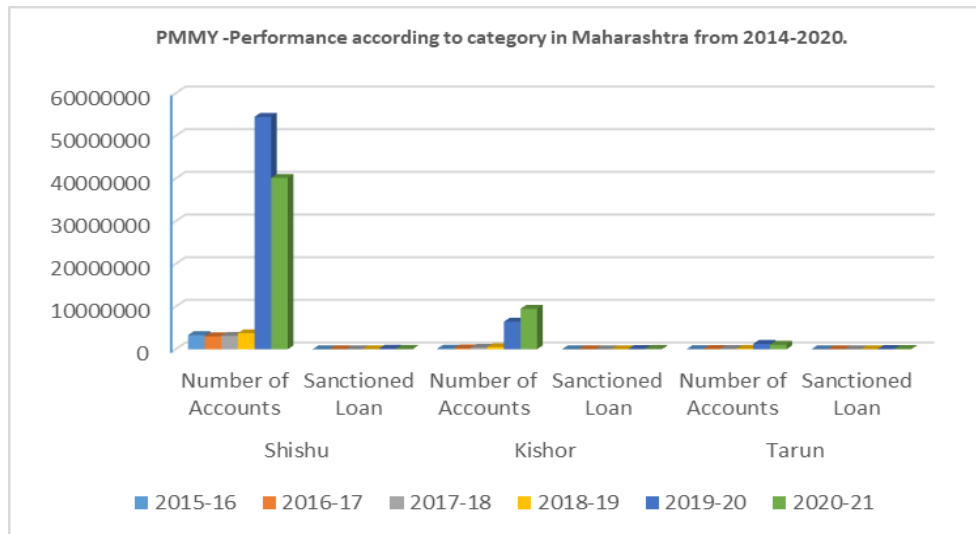
[Amount Rs. in Crore]

Category/ Year	Shishu		Kishor		Tarun	
	Number of Accounts	Sanctioned Loan	Number of Accounts	Sanctioned Loan	Number of Accounts	Sanctioned Loan
2015-16	3337382	6695.06	154441	3645.03	43242	3466.39
2016-17	3054130	6961.75	220662	5082.03	69362	5242.88
2017-18	3145685	8093.38	354818	7529.9	96117	7128.12
2018-19	3750570	10255.06	510249	8524.12	125162	7659.76
2019-20	54490617	163559	6471873	95578	1285116	78359
2020-21	40180115	109953	9486160	132516	1068771	79290
CAGR	51.39%	59.43%	98.63%	82.01%	70.67%	68.48%

Source: <https://www.mudra.org.in/>

From above table it is observed that compound annual growth rate (CAGR) 51.39% number of accounts and 59.43% loan sanctioned for Shishu category which is lower than 98.63% number of accounts and 82.01% loan sanctioned for Kishor category for the period of 2015-2021

Graph-3.1.1: PMMY -Performance according to category in Maharashtra from 2014-2021.



Source: <https://www.mudra.org.in/>

Findings :-

- 1) This study observed that Maharashtra was the beneficiary of sanctioned MUDRA loan standing at the top third position until 2017-18 and standing fourth position in 2020-21 in India.
- 2) Mudra loans have been steadily increasing in sanction of loans to Kishor and Tarun category in Maharashtra as compare to shishu category.
- 4) It is observed that compound annual growth rate (CAGR) is 51.39% of mudra loan accounts of Shishu category which is lower than 98.63% of Mudra loan accounts of Kishor category and 70.67% of Mudra loan accounts of Tarun category.
- 5) It can be observed that the amount of loan sanctions and growth rate of sanctioned amount has been increasing in diminishing ways after 2017 in Maharashtra state.
- 6) This study observed that banks are implementing financial support government schemes like MUDRA Yojana in a very positive way to achieve continued growth of MSMEs.

Recommendation :-

- 1) The loans sanctioned to the Shishu category should be increased.
- 2) It is necessary to increase loans sanctioned to economically backward class people. This category

in the report of Mudra has not been mentioned.

- 3) There is a need for more efforts to increase the size of loans as Maharashtra is an industrialized state in India.
- 4) It is important to increase the level of awareness about PMMY, aimed to facilitate credit flow to the MSMEs sector to become competitive enough in global Turbulence.
- 5) Banks should take initiatives in growth if sanctioned amount of MUDRA loan.

