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A STUDY ON FACTORS DETERMINING ETHICAL BEHAVIOUR OF
RETAIL INVESTORS

Kawaljeet Kaur Sygal Research Scholar, Pillai College of Arts, Commerce and
Science, Panvel.

Dr. Eknath Zhrekar Assistant Professor, Department of Commerce, Mahatma Night
Degree College of Arts and Commerce, Chembur Naka, Mumbai.

Abstract

Retail investors choose investment avenues based on various factors like risk, return, news, emotions etc. Majority of the studies conducted on retail investors fail to analyse the factors beyond risk and return. Ethical investing has emerged as a preferred investment style amongst the retail investors in the recent years. This study attempts to identify the factors determining ethical behaviour of retail investors. It aims to analyse the reasons behind investors choosing to invest ethically.

Keywords: Retail Investors, Ethical Investments, Ethics.

Introduction

Ethics is a set of moral principles or standards of conduct that guide our actions and they have an impact on our decision making process and on others. Honesty, fairness, dedication, and concern and regard for others are all widely recognised ethical standards. Ethical behaviour is guided by these principles and strikes a balance between self-interest and the direct and indirect implications of one's actions on others.

The practise of utilising one's ethical beliefs as the primary filter for selecting stocks to invest in is referred to as ethical investing. Ethical investment is based on the investor's personal beliefs. Ethical investment and socially conscious investing are often used interchangeably; however, socially conscious funds often have a single overall set of rules that are used to pick the portfolio, whereas ethical investing produces a more individualised result.

The activity of picking investments based on ethical or moral values is known as ethical investing. Choosing investments based on ethics isn't a guarantee of success.

Sin stocks, or companies involved in stigmatised activities such as gambling, drinking, smoking, or guns, are often avoided by ethical investors. (Cosentino, M. (2021))

When evaluating investments based on ethics, it's also important to consider if the company's actions are consistent with their commitment to ethics, as well as its past, present, and future success.

Ethical investing is beneficial to society; yet, it must meet specific criteria in order to be successful. It is necessary to identify a successful company idea that will benefit the entire world. Solar panels, for example, are a good example of ethical investment. If an investor can discover a business opportunity that will have a good influence on the environment, there must be "additionality" – a path for the company to grow in a sustainable manner. In the stock market, however, achieving such a goal is more challenging.

Not investing in immoral enterprises does not imply they will go away; in fact, they may thrive as long as there are other investors looking for big profits.

There is a significant increase in demand from certain investors who expect that their investments not only be successful, but also meet certain non-financial criteria. These investors appear to be led by a feeling of moral obligation to strike a balance between their desire for wealth and ethical or community concerns. In and of itself, the word 'ethics' holds a tremendous amount of responsibility and a critical framework that can effect even the tiniest aspect of a given circumstance. It is a single entity capable of causing an event to occur in either favourable or unfavourable way, as well as

having a negative impact in general.

Financial (utilitarian) and non-financial (expressive) objectives such as values influence individual investing behaviour to differing degrees. Concern about socially responsible projects, (Diouf, D., Hebb, T., & Touré, E. H. (2016)) . SEBI guidelines, theory of planned behaviour, moral values, etc all influence ethical behaviour. Though ethical difficulties are widely acknowledged, the bulk of people are motivated by financial gain. Nowadays the ethics has become part of all financial decisions as people have started realising good money begets good money so it is interesting to know what are factors determining ethical behaviour in terms of retail investments.

Objectives:

- To highlight role of ethical behaviour in investments
- To explore different factors determining ethical behaviour of retail investors
- To know the impact of different factors of ethical behaviour on rate of investment.

Statement of Problem

- Retail investors are influenced by few factors determining ethical behaviour.
- Social science deals with tracing out the factors determining ethical investment
- It is for larger good of the society if retail investors have ethical decision making in terms of investment
- Need of the hour is to realise importance of CSR, Socially responsible investment, Moral norms in respect to financial planning.

Review of literature

Sofia Jasmeen (2009) wrote an essay titled "Investment Choice of Individual Investors" that appeared in The Indian Journal of Commerce from October to December 2009. According to a survey, while the majority of investors favour low-risk investments, a significant number of investors prefer high-risk investments. This could be due to increased awareness among Indian private investors about investment opportunities and the investment climate. By being ethical and honest, financial institutions can capture this type of investment climate and instil confidence in investors. The survey also found that there is no substantial link between the respondents' profile – age, gender, religion, credentials, income, and career – and the risk they accept when making investments. Safety and liquidity are still more important to Indian investors than rewards. The influence of social values can be addressed in several ways. Bollen (2007) shows That social investors, compared to conventional investors, are more loyal to their funds. This loyalty remains intact even if the fund records negative results. Based on the concept Bauer and Smeets (2010a and 2010b) also discovered that a considerable number of people in the U.S. Values-oriented investors are more devoted to their mutual funds than other types of investors. Hong and Kostovetsky (2009) investigate the impact of political values on investments by focusing their research on fund-managers. They discovered that fund managers who support the UK's Liberal Democrats prefer to invest in funds that have a good social and environmental track record. Kacperczyk and Hong (2009), in a similar spirit, questioned whether social norms have an impact on markets. To respond to this, They concentrate their research on sin stocks in response to this query. They discover that there exist institutions that are Pension funds, which are framed by social norms, are less likely to hold sin equities than other funds.

Hypothesis

H1- There is a significant correlation between ethical investment with regards to various factors like Socially responsible investment, Ethical investment, refraining from unethical invnts, SEBI based

compliance investment, theory of planned behaviour, moral and ethical values learnt.

H0- There is no significant correlation between ethical investment with regards to various factors like Socially responsible investment, Ethical investment, refraining from unethical invts, SEBI based compliance investment, theory of planned behaviour, moral and ethical values learnt.

H2- There is a significant prediction of ethical investment by various factors like Socially responsible investment, Ethical investment, refraining from unethical invts, SEBI based compliance investment, theory of planned behaviour, moral and ethical values learnt.

H0- There is no significant prediction of ethical investment by various factors like Socially responsible investment, Ethical investment, refraining from unethical invts, SEBI based compliance investment, theory of planned behaviour, moral and ethical values learnt.

Research Methodology

Nature of research and construct measurement: - This research is qualitative in nature. As rate of investment as ethical investor depends upon perception of retail investors about ethical behaviour.. This is measured through 6 constructs.

- Socially responsible investment- All sorts of investment preferences in socially responsible projects.
- Ethical investment practices- investment into ethical companies
- Refraining from investment in non ethical projects
- SEBI based compliance investment
- Theory of planned behaviour involving tax planning and brokerage payment
- Moral and ethical practices and values learnt

Data collection: - Data is collected from primary source through questionnaire and telephonic interview. It is collected from various retail investors working in different sectors and at varied levels from Mumbai. Data is also collected from Articles, newspaper and social media as a Secondary source of data collection.

Sample size and sampling techniques: - As the population of the study is infinite so, non-probability snowball techniques of sampling is used and data is collected from 200 retail investors.

Data Analysis technique: - Multiple regression and one way Anova to test hypothesis.

Tool used: - questions were drafted through google form to collect more specific data of the study and SPSS software was used to analyse the data.

Findings & Analysis

Hypothesis 1

Correlation

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		Rate of invt	SRI	EI	Refrain from unethical	SCI	TP n B	Moral values
A1-F	Correlation Coefficient	1.000	.289**	.327**	-.341**	.291**	.318**	.376**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
	N	200	200	200	200	200	200	200

From the above table it shows that there exist a positively relationship between Rate of investment of retail investors and these variables like Socially responsible investment, Ethical investment, refraining from unethical invts, Sebi compliance based offers, Tax planning and brokerage payment and moral values. Thus H1 is accepted as p value is less than 0.005.

2) Hypothesis 2

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.633	.402	.381	1.087	2.135

This shows that total 40.2% change in Y (Rate of Investment) depends upon the perception of investors towards Socially responsible investment, Ethical investment, refraining from Unethical Investment, SEBI based compliance investment, planned tax behaviour and Morality. DW value near to 2 shows that, there is no Autocorrelation problem.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	154.13	6	25.78	21.73	.000
	Residual	227.070	193	1.182		
	Total	382.195	199			

This table shows TSS= MSS+ RSS (Error), MSS= 154.13 and RSS = 227.070 which explains how well regression model explains the relationship between X and Y. $R^2 = \text{MSS}/\text{TSS}$ ie $154.13/382.195 = 40.2$ so 40% relationship of Y is explained by these X variables. $F > 4$ which depicts the model is fit and p value is less than 0.05.

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.030	.843		1.221	.223		
	Total SRI	-.145	.075	.165	3.044	.004	.806	1.240
	Total EI	.217	.071	.175	3.043	.003	.930	1.075
	Total refrain	-.418	.129	-.190	-3.236	.001	.901	1.110
	Total S.C	.582	.105	.342	5.543	.000	.812	1.232
	Total Morality	.481	.127	.235	3.798	.000	.804	1.243
	Total TPNB	.068	.111	.040	.608	.544	.722	1.385

Equation: $Y = A + B1X1 + CH2X2 + C3X3 + P4X4 + CO5X5 + S6X6$

P value is less than 0.05 for variables such as SRI, EI, Refrain from unethical investment, and SEBI

based compliance investment, Morality which shows there is significant impact of these variables on rate of investment. Tolerance values are greater than 10% and VIF values are less than 3 which shows no problem of Multicollinearity.

Limitations

- As this study is subjective in nature there is a chance of bias response from the respondent due to unpredictable behavior.
- The study does not cover the opinion of the brokers and corporates
- Due to time and situation constraints sample size covered is inaccurate to predict accurately.
- Data collected falls mostly in the category of Specific age group.

Conclusion

Research results presents an overview of investors' ethical convictions as represented in their investment decisions, and attempts to construct several forces that motivate investors to invest. In this study, we discuss the motivations behind SRI, as well as its history and current best practises considered as perception towards ethical investment. Factors determining ethical behaviour are intrinsic as well as extrinsic. The first is the investor's internal core values in terms of knowledge, experience, and goals, and the second is the application of those faculties in investing decision-making. This analysis finds that most research papers find that socially responsible (SR) investments perform similarly to traditional investments, although these conclusions are contradicted by other studies' findings. The findings also show that there is a common understanding. So in general Ethical behaviour is determined by various factors like Socially responsible investment, Ethical investment, refraining from unethical practices, SEBI guidelines, theory of planned behaviour, moral and ethical values learnt.

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A STUDY OF THE AGE FACTOR OF CUSTOMERS OF THE FOOD AND BEVERAGES INDUSTRY IN MUMBAI CITY

Dr. Lata Krishnan, Associate Professor & Head, Department of Commerce, Mahatma Night Degree College of Arts and Commerce, S.T. Road, Chembur Naka, Chembur, Mumbai 400 071

Abstract

The urban population of Mumbai is over 22 million. The population density of Mumbai city is 25,357 people per sq. km. making it the most densely populated city in India. It is the 4th most densely populated city in the world, as per 2011 census data. The population is increasing year after year as people from all over India, migrate to Mumbai looking for job opportunities. It is interesting to find out how this large population addresses its necessity of food. How many people eat fresh home cooked food and how many people eat out in restaurants. Which age groups prefer to eat out and which age group eats at home? Answers to these questions will help the Food and Beverages Industry in Mumbai City to identify their target audience and serve them better.

Significance: The study of the age factor of customers of the Food and Beverages Industry in Mumbai City will provide grounds for further research and portfolio analysis. A study of the eating habits of people in Mumbai city with reference to their age will help the food and beverages industries marketing managers tweak their marketing mix to attain competitive advantage. It will throw light on the growth potential of the industry and help in trend studies. Beside the Food and Beverage Industry, the findings of this research will help the Nutrition and Fitness Industry, Healthcare Industry, Pharmaceutical Industry among others.

Aim: This research paper aims at finding out whether there is a relationship between age and eating habits of people pertaining to eating out ie. ordering in food or eating from restaurants. While there are statistics available in reports published by the NRAI National Restaurant Association of India year after year which give us a national picture, the aim here is to find out which age groups in Mumbai city eat out more.

Research Methodology: Primary and secondary data collected. Secondary data from newspapers, magazines, articles, research papers and books. A structured questionnaire was used to collect the responses of the respondents.

Time Period of Research: Data collection was conducted in September 2022 and data from 87 respondents living in Mumbai city was gathered. Data analysis and report was completed in November 2022.

KEYWORDS: Food and Beverages Industry, age factor, fresh home cooked food, order in food or eat from restaurants, generation Z, Baby Boomers.

MEASUREMENT: MS-EXCEL was used for data analysis, Spearman's Rank Correlation Test

1.1. Introduction: Mumbai's urban population is estimated to be over 22 million. Mumbai is the most densely populated city in India 25,357 per sq. km. It ranks 4th as the most densely populated cities in the world. Data as per 2011 census. The population is increasing year after year as migrants' rush to Mumbai seeking for job opportunities. It is interesting to find out how this large population addresses its necessity of food. How many people eat fresh home cooked food and how many people eat out in restaurants. Which age groups prefer to eat out and which age group eats at home? Answers to these questions will help the Food and Beverages Industry in Mumbai City to identify their target audience and serve them better.

1.2. Mumbai City

The median age of people in Mumbai city is 44 years. Children in the age group 0 - 14 years make up 26.4% of the population and people aged 65 years and over make up 21.6% of the population. Mumbai's urban population is over 22 million. The rapid population growth is a consequence of people migrating from other states in the country. The migrants enter Mumbai city in search of

business and employment opportunities. Source: Mumbai 2016 Census All persons QuickStats. There is a boom in the Food and Beverages Industry in Mumbai city. The population of Mumbai as per 2011 census is 22 million. This population creates a high demand for restaurants and cafes. The blog on www.torqus.com, calls Mumbai a melting pot of different Indian regional tastes. From street food to fancy fine dine restaurants, Mumbai has so much to offer to so many. NRAI National Restaurant Association of India 2019 report claims Mumbai's organised food service market to be Rs. 40,480 crores. The report also claims that the Indian foodservice industry is growing at a compounded annual growth rate of 9 percent. It is estimated to touch the figure of Rs 5.99 trillion by 2022-23. Food is a necessity that every person of any age group has to engage with every day. The Hindu, in its article, "The Mumbaikars eat-out casually" written by Lalitendu Mishra on 7th April 2018 surveyed 3 cities Mumbai, Delhi and Bengaluru to study the number of casual dining restaurants in the 3 cities. They defined Casual dining restaurants as those restaurants serving moderately priced food in a casual environment. Their survey report revealed that Mumbai city ranks first in the number of casual dining restaurants. 60% of all restaurants in Mumbai are casual dining restaurants. Delhi and Bengaluru have 43% and 46% respectively.

1.3. Food and beverages industry in India

Suchimita Pal wrote in her article in Curly Tales on January 6, 2022 Suchimita Pal states that Delhi was the dining capital of India for 2021. 45 million dined out in the year 2021. Bangalore was declared the liquor capital as it gulped down 50,000 litres of liquor in December 2021 itself.

Chloe Couper, Business Manager at Direct Line Life Insurance, commented: He said, "*Fast food outlets are now accessible from anywhere. All you need is a delivery app and food can arrive within minutes, meaning temptation is there for parents and children alike. While it can be tricky for parents to keep track of what their children are eating when they are out of sight, access to so much fast food may have serious negative health consequences. Young parents under 35 years old order the highest number of takeaways at 64 per year, equating to one every six days. The children of younger parents unsurprisingly also consume the highest number of takeaways at 48 a year, averaging one every eight days. Parents aged between 35-54 and their children consume an average of one takeaway every eight and ten days respectively.*"

2. Aim: This research paper aims at finding out whether there is a relationship between age and eating habits of people pertaining to eating out i.e. ordering in food or eating from restaurants. While there are statistics available in reports published by the NRAI National Restaurant Association of India year after year which give us a national picture, the aim here is to find out which age groups in Mumbai city eat out more.