Conclusion :- Thus, the Government of India launched various financial supporting schemes to tackle the problem of lack of finance availability to the MSMEs sector. Pradhan Mantri Mudra Yojana (PMMY) is continuously working to achieve financial inclusion and provide credit to micro units in Maharashtra at large scale. This scheme has benefited total Rs.12.27 crore loan accounts with a sanction of nearly Rs. 5.71 lakh crore from 2015-16 to 2018-19. It has also resulted in benefiting entrepreneurs, thereby providing employment to a large number of skilled and unskilled laborers across the country and making them stronger and competitive enough in global Turbulence.

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Role of Advanced Education in Harnessing Human Capital

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Abstract :- Education is the most powerful tool that has the power to change the entire world. For any country, the level of education of its people is important for eliminating poverty, gender inequality and fostering peace in the nation. Further, the development of human abilities and knowledge of the population or labour force of a country can be achieved through education. Education is a critical element of a country's human capital that increases the efficiency of the labour force and helps the economy to move up in creating value. Human capital formation comprising of health, education and standard of living of people plays a very important role in a country's economic development. Primary Education makes a society literate and capable of reading and writing. Poor underdeveloped nations need to analyse and improve the level of primary education in their country. However, if a developing nation intends to march towards the dream of becoming a developed nation, then the role and importance of advanced education cannot be looked down upon. Advanced education aims at improving the cognitive skills of the labour force which in turn helps to build the human capital of a country. Human Capital is an important aspect of economic development. India is going to be entering its centenary year in another twenty five years. Education will play a key role in making India a developed nation while it enters 2047 and celebrates its 100th year.

Key Words :- Advanced education, human capital, Economic development and India@100.

Introduction :- India, currently is classified as a developing economy based on its Gross Domestic Product (GDP)¹⁵. India celebrated its 75th Azaadi ka Mahotsav in 2022 and will be entering its centenary year in 2047. The country aims to bridge

across the "middle - income trap" and evolve into a developed nation in the next 25 years. The competitiveness roadmap for India @ 100 is a broad view of the goals that India has set for itself for the coming 25 years. It defines new principles for India's development approach and outlines a new architecture for policy implementation.

India is a country that has shown its immense potential to deliver high and sustained economic growth since seven decades. But India still classifies as a lower middle-income country. One of the very important milestone to achieve is to improve the level of advanced education in the country.

The level of advanced education plays a significant role in harnessing human capital of a country. Human capital is an important factor in the social progress and economic development of a country. Thus, it is intended to understand the role of advanced education in harnessing human capital and its impact on the economic development of a country.

Objectives of the study :-

1. To understand the guiding principles laid down by the competitive roadmap issued for achieving the India @ 100 target by the year 2047.
2. To understand the relevance of education as a component of economic and social progress of a country.
3. To evaluate the level of tertiary education across various countries by studying the percentage of population having completed tertiary education in various countries.
4. To understand the trend in the population attaining tertiary education country wise since the past few years.
5. To analyse the relation between the level of tertiary education in a country and the economic development of that country

measured in terms of gross domestic product (GDP) (Current).

Research Hypothesis :-

H0: There is no relation between the population having attained tertiary or advanced education and the economic development of a country.

H1: There is a relation between the population having attained tertiary or advanced education and the economic development of a country.

Review of literature :-

Pasban, Mohammad Reza & Nojedeh, Sadegheh. (2016) :- has studied the role of human capital in the organization and the characteristics of human capital. The results of the researcher indicate that the common index, which is important at all levels of management in the organization, is human skill. Those who work in the central core of the organization must develop higher skills. These people must have enough knowledge, information, innovation, and creativity to increase the customer's satisfaction and create competitive advantage for the organization.

Chankseliani, M., Qoraboyev, I. & Gimranova, D(2021) :- have studied the ways in which higher education can help to achieve and exceed the outcomes enshrined in the Sustainable Development Goals.

Howell, C., Unterhalter, E., & Oketch, M. (2022) :- developed the conceptual framework to illustrate the ways in which the relationship between tertiary education and development is enacted. The theory intended to establish evidence that inclusion of tertiary education in the sustainable development goals is recognition of the potential role of post- compulsory education in global development.