3. Significance: The study of the age factor of customers of the Food and Beverages Industry in Mumbai City will provide grounds for further research and portfolio analysis. A study of the eating habits of people in Mumbai city with reference to their age will help the food and beverages industries marketing managers tweak their marketing mix to attain competitive advantage. It will throw light on the growth potential of the industry and help in trend studies. Beside the Food and Beverage Industry, the findings of this research will help the Nutrition and Fitness Industry, Healthcare Industry, Pharmaceutical Industry among others.

4. Research Methodology: Primary and secondary data collected. Secondary data from newspapers, magazines, articles, research papers and books. A structured questionnaire was used to collect the responses of the respondents.

5. Time Period of Research: Data collection was conducted in September 2022 and data from 87 respondents living in Mumbai city was gathered. Data analysis and report was completed in November 2022.

6.1. **Literature Review:** ProQuest (Firm), & Wilks, N. A. (2009). *Marketing food to children and adolescents: A review of industry expenditures, activities, and self-regulation*. New York: Nova Science Publishers. This book explores the concern about the dramatic increase in childhood obesity in the United States which has prompted Congress to request that the Federal Trade Commission conduct a study of food and beverage marketing to children and adolescents. The results of that study – an analysis of 2006 expenditures and activities by 44 companies – are presented here.

6.2. Lucas, E., Lunet, N., Gelormini, M., Jewell, J., Morais, I., Albuquerque, G., . . . Padrão, P. (2019). A multicentre study of street foods purchased in urban areas of Central Asia: The FEEDCities Project. *European Journal of Public Health*, 29(Supplement_4), doi:10.1093/eurpub/ckz185.311. Street food (SF) is a strong tradition in Central Asia, where urbanisation and westernisation of food habits is occurring. Research on SF consumption is scarce, and crucial to understand its implications for public health. This study aims to describe the SF purchases in urban areas of Tajikistan, Kyrgyzstan, Turkmenistan and Kazakhstan.

6.3. Paradiso, F., Agosti, G., Prencipe, G. P., Trinito, M. O., Iacovacci, S., Contoli, B., . . . Masocco, M. (2020). The Norwegian industry-led scheme restricting marketing of unhealthy food and beverages to children. *European Journal of Public Health*, 30(Supplement_5), doi:10.1093/eurpub/ckaa165.077 The Norwegian food industry has implemented a self-regulatory scheme to restrict the marketing of unhealthy foods and beverages to children under the age of 13 years. In the period 2014-2019, the scheme has treated 77 complaints and made 126 assessments of planned marketing campaigns.

6.4. "How The Changing Food Habits Of Millennials Are Impacting The Restaurant Business" an article written in the The Restaurant Times on 7th December, 2018 states the following: There is a difference in eating habits of people belonging to different age groups. The Millennials or Generation Y (people between the ages of 18 and 35) account for 65% of India's population. This age group is tech-savvy people and regularly exposed to global trends and lifestyles. This age group is well-read, extensively travelled and has a high spending power. They are rational not emotional. The trend of splitting bills, that is 'Going Dutch' is popular. They drive the growth index of the restaurant industry. The Millennials' food habits are quite different from that of the Baby Boomers, and have a significant impact on the restaurant business. As a result of this, over time, India has experienced a proliferation of fine dining restaurants, pubs, cafes, clubs, bars, lounges, and international fast food restaurants, which compete to cater to the Millennials' changing food habits.

7. Objectives:

1. To understand what people of different age groups in Mumbai city eat when they do not eat fresh home cooked food.
2. To analyse the age-wise eating habits of people living in Mumbai city.

8. Hypothesis:

H0: There is no significant difference in the eating habits of people living in Mumbai city with reference to their age.

H1: There is a significant difference in the eating habits of people living in Mumbai city with reference to their age.

9. Data Analysis:

An age wise analysis was done on the data collected from 86 respondents. 6 age groups were identified.

9.1. To understand what people of different age groups in Mumbai city eat when they do not eat fresh home cooked food.

Sr.No.	Description of age group	Number of respondents in each age group	Percentage
1	Age Group 1 (14 - 19 years)	12	13.95
2	Age Group 2 (20 - 29 years)	33	38.37
3	Age Group 3 (30 - 39 years)	18	20.93
4	Age Group 4 (40 - 49 years)	12	13.95
5	Age Group 5 (50 - 59 years)	8	9.30
6	Age Group 6 (60 - 69 years)	3	3.49
	Total number of respondents	86	100.00

Table 1. Primary Data collected in September 2022 from people living in Mumbai city.

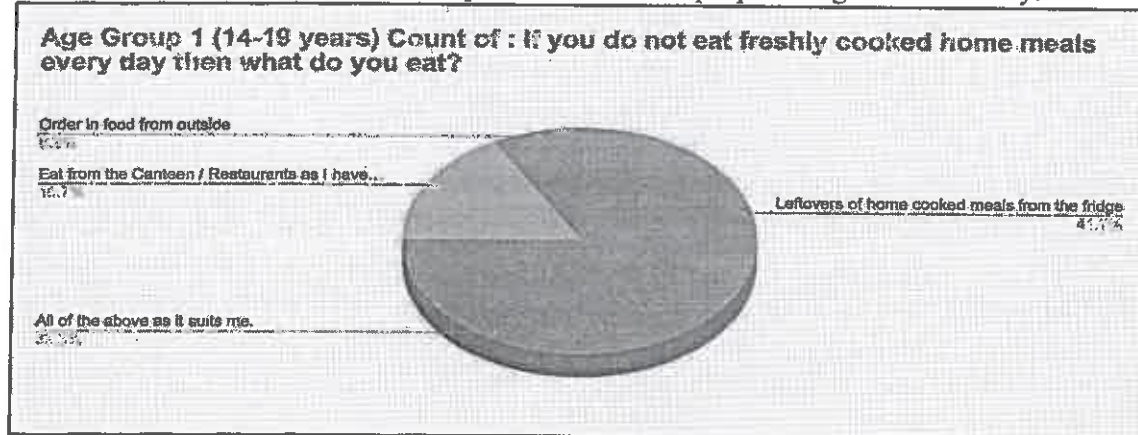
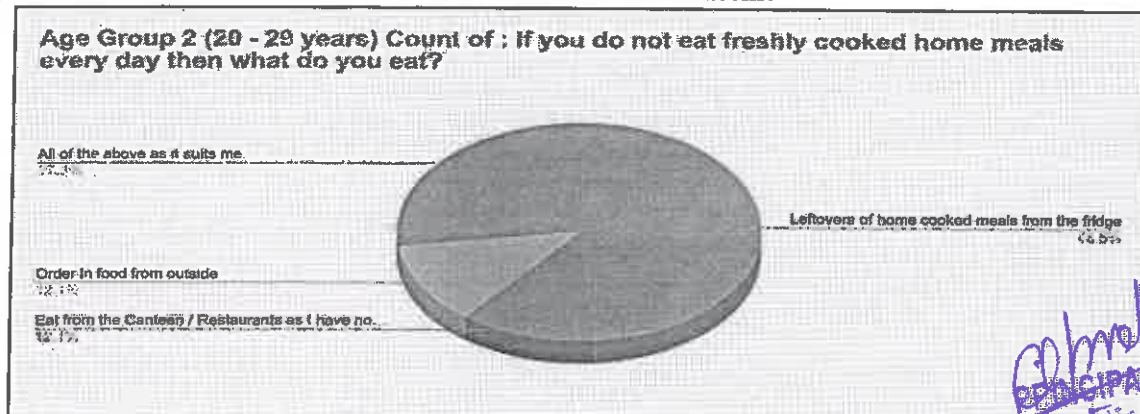


Figure 1. Age Group 1 (14-19 years) Count of: If you do not eat freshly cooked home meals everyday then what do you eat?

9.1.1. 41.7% of people in Mumbai city in the age group 14-19 years eat leftovers of home cooked meals. 25% eat outside food and 33.3% do all of the above as it suits them. While we can say that this age group largely eats home cooked food, fresh or leftovers, there is still a clear 25% and more who eat outside food ordered in or from restaurants and canteens.