Research Methodology :-

Nature of Research :- The research study is exploratory in nature. As per ¹⁶Saunders (2004), in

¹⁶ Saunders, M., Lewis, P. and Thornhill, A. (2009). Research Methods for Business Students, Pearson, New York

his book Research methodology, exploratory study is a valuable means of finding out 'what is happening; to seek new insights: to ask questions and to assess phenomena in a new light. The study has aimed to explore the relation between the level of advanced education in harnessing human capital of a country thereby impacting the economic development of that country.

Data :- Secondary sources of data have been used for the purpose of the study. Published sources like news article, published databases of recognized agencies, news articles, research reports, dissertations and theses have been used.

Data Analysis :- Correlation analysis has been used to analyse the statistical relationship between the two random variables.

Data Presentation :- Appropriate statistical data presentation techniques such as tables, charts and diagrams have been used.

Competitive Challenges before India :- The competitiveness diagnostics have revealed three particular challenges that India will have to address to be classified as a developed nation in 2047:

- **The shared prosperity challenge** :- India's headline GDP growth has been strong and even accelerating. But weak social progress, rising inequality, and a lack of convergence across regions suggest that this growth has failed to translate into the expected improvements in quality of life for many Indians.
- **The jobs challenge** :- India has a vast demographic opportunity with a young and growing working-age population. But it has increasingly struggled to create jobs for a large part of its labour force, especially women and the less skilled.
- **The policy implementation challenge** :- India's government has pursued an ambitious agenda of economic reforms, largely focused on the relevant issues and based on mostly sound conceptual principles. But the impact on job creation and the growth of firms has

fallen short of ambitions.

The Competitiveness Roadmap :- The Economic Advisory Council, in its competitive roadmap has laid down the '4 S' guiding principles. The principles include:

- **Shared Prosperity:** Prosperity needs to be shared across all parts and regions of India
- **Social Prosperity:** Prosperity goals need to be matched by social progress
- **Sustainable Prosperity:** Prosperity growth needs to be environmentally sustainable
- **Solid Prosperity:** Prosperity needs to be solid and resilient in the face of external shocks

The principle of social prosperity mentions about matching prosperity goals by social progress. Social progress refers to the capacity of a society to meet the basic human needs. It can also be understood as aggregate improvement in the quality of life for the population. Quality of life is affected by not only income but a wide range of non - GDP related factors. The social progress Index measures the social progress of a country. The index takes into consideration three dimensions:

- Basic Human needs
- Foundations of well being
- Opportunity

The basic human needs dimension further comprises of the following factors :-

- Nutrition and medical care
- Shelter
- Water and sanitation
- Personal safety.

The foundation of well-being comprises of the following factors :-

- Access to basic knowledge
- Health and wellness
- Access to information and communications
- Environmental quality

The opportunity dimension comprises of the following factors :-

- Personal rights
- Personal freedom and choice

- Inclusiveness
- Access to advanced education

India ranks 115th among 163 countries on the overall measure of Social Progress Index. One of the very important factors of measuring social progress index in access to advanced education.

What is Education? :- In the words of Nelson Mandela, "Education is the most powerful weapon that can be used to change the world." These words highlight the importance of education in eliminating poverty, gender inequality, fostering peace in the nation. Further, the development of human abilities and knowledge of the population or labour force of a country can be achieved through education. Education is a critical element of a country's human capital that increases the efficiency of the labour force and helps the economy to move up in creating value. Human capital formation comprising of health, education and standard of living of people plays a very important role in a country's economic development. Primary Education makes a society literate and capable of reading and writing. Poor underdeveloped nations need to analyse and improve the level of primary education in their country. However, if a developing nation intends to march towards the dream of becoming a developed nation, then the role and importance of advanced education cannot be looked down upon. Advanced education aims at improving the cognitive skills of the labour force which in turn helps to build the human capital of a country.

System of higher education in India :- The higher education system of India is one of the largest in the world. The term 'higher education' with respect to India refers to the tertiary level education that is imparted after 12 years of schooling (10 years of primary education and 2 years of secondary education). The entire higher education ecosystem in India comprises around more than a thousand universities and more than forty-two thousand colleges that provide training and education in various fields. All these institutions fall under the purview of the Ministry of Education.