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Figure 2. Age Group 2 (20-29 years) Count of: If you do not eat freshly cooked home meals every day then what do you eat.

9.1.2. 48.5% of people in Mumbai city in the age group 20-29 years eat leftovers of home cooked meals. 24.2% eat outside food and 27.3% do all of the above as it suits them. While we can say that this age group largely eats home cooked food, fresh or leftovers, there is still a clear 24.2% and more who eat outside food ordered in or from restaurants and canteens.

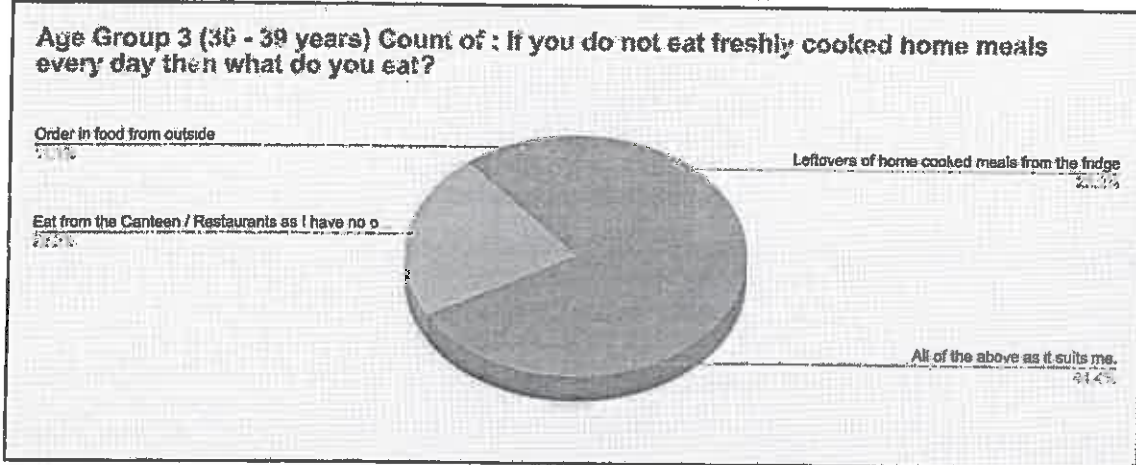


Figure 3. Age Group 3 (30-39 years) Count of: If you do not eat freshly cooked home meals every day then what do you eat.

9.1.3. Blue is leftover home cooked food, Red is all of the above, 22.2% of people in Mumbai city in the age group 30-39 years eat leftovers of home cooked meals. 33.3% eat outside food and 44.4% do all of the above as it suits them. We can say that this age group largely eats outside food ordered in or from restaurants and canteens.

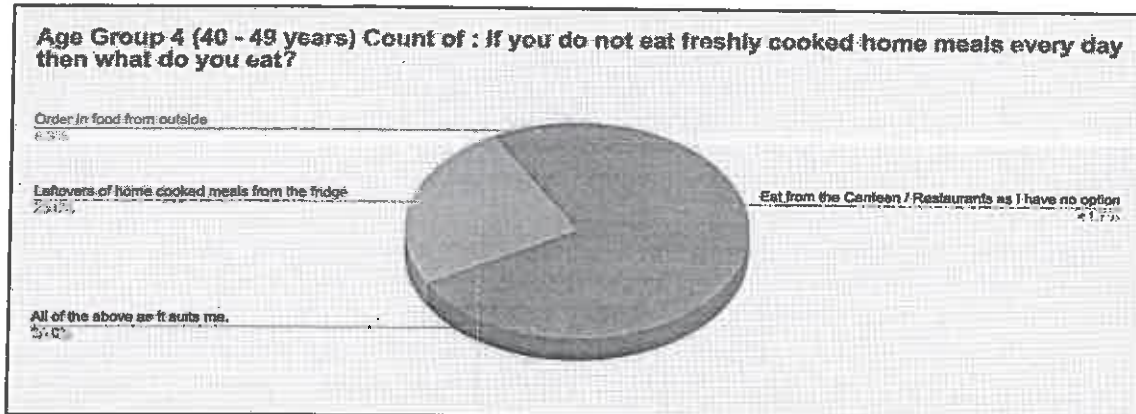


Figure 4. Age Group 4 (40-49 years) Count of: If you do not eat freshly cooked home meals every day then what do you eat.

9.1.4. 25.00% of people in Mumbai city in the age group 40-49 years eat leftovers of home cooked meals. 50.00% eat outside food and 25.00% do all of the above as it suits them. We can say that this age group largely eats outside food ordered in or from restaurants and canteens.

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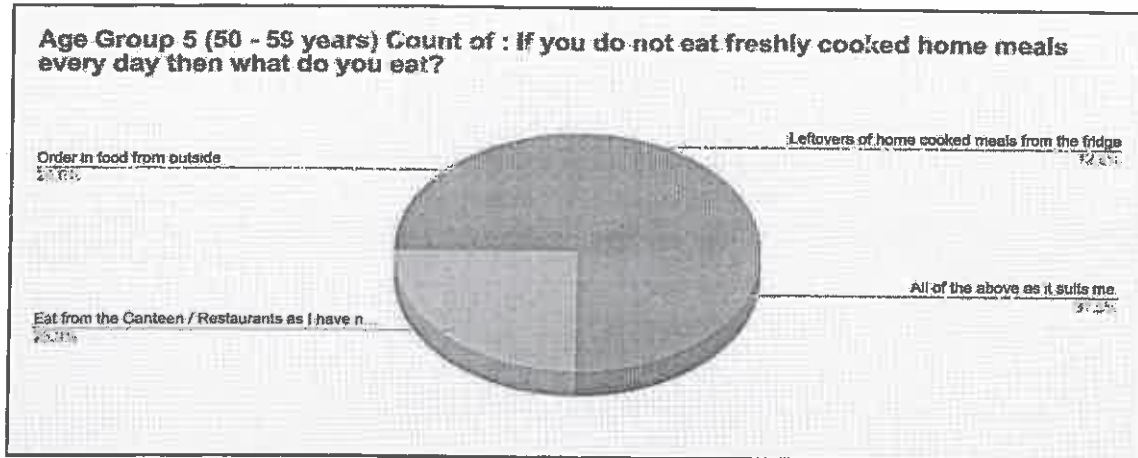


Figure 5. Age Group 5 (50-59 years) Count of: If you do not eat freshly cooked home meals every day then what do you eat.

9.1.5. 12.50% of people in Mumbai city in the age group 50-59 years eat leftovers of home cooked meals. 50.00% eat outside food and 37.50% do all of the above as it suits them. It is the age group that depends maximum on food from restaurants, canteens and ordered in food.

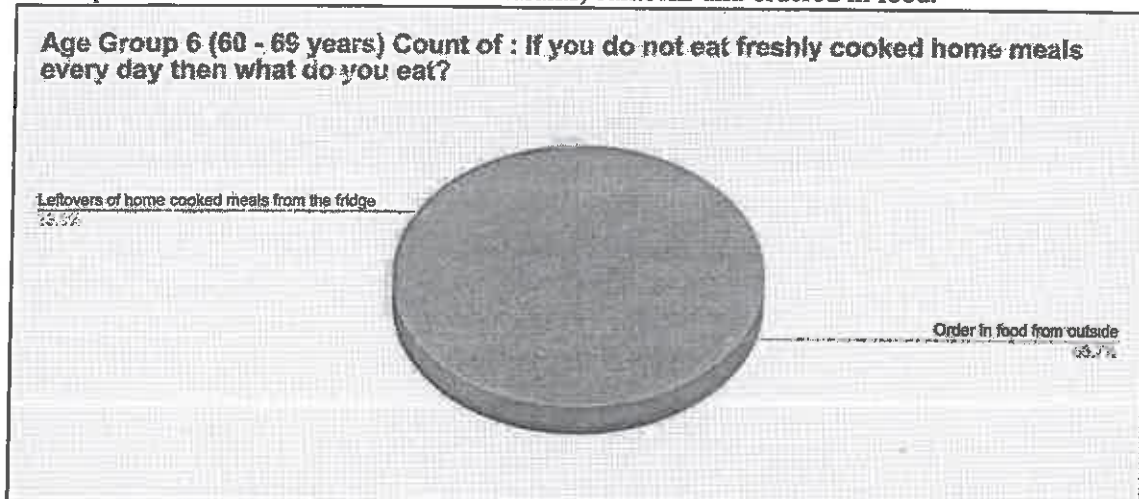


Figure 6. Age Group 6 (60-69 years) Count of: If you do not eat freshly cooked home meals every day then what do you eat.

9.1.6. 33.3% of people in Mumbai city in the age group 60-69 years eat leftovers of home cooked meals. 66.7% eat ordered from outside. It is the age group that depends maximum on food from restaurants, and order in food.

9.1.7. **Inference:** To understand what people of different age groups in Mumbai city eat when they do not eat fresh home cooked food from the above the age group 6 (60-69 years) is the one that largely depends on outside food eaten from restaurants and ordered in. It ranks first at 66.7% The age group 5 (50-59 years) is the second in rank at 50.00% and more with all of the above at 37.50%. The age group 4 (40-49 years) is the third in rank at 50% and more with all of the above at 25.00%

The research findings bust the myth pertaining to age groups and eating habits of people. It is believed that the millennials are the ones who eat out more often. However here we see Generation Y and Baby Boomers, age group 6 (60-69 years), age group 5 (50-59 years), age group 4 (40-49 years) largely depend on outside food i.e. order in food and eat from restaurants. The reasons could be

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many, the disposable income of this age group, this age group is busy at work, no time to cook, and may like to eat out.

10. Hypothesis Testing:

H0: There is no significant difference in the eating habits of people living in Mumbai city with reference to their age.

H1: There is a significant difference in the eating habits of people living in Mumbai city with reference to their age.

Spearman's Rank Correlation Test

Coefficient	0.5
N:	3
T static:	0.58
DF:	1
P value:	0.33

P value is 0.33.

$0.33 > 0.05$ Hence, the null hypothesis is accepted and the alternate hypothesis is rejected.

11. Limitations:

1. The research is limited to studying the eating habits of people living in Mumbai city.
2. The research attempts at only studying age as a factor that impacts eating habits of people living in Mumbai city.
3. The research is limited to studying 6 age groups starting with 14 years and above and ending at 69 years. The age groups falling before and after this grouping is left out.

12. Scope:

1. Research may be conducted to study other factors impacting the eating habits of people living in Mumbai city such as income, gender, employment, marital status, culture etc.
2. Research may be conducted separately for different vertices of the food and beverages industry such as fast food, fine dining, canteen food, order-in food, casual dining, multi-cuisine, specialty cuisine, home-dining etc. to study how the various eating habits of people living in Mumbai city affect them.
3. Similar research may be conducted for different cities and a comparative analysis among cities too may be done.
4. More age groups may be covered of population below 14 years and beyond 69 years of age for further research.

13. Findings:

1. The research studied what people of different age groups in Mumbai city eat when they do not eat fresh home cooked food. It was found that Age Group 6 (60-69 years), Age Group 5 (50 -59 years) and Age Group 4 (40 - 49 years) are the three age groups that rank 1,2,3 respectively in that they order in food, eat from restaurants, eat from canteens, and the remaining age groups eat leftover food or do all of the above.
2. The research studied how often people order food, or eat from restaurants. It was found that Age Group 6 (60 - 69 years) of age was the age group that ranked 1st in ordering in food, or eating from restaurants.
3. It was found that Generation Z and Generation Y or the millennials are not the ones that eat out more often.

4. Baby Boomers and Generation X are the ones who are eating out, ordering in food or eating from restaurants.
5. The eating habit trend seen in 2018 among people living in Mumbai city has drastically changed in 2022. The reason may be attributed to the Covid-19 pandemic and its impact on the Food and beverage industry on a whole. The fear factor among people still looms large although we do see a quick change in their mindsets.

14. Research Contribution:

1. Age has no impact on eating habits of people living in Mumbai city.

15. **Conclusion:** Age alone has no impact on the eating habits of people living in Mumbai city. There are many other factors that influence eating habits which may affect their decision such as income, growth in the food and beverages industry in Mumbai city, employment status of people living in Mumbai, health and fitness, the Covid-19 pandemic impact, gender, education, cultural background, social background, affluence, international mindedness of human resource, social media, emergence of food connoisseurs and food critics etc. that need to be studied.

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**POSITIONING COMPANIES FOR FUTURE SUCCESS WITH DIVERSE
WORKFORCE**

Dr Ekanth Kundlik Zhrekar I/c Principal, Mahatma Night Degree College of Arts
and Commerce, Chembur Naka, Mumbai.

Mrs Rashmi Omkar Bendre Research Scholar, Pillai College of Arts, Commerce &
Science, New Panvel.

Abstract

The COVID19 pandemic has become a huge trepidation for the world for an indistinct time. As a flux, COVID19 has impacted human race and business fraternity globally and challenged them to rethink, redesign and reinvent a new way to modulate in and out of the remote work environment. There has been an exemplar shift in the workplace in many ways and if organizations are not acclimated to these alterations, then a problem of survival will surely arise especially with a diverse cohort. Challenge presents itself when ineffective mentor impairs the progress of the company by superficially mishandling the diverse workforce. Key to the success during the crisis is leveraging the diverse workforce. Diversity of view precludes the team resorting to groupthink and accomplishing greater results. Furthermore, the companies can focus their teams on required area making it multidisciplinary.

Keywords: Diverse Workforce.

Introduction

The COVID-19 epidemic has transformed the corporate world in unforeseen and historic ways, with global ramifications. Organizations and people are coping with the virus's ramifications as the new reality of the epidemic settles in. In the near future, corporations have typically taken sympathetic pro-employee stances, and many have drastically changed how and where people work. At first glance, both behaviours appear logical and practical.

The Covid-19 coronavirus is sparking one of the most profound workplace revolutions in our history. The Army War College coined the acronym VUCA (volatile, uncertain, complex, and ambiguous) in 1987. It only took a few weeks for the Covid-19 coronavirus to change the way businesses operate. The issue arises in gauging paradigm shifts and the pandemic's long-term ramifications. A paradigm shift is a fundamental shift in a phenomenon's underlying beliefs. These are uncommon but significant shifts in research that dramatically affect our knowledge of events by changing the basic assumptions from which our perception is built.

Diverse Workforce

Many organizations around the world are dealing with the irrevocable effect of the heterogeneous composition of their labor force. This phenomenon is strongly related with one of workforce's composition dynamics: the presence of multiple generations in workplaces given the increasing longevity of the population (King and Bryant 2017; Kooij et al. 2011; Bloom and Van Reenen 2010). While there is no consensus in the literature regarding the definitions of the different generations (Stewart et al. 2017), current workplaces are composed of least three generations: Baby Boomers (born 1944–1964), Generation X (born 1965–1980), and Generation Y (born 1981–1995)—well known as Millennials. To add to this complexity, the “youngest” members of the post-millennial generation (born after 1996), or Generation Z, have recently started to be active members in the labor force.

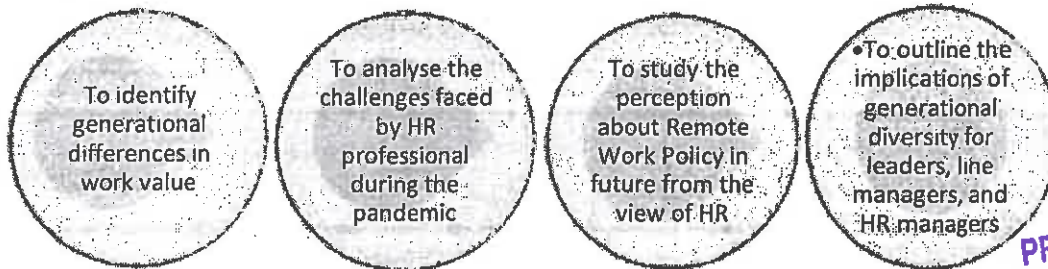
Ivan Cherez-Ojeda et al (2020) the study focuses on the Generational cohorts influence the use and preferences for ICTs among patients with obstructive lung diseases. Younger generational cohorts were associated with higher access to the Internet and smartphone ownership, as well as higher interest for using ICTs to receive and ask for health-related information.