On the basis of management, the universities have been classified into:

- Central Universities: The Central Universities are set up through an Act in Parliament
- State Universities: The State Universities are set up through an Act in the State Legislature.
- Private Universities: The Private Universities are set up through an Act in the State Legislature. It includes specialized institutions and multidisciplinary research universities.
- Deemed Universities: Deemed Universities are well-performing institutes that are declared to be of equal standing as the universities by the Central Government on the advice of the Union Grants Commission (UGC).
- Institutes of National Importance: These are eminent institutions of India that are known to develop highly skilled individuals. They are funded by the Government of India and include all the Indian Institutes of Technology (IIT's) , National Institutes of Technology (NIT's) and All India Institute of Medical Sciences (AIIM's).

Colleges :- The colleges enabling higher education in India can be affiliated either with central or state universities. The private colleges are mostly affiliated with state universities. Further, there are autonomous colleges as well that enjoy autonomy in terms of deciding curriculum, admissions and examination process. But they are also affiliated with a government university (central or state).

Data Analysis :-

Population with Tertiary Education across various countries :- Population with tertiary education is defined as those having completed the highest level of education. This includes both theoretical programmes leading to advanced research or high skill professions such as medicine and more vocational programmes leading to the labour market. The data tabulated below shows the percentage of population in the age group of 25 to 34 years who have attained tertiary education

Table 1: Population with tertiary education 25-34 year olds
Source: OECD (2022), Population with tertiary education (indicator)

Country	2018	2019	2020	2021
Argentina	17.46	18.86	18.21	19.03
Australia	51.39	52.48	54.61	54.31
Austria	40.46	41.61	41.42	42.44
Belgium	47.40	47.28	48.51	50.87
Brazil	20.83	21.03	22.67	23.03
Canada	61.75	62.97	64.39	66.36
Colombia	28.96	29.87	29.99	30.53
Costa Rica	27.82	31.35	32.47	30.26
Czech Republic	33.33	32.58	33.00	35.04
Denmark	45.83	47.10	42.58	49.04
Estonia	43.63	42.76	43.15	43.18
Finland	41.31	41.82	44.67	40.06
France	46.94	48.05	49.45	50.26
Germany	32.28	33.26	34.88	35.88
Greece	42.82	42.41	43.69	44.18
Hungary	30.58	30.59	30.69	32.91
Iceland	42.12	42.18	38.30	41.92
India	17.59	19.49	20.50	21.00
Indonesia	17.34	17.47	18.11	18.66
Ireland	56.17	55.45	58.38	62.88

Israel	47.11	47.04	47.26	46.01
Italy	27.86	27.93	28.63	28.27
Japan	60.73	61.51	63.55	64.81
Korea	69.57	69.80	69.81	69.29
Latvia	41.65	43.81	44.25	45.50
Lithuania	55.58	55.19	56.18	57.48
Luxembourg	54.78	54.99	58.15	63.12
Mexico	23.36	23.59	25.29	27.06
Netherlands	47.60	49.10	52.26	55.60
New Zealand	45.81	43.79	43.91	45.32
Norway	48.21	48.66	50.84	55.03
Poland	43.52	43.48	42.43	40.64
Portugal	35.08	37.37	41.91	47.45
Slovak Republic	37.21	39.16	39.04	39.50
Slovenia	40.71	44.11	45.43	47.95
Spain	44.26	46.51	47.38	48.73
Sweden	47.53	48.37	49.13	49.22
Switzerland	51.21	52.70	52.97	52.27
United Kingdom	50.75	51.81	55.83	57.47
United States	49.37	50.38	51.86	51.17

Table 1: Population with tertiary education 25-34 year olds

Source: OECD (2022), Population with tertiary education (indicator)

Analysis of population with tertiary education :-

- Out of the 40 countries under consideration, 19 countries have shown an increasing trend in terms of population with tertiary education from 2018 to 2021. These 18 countries include United Kingdom, Sweden, Spain, Solvenia, Portugal, Norway, Netherlands, Mexico, Luxembourg, Latvia, Japan, India, Indonesia, Hungary, Germany, France, Colombia, Canada and Brazil.
- The population that attained tertiary education in the age group of 25 to 34 years in countries like Argentina, Austria, Denmark, Iceland and Slovak Republic increased in the year 2019 as compared to 2018 but decreased in 2020 as compared to 2019. However, it again increased in 2021 as compared to 2020.
- In countries like Australia, Costa Rica, Finland, Italy, Korea, Switzerland and the United States, there was an increase in the population with tertiary education in the years 2019 and 2020 when compared to the previous year respectively. However, there was a decline in the population with tertiary education in the year 2021 when compared to the year 2020.
- Poland is the only country wherein the population with tertiary education has been declining since 2018 to 2021 and Israel is the only country where the population with tertiary education increased in 2020 as compared to 2019 and 2018 but declined again in 2021.
- Belgium, Czech Republic, Estonia, Greece, Ireland, Lithuania and New Zealand are the countries where there was a decrease in the population in 2019 when compared to 2018. However, in 2020 and 2021, there has been an increase in the population with tertiary education.
- In the year 2021, the top 10 countries with population with tertiary education include Australia, Canada, Ireland, Japan, Korea, Lithuania, Luxembourg, Netherlands, Norway and United Kingdom (arranged alphabetically). It would be worthwhile to note that all these

countries except Norway appeared in the top 10 category even in the year 2020. In 2020, Switzerland instead of Norway falls in the category of top 10 countries with population having tertiary education in the age group of 25 to 34 years.

- India, in the year 2021 falls in the bottom 5 countries where the population in the age group of 25 to 34 years who have attained tertiary education is only 21. However, it has shown an increasing trend from 2018 to 2021. The other countries that fall in the bottom 5 include Argentina, Brazil, Indonesia and Mexico.

Human Capital and Economic Development :-
Human capital is an intangible form of an asset that is possessed in an individual. Human capital

refers to the stock of skill, ability, expertise, education, and knowledge in a nation at a point of time. Human capital is the one of the main reasons for the accelerated growth and expansion for many countries that provide investment in human capital. An appropriate measurement of economic development of a country is the gross domestic product (GDP). Human capital, though not a direct variable of the measurement of the gross domestic product it has an impact on the same since humans are the most important resource for any nation.

The Gross Domestic Product (GDP) (Current) in USD (Billions) of various countries across the world for 2021 and 2020 given by the International Monetary Fund (IMF) is tabulated as under:

**Table 2: Gross Domestic Product (GDP) (Current)
in USD (in billion)**

Source: International Monetary Fund, World Economic Outlook Database, October 2022

Country	2021	2020
Argentina	486.70	389.06
Australia	1,635.26	1,357.64
Austria	477.08	432.91
Belgium	599.11	521.26
Brazil	1,608.08	1,448.55
Canada	1,988.34	1,645.42
Colombia	314.41	270.42
Costa Rica	64.42	62.14
Czech Republic	281.78	245.98
Denmark	398.30	355.22
Estonia	37.22	31.35
Finland	297.58	271.61
France	2,957.43	2,636.02
Germany	4,262.77	3,886.56
Greece	216.38	188.68
Hungary	182.28	156.74
Iceland	25.60	21.70
India	3,176.30	2,667.69
Indonesia	1,187.32	1,062.16
Ireland	504.52	425.51
Israel	488.53	413.27
Italy	2,101.28	1,891.06
Japan	4,932.56	5,031.62
Korea	1,810.97	1,644.68

Latvia	38.90	33.62
Lithuania	65.55	56.50
Luxembourg	86.77	73.29
Mexico	1,297.66	1,089.83
Netherlands	1,013.52	909.07
New Zealand	246.97	210.51
Norway	482.18	362.20
Poland	679.07	599.80
Portugal	250.06	228.36
Slovak Republic	114.95	105.09
Slovenia	61.79	53.66
Spain	1,426.22	1,280.46
Sweden	635.66	547.05
Switzerland	799.80	739.00
United Kingdom	3,187.63	2,758.87
United States	22,996.08	20,893.75

**Table 2: Gross Domestic Product (GDP) (Current)
in USD (in billion)**

Source: International Monetary Fund, World Economic Outlook Database, October 2022