Maribel Guerrero et al (2019) this paper was to provide insights into how employees' human capital/attitudes, organizational determinants, and environmental determinants of corporate venturing are influenced by employees' generational cohort. The first contribution relates to the effects of human capital and attitudes toward entrepreneurship on corporate venturing for different generational cohorts. The second contribution relates to the organizational determinants of corporate venturing. Third contribution relates to the influence of environmental determinants on corporate venturing.

Prof. Vasanthi Srinivasan The research report focusses on diversity and inclusion strategies in India are focused on gender, generational, and disability diversities. The investigations indicate that 90% of Indian organizations talk about gender diversity as the main focus of their diversity and inclusion strategies. Moreover, the focus of disability diversity is very high in India. When it comes to generational diversity, generations are viewed as age cohorts—people born during the same birth years, experiencing similar significant life events. The study brings forth the need to understand generations from a holistic perspective and also under the bigger gamut of other diversity-related components.

Lisa Burden, J.D. (2017) The generations have different expectations for feedback and different motivators for engagement and retention. The two younger generations expect lots of feedback. Flexible work environments also are important to younger workers. They want to be able to work from home, take an afternoon off and then work a little extra at some other time. Younger workers say they will leave a job that pays well for an opportunity that offers greater flexibility.

Objective of this Study



Hypothesis:

Companies with diverse human capital are more prone to be successful

Hypothesis 1a: Youngest generational cohorts positively moderate the effect of employees' diversified human capital on corporate venturing activities.

Research Methodology

The scientific problem needs to be addressed by formulation of research methodology. The process involves obtaining data and information as a part of the research study. The data required for the study were collected from both the primary sources and secondary sources. The primary data has been collected directly from working professionals using the pre-defined well-structured questionnaire. Totally 30 samples were collected. The various statistical tools applied to analyse the primary data are Chi Square Test. The tabulated data is used to facilitate the quick grasp and constructive analysis. The secondary data were collected from the published journals, books,

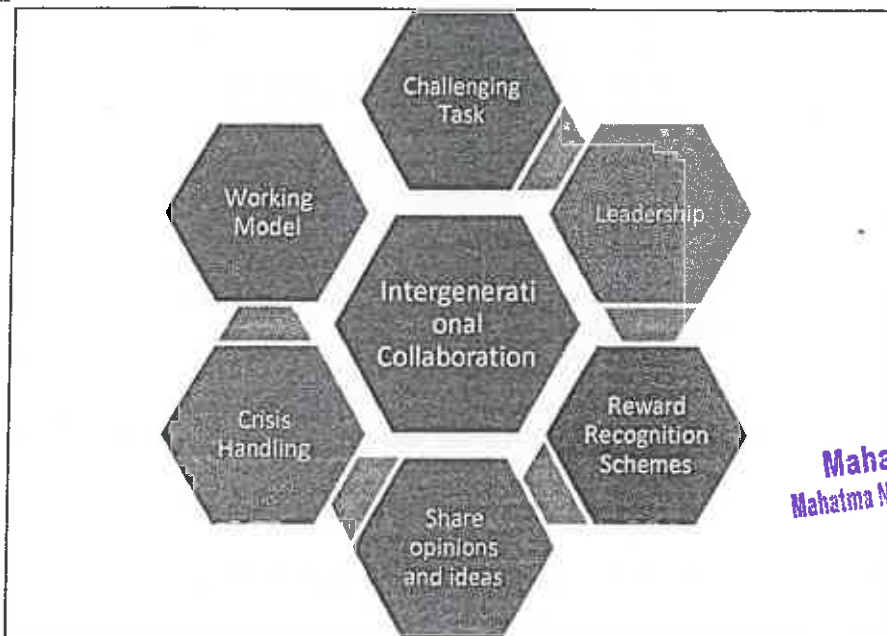
	and others		
	Work alone	5	16.1
	Total	31	100.0

The new regime highlights the type of emerging leaders who are team players and responsible for their leadership respective teams

Overall Expectations		Frequenc y	Percent
Valid	Career Development	7	22.6
	Communication	6	19.4
	Company Culture	7	22.6
	Compensation Benefits	7	22.6
	Leadership	4	12.9
	Total	31	100.0

The overall expectations of the employees from the company emphasis Career Development and Compensation Benefits

Conclusion



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Distinct generations have had different experiences, educational environments, and have been moulded most crucially by demographic and cultural trends. Although each member of a generational cohort is unique, these characteristics in general establish cohort preferences regarding how those who lead them desire to be driven. Accommodating generational preferences in areas such as articulating their values and views will aid in the promotion of a job satisfaction and retention environment. Facilitating employee growth and development is critical in leadership jobs. However, with a workforce that is multigenerational, this is not a simple process.

The following are brief suggestions for leaders who are managing a multigenerational workforce and allowing that workforce to grow and address the challenges of tomorrow:

- Attempt to comprehend each generational cohort and account for generational differences in

A STUDY OF STUDENT'S PERCEPTION ON EMPLOYABILITY SKILLS OF COMMERCE STUDENTS GRADUATING DURING THE COVID -19 PANDEMIC PERIOD IN MUMBAI

Mrs. Bhakti Batavia¹, Dr. Lata Krishnan²

¹ Assistant Professor, Department of Commerce, Changu Kana Thakur Arts, Commerce and Science College (Autonomous), New Panvel.

² Associate Professor, Head, Department of Commerce, Mahatma Night Degree College of Arts and Commerce, Chembur, Mumbai.

Abstract:

Accounting Education Requirement and demand is changing day by day with the level of competition increasing in the market. There is a need to change teaching learning process in Accounting Education for enhancing Employability skills among students. Since March 2020 the entire World is facing the difficult situation of Covid -19. It is in the hands of our country how it can survive and overcome and make their economy strong again. Simultaneously, it is up to an individual person how to sustain their position in the market to avoid job loss. Also, every individual should know how he/she can develop more employability skills for survival and growth. Students graduating during Covid -19 pandemic are worried about their future. So, the need has arisen to make students employable in the market. This research is a first step to show a path on employability skills of Commerce students graduating during Pandemic. The research has investigated Perception of Commerce Graduates on employability skills of Pre-Pandemic Era and Pandemic Era. A comparison is also made on employability skills. A questionnaire was prepared and responses of were analysed. Testing of Hypothesis is done by applying One Way ANOVA.

Keywords: Employability Skills, Knowledge Assimilation, Personality Traits, Behavioural Skills.

Introduction:

Skills which are required by the individual to be employable are called employability skills. It differs from person to person. Employability skills can be defined as those soft skills and Hard Skills which employers look for in a potential employee. The researchers have categorised employability skills into five categories which are as follows:

Knowledge Assimilation	Communication Skills	Behavioural Skills	Personality Traits	IT Skills
Understanding of Concepts	Oral Communication	Ethics and values	Professionalism	Awareness of Modern technology
Practical Implementation of concepts	Written Communication	Social Etiquettes	Leadership	Use of Modern Technology
Knowledge of Current Affairs	Presentation Skills	Emotional Intelligence	Positive Attitude	Application of software programmes
Intelligence quotient	Workplace Communication	Respect and dignity	Self-Management	Ethical issues in IT