Comparison between the population with tertiary education in various countries across the world and the Gross Domestic Product (Current) of such countries

Table 3: Comparative analysis between the population with tertiary education in various countries and the Gross Domestic Product

Source: OECD (2022), Population with tertiary education (indicator)

Source: International Monetary Fund, World Economic Outlook Database, October 2022

Country Name	Year 2020		Year 2021	
	Population of tertiary education	Gross Domestic Product (Current) (in USD Billion)	Population of tertiary education	Gross Domestic Product (Current) (in USD Billion)
Argentina	18.21	389.06	19.03	486.70
Australia	54.61	1,357.64	54.31	1,635.26
Austria	41.42	432.91	42.44	477.08
Belgium	48.51	521.26	50.87	599.11
Brazil	22.67	1,448.55	23.03	1,608.08
Canada	64.39	1,645.42	66.36	1,988.34
Colombia	29.99	270.42	30.53	314.41
Costa Rica	32.47	62.14	30.26	64.42
Czech Republic	33.00	245.98	35.04	281.78
Denmark	42.58	355.22	49.04	398.30
Estonia	43.15	31.35	43.18	37.22
Finland	44.67	271.61	40.06	297.58
France	49.45	2,636.02	50.26	2,957.43
Germany	34.88	3,886.56	35.88	4,262.77

Greece	43.69	188.68	44.18	216.38
Hungary	30.69	156.74	32.91	182.28
Iceland	38.30	21.70	41.92	25.60
India	20.50	2,667.69	21.00	3,176.30
Indonesia	18.11	1,062.16	18.66	1,187.32
Ireland	58.38	425.51	62.88	504.52
Israel	47.26	413.27	46.01	488.53
Italy	28.63	1,891.06	28.27	2,101.28
Japan	63.55	5,031.62	64.81	4,932.56
Korea	69.81	1,644.68	69.29	1,810.97
Latvia	44.25	33.62	45.50	38.90
Lithuania	56.18	56.50	57.48	65.55
Luxembourg	58.15	73.29	63.12	86.77
Mexico	25.29	1,089.83	27.06	1,297.66
Netherlands	52.26	909.07	55.60	1,013.52
New Zealand	43.91	210.51	45.32	246.97
Norway	50.84	362.20	55.03	482.18
Poland	42.43	599.80	40.64	679.07
Portugal	41.91	228.36	47.45	250.06
Slovak Republic	39.04	105.09	39.50	114.95
Slovenia	45.43	53.66	47.95	61.79
Spain	47.38	1,280.46	48.73	1,426.22
Sweden	49.13	547.05	49.22	635.66
Switzerland	52.97	739.00	52.27	799.80
United Kingdom	55.83	2,758.87	57.47	3,187.63
United States	51.86	20,893.75	51.17	22,996.08
		Correlation Coefficient = 0.14	Correlation Coefficient = 0.11	

Source: OECD (2022), Population with tertiary education (indicator)

Source: International Monetary Fund, World Economic Outlook Database, October 2022

Analysis :- The correlation coefficient between the level of tertiary education of the population between the age group of 25 to 34 and the gross domestic product (Current) for the year 2020 is 0.14 indicating a positive relationship between the two variables. For the year 2021, the correlation coefficient is 0.11 which also indicates a positive correlation between the level of tertiary education of the population of a country and the economic development when measured in terms of its gross domestic product (GDP) (Current).

Conclusion :- The objective of the study was to bring out the role that level of advanced education plays in harnessing human capital a country thereby trying to validate the relevance of advanced education in social progress and

economic development. It has been established that there is a positive relation between the level of advanced education of people in a country to the economic development of that country. It can be seen that role of education is indeed very important in the development of human capital. It is a known fact that fame, money, power, wealth etc cannot do anything without educated human force. Since decades, emphasis has been laid on making a country literate. A lot of resource allocation has been done in order to make the Indian society a literate society and although a little slow, India has tried to attain the level of primary education. Primary education is necessary for an underdeveloped nation become a developing nation. However, to fulfil the dream of being a developed nation by 2047, in its centenary

year, India must improve the access to higher and tertiary education. Professionals in the field of medicine, education, engineering, finances will be able to contribute much more towards the development of the nation.

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