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Review of Literature

- 1) Billy S. Javier (2018) has researched on the factors of employability of the Information Technology graduates. The study focused on IT program curriculum and its relation with the employability skills. The data were collected from 96 respondents. The 5-point Likert scale questionnaire were prepared to collect the data. The research was based on descriptive correlational method. The study reveals that extra-curricular activities as well as attending various seminars and training sessions will definitely affects the employability skills of IT graduates positively. It is concluded with all three element that is graduates, instructional System and Employers need to understand each other needs to generate employability skills.
- 2) Erni Tanius (2018) has indicated the perception of employer and perception of graduates on employability. The researcher has identified the gap between the perception of employer and graduates. The data were collected from 607 staff of the companies and 700 graduated. The data collected were analysed through Mean and standard deviation. The researcher found the clear mismatch between the both perceptions. The study concluded with there is a need of high degree of employability skills in the graduates to cope up the need of industry. The study 14 recommended that there should be a curriculum updating on frequent span of time. The advice of corporate and employer to be taken while framing the curriculum. Training should also be given to the graduates is also recommended.
- 3) Argha Chatterjee (2018) has studied employer's expectation on employability skills. The study aims to find out the skills the graduates perceived. It also focuses on employers expectations for the same. It has pointed out the new ways to enhance the employability skills in graduates as per the expectation of the employer. The data were collected from 500 graduates and 50 recruiters. The data collected is analysed with the help of standard deviation, central tendency, and correlation analysis. The study concluded with the employer's expectation on employability skills is much more than what graduates perceived. Expectation of the employer is much higher than what exactly graduates have.
- 4) Nuru Kalufyal and Lucas Mwakajinga (2016) has highlighted the perception of employer as well as perception of graduates on employability. The data were collected from 200 graduates and 21 employers. The study found that there is a difference between the view point of employer and graduates on the employability skills. The data collected is interpreted through Mean and standard deviation and correlation, t-test is also applied. The study concluded with employers expects more technical and practical knowledge from the graduates but graduates does not possess. So, there is a difference in their views. The study recommended that there should be arrangement of short term courses, alumni networking should be done.
- 5) Dr. Syamala G, Ramajan Varunkar (2016) analyzed the perceptions of students on challenges in commerce education. The study was conducted to understand why commerce graduates have low employability skills, lack of potentiality to compete, seeks low paid jobs. The purpose of the study was to identify the problems faced by commerce graduates and to find out the reasons of low employability skills in commerce graduates. The data were collected from primary as well as secondary source. The data collection is done through questionnaire as well as observation method. The findings of the study reveals that the person who have low score opt commerce field but commerce field has potential to bring change in the society.

Objectives of the study:

1. To study awareness of employability skills among commerce graduates.
2. To Study the student's perception on the level of employability skills among Commerce graduates in pre pandemic era.
3. To Study the student's perception on the level of employability skills among Commerce graduates in pandemic era.

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4. To compare level of employability skills among Commerce graduates in pre pandemic and pandemic era.

Hypotheses of the study:

Hypotheses 1:

H₀ - There is no significant difference in the Knowledge Assimilation among Commerce Graduates in Pre-Pandemic era and Pandemic era.

H₁ - There is a significant difference in the Knowledge Assimilation among Commerce Graduates in Pre-Pandemic era and Pandemic era.

Hypotheses 2:

H₀ - There is no significant difference in the Communication Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.

H₁ - There is a significant difference in the Communication Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.

Hypotheses 3:

H₀ - There is no significant difference in the Behavioural Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.

H₁ - There is a significant difference in the Behavioural Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.

Hypotheses 4:

H₀ - There is no significant difference in the Personality Traits among Commerce Graduates in Pre-Pandemic era and Pandemic era.

H₁ - There is a significant difference in the Personality Traits among Commerce Graduates in Pre-Pandemic era and Pandemic era.

Hypotheses 5:

H₀ - There is no significant difference in the IT Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.

H₁ - There is a significant difference in the IT Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.

Research Methodology:

Research Type	Empirical Research
Sources of Data Collection	Primary Data
Data Collection Tool	Questionnaire
Sampling Area	Mumbai
Sampling Method	Non-Probability Sampling Method (Convenience Sampling)
Sample Size	87 Commerce Graduates of Pre-Pandemic Era 87 Commerce Graduates of Pandemic Era
Data Analysis	Using Ms- Excel 2019
Hypothesis Test	ANOVA

Significance of the Study:

- 1) This study will help to understand whether pre pandemic Graduates and Pandemic Graduates are aware about Employability Skills or not.
- 2) This study will help to understand the perception of pre pandemic Graduates and Pandemic Graduates on Employability Skills.

Limitations of the Study:

- 1) The Study is restricted to Mumbai Region only.
- 2) The Study is restricted to the perception of commerce Graduates only

Scope for Further Research:

- 1) The Study can be extended to other geographical regions.
- 2) The study can also be taken on perceptions of other stakeholders on employability skills and comparison of that.

Data Analysis, Interpretation and Findings:

- 1) Difference in Knowledge Assimilation among the students in Pre pandemic and pandemic Era.

Understanding of Concepts

Knowledge Assimilation	Understanding of Concepts			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	27	31%	12	14%
Agree	36	42%	45	52%
Neutral	15	17%	23	26%
Disagree	3	3%	3	3%
Strongly Disagree	6	7%	4	5%
Total	87	100%	87	100%

(Source: Primary Data)

Practical Implementation of Concepts

Knowledge Assimilation	Practical Implementation of Concepts			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	18	21%	9	10%
Agree	27	31%	40	46%
Neutral	27	31%	24	28%
Disagree	9	10%	9	10%
Strongly Disagree	6	7%	5	6%
Total	87	100%	87	100%

(Source: Primary Data)

Knowledge of Current Affairs

Knowledge Assimilation	Knowledge of Current Affairs			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	6	7%	18	21%
Agree	36	42%	38	44%
Neutral	33	38%	20	23%
Disagree	9	10%	7	8%
Strongly Disagree	3	3%	4	4%
Total	87	100%	87	100%

(Source: Primary Data)

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IQ (Intelligence quotient)

Knowledge Assimilation	IQ (Intelligence quotient)			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	9	10%	17	20%
Agree	39	45%	37	43%
Neutral	36	42%	25	29%
Disagree	0	0%	2	2%
Strongly Disagree	3	3%	6	6%
Total	87	100%	87	100%

(Source: Primary Data)

2) Difference in Communication Skills among the students in Pre pandemic and pandemic Era.

Oral Communication:

Communication Skills	Oral Communication			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	27	31%	15	14%
Agree	36	42%	36	52%
Neutral	12	14%	19	26%
Disagree	9	10%	10	3%
Strongly Disagree	3	3%	7	5%
Total	87	100%	87	100%

(Source: Primary Data)

Written Communication

Communication Skills	Written Communication			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	30	35%	14	16%
Agree	36	41%	27	32%
Neutral	15	17%	29	33%
Disagree	0	0%	7	8%
Strongly Disagree	6	7%	10	11%
Total	87	100%	87	100%

(Source: Primary Data)

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Presentation Skills

Communication Skills	Presentation Skills			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	27	31%	16	18%
Agree	24	28%	30	35%
Neutral	24	28%	24	28%
Disagree	3	3%	9	10%
Strongly Disagree	9	10%	8	9%
Total	87	100%	87	100%

(Source: Primary Data)

Workplace Communication

Communication Skills	Workplace Communication			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	21	24.5%	15	17%
Agree	33	38%	27	31%
Neutral	21	24.5%	24	28%
Disagree	9	10%	11	13%
Strongly Disagree	3	3%	10	11%
Total	87	100%	87	100%

(Source: Primary Data)

3) Difference in Behavioural Skills among the students in Pre pandemic and pandemic Era.

Ethics and Values

Behavioural Skills	Ethics and Values			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	21	24%	8	9%
Agree	45	52%	37	43%
Neutral	12	14%	28	32%
Disagree	9	10%	9	10%
Strongly Disagree	0	0%	5	6%
Total	87	100%	87	100%

(Source: Primary Data)

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Social Etiquettes

Behavioural Skills	Social Etiquettes			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	27	31%	8	9%
Agree	30	35%	37	43%
Neutral	21	24%	27	31%
Disagree	9	10%	10	11%
Strongly Disagree	0	0%	5	6%
Total	87	100%	87	100%

(Source: Primary Data)

EQ (Emotional Intelligence)

Behavioural Skills	EQ (Emotional Intelligence)			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	15	17%	11	12%
Agree	39	45%	38	44%
Neutral	24	28%	20	23%
Disagree	6	7%	11	13%
Strongly Disagree	3	3%	7	8%
Total	87	100%	87	100%

(Source: Primary Data)

Respect and Dignity

Behavioural Skills	Respect and Dignity			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	27	31%	19	22%
Agree	36	42%	31	36%
Neutral	21	24%	22	25%
Disagree	3	3%	9	10%
Strongly Disagree	0	0%	6	7%
Total	87	100%	87	100%

(Source: Primary Data)

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4) Difference in Personality Traits among the students in Pre pandemic and pandemic Era.

Professionalism

Personality Traits	Professionalism			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	30	34%	16	18%
Agree	39	45%	30	35%
Neutral	18	21%	24	28%
Disagree	0	0%	9	10%
Strongly Disagree	0	0%	8	9%
Total	87	100%	87	100%

Leadership

Personality Traits	Leadership			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	36	42%	18	20%
Agree	33	38%	32	37%
Neutral	15	17%	19	22%
Disagree	3	3%	11	13%
Strongly Disagree	0	0%	7	8%
Total	87	100%	87	100%

(Source: Primary Data)

Positive Attitude

Personality Traits	Positive Attitude			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	36	41%	27	31%
Agree	36	41%	27	31%
Neutral	9	10%	22	25%
Disagree	6	7%	3	4%
Strongly Disagree	0	0%	8	9%
Total	87	100%	87	100%

(Source: Primary Data)

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Application of Software Programs

IT Skills	Application of Software Programs			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	18	21%	21	24%
Agree	36	41%	28	32%
Neutral	24	28%	29	33%
Disagree	6	7%	5	6%
Strongly Disagree	3	3%	4	5%
Total	87	100%	87	100%

(Source: Primary Data)

Ethical Issues in IT

IT Skills	Ethical Issues in IT			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	12	14%	19	22%
Agree	36	41%	30	34%
Neutral	27	31%	26	30%
Disagree	9	10%	8	9%
Strongly Disagree	3	4%	4	5%
Total	87	100%	87	100%

(Source: Primary Data)

Lack of Employability Skills among the students in Pre pandemic and pandemic Era.

Lack of Employability Skills	Lack of Employability Skills			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Strongly Agree	27	31%	12	14%
Agree	15	17%	45	52%
Neutral	36	41%	17	19%
Disagree	6	7%	8	9%
Strongly Disagree	3	4%	5	6%
Total	87	100%	87	100%

(Source: Primary Data)

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Importance of Teacher in enhancing Employability

Importance of Teacher in enhancing Employability	Importance of Teacher in enhancing Employability			
	Pre-Pandemic Era	Percentage	Pandemic Era	Percentage
Yes	87	100%	78	90%
No	0	0%	9	10%
Total	87	100%	87	100%

(Source: Primary Data)

Hypotheses Testing:

Testing of Hypotheses is done using One Way ANOVA

Hypotheses	Calculated Value	Table Value	Conclusion
Hypotheses 1: H ₀ - There is no significant difference in the Knowledge Assimilation among Commerce Graduates in Pre-Pandemic era and Pandemic era. H ₁ - There is a significant difference in the Knowledge Assimilation among Commerce Graduates in Pre-Pandemic era and Pandemic era.	0	4.09	As Calculated Value is less than Table so, H ₀ is Accepted
Hypotheses 2: H ₀ - There is no significant difference in the Communication Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era. H ₁ - There is a significant difference in the Communication Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.	0	4.09	As Calculated Value is less than Table so, H ₀ is Accepted
Hypotheses 3: H ₀ - There is no significant difference in the Behavioural Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era. H ₁ - There is a significant difference in the Behavioural Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.	5.54	4.09	As Calculated Value is More than Table Value so, H ₁ is Accepted.
Hypotheses 4: H ₀ - There is no significant difference in the Personality Traits among Commerce Graduates in Pre-Pandemic era and Pandemic era. H ₁ - There is a significant difference in the Personality Traits among Commerce Graduates in Pre-Pandemic era and Pandemic era.	0	4.09	As Calculated Value is less than Table so, H ₀ is Accepted
Hypotheses 5: H ₀ - There is no significant difference in the IT Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era. H ₁ - There is a significant difference in the IT Skills among Commerce Graduates in Pre-Pandemic era and Pandemic era.	5.96	4.09	As Calculated Value is More than Table Value so, H ₁ is Accepted.

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Suggestions and Conclusion:

- 1) Curriculum mapping should be done as per the demand of the Market. Feedback on the syllabus should be taken from corporate people.
- 2) Colleges should have a “diagnoses and counselling approach”. There should be an academic counsellor in every college. An academic counsellor will guide the students in identifying their interest and enhancing employability skills.
- 3) College should arrange training sessions for the students. Training should be a compulsory part of the curriculum. So that students will get the real approach to work and employability skills can be improved.
- 4) The College should organize expert lectures from the corporate world, retired and experienced staff, Government officers etc.
- 5) The College should have MOU with various government institutions of skill development, and various other Universities. So that students can learn different aspects apart from curriculum and employability skills can be enhanced.

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A STUDY ABOUT AWARENESS OF GENERIC MEDICINE AMONG PEOPLE AND ITS IMPACT ON THEIR BUYING BEHAVIOR

Dr. Lata Krishnan¹, Mrs. Neha Ashish Tiwari²

¹ Associate Professor, Head, Department of Commerce, Mahatma Night Degree College of Arts and Commerce, S.T. Road, Chembur Naka, Chembur, Mumbai 400071.

² I/C Principal, N R Bhagat Senior College of Arts, Commerce & Science, Nerul 400706.

ABSTRACT

Generic drugs were instituted in 1984 in the United States. Since that time, numerous studies have been conducted in several countries on consumer attitudes and behavior when purchasing generic medicines. Understanding this segment's false influencing attitude and coping intention has been challenging. This paper aims to present a mapping of the literature on the attitude toward and intention to purchase generic medicines and prisoner perceptivity that can help define and ameliorate promotional strategies for the use of these products. To identify papers related to the theme, The results indicate that this topic is fairly new, with publications in the leading journals in the area demonstrating its significance. Analysis revealed five strategic insights and showed that the research theme could be grouped into three clusters: (i) Consumer attitude and behavior, (ii) Perspective of patients and health professionals, and (iii) Assessment of the risks associated with generic medications to determine which factors can influence purchase intention, providing decision-makers with a broader view with regard to directing public policy strategies in healthcare.

Keywords: Purchase intention, Generic drugs, Attitude, Consumer behavior, Cost of therapy.

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

INTRODUCTION

"Generic medicines work the same as brand-name medicines "

A generic drug or generic drug is a drug that is manufactured and distributed without a patent. A generic drug can have a patent on its formulation, but its active ingredient is not patented. Generic medicines are not inferior to any type of branded medicines in quality and they are as effective as branded medicines. Even their dosage, side effects, active ingredients, etc. are the same as all branded medicines. Getting a license to market generic medicine Most of the big cities have generic medical stores where only generic medicines are available. But due to lack of wide publicity, people do not get the benefit of them. You can get generic medicines containing the salt of the same medicine for much less than what the doctor prescribes for any disease. This price difference can range from five to ten times. It's just about you being aware.

Very few people will know that almost all the reputed pharmaceutical companies in the country make branded as well as low-cost generic medicines.

It is worth mentioning that after all the research on any one disease, it is recommended to give a chemical compound as a special medicine. Different companies sell this compound under different names. The name of generic medicines is determined by an expert committee based on the name of the active compound present in them. The generic name of any medicine is the same all over the world.

Generic drugs are made and distributed without a patent, that is, the formulation of a generic drug can be patented, but its ingredients cannot be patented.

For example, there is a generic medicine called sildenafil for the treatment of erectile dysfunction (erectile dysfunction). This drug is sold by a company named Pfizer under the name Viagra.

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On average, generic medicines are five times cheaper than branded medicines. The availability of generic medicines can contribute a lot to providing health security to the common man and this will challenge the monopoly of branded companies in the pharmaceutical industry. According to the World Health Organization, if generic medicines are prescribed, medical expenditure will be reduced by 70 percent only in rich countries and this reduction will be even more in poor countries.

Generic drugs are delivered straight from the manufacturer to the retailer. Companies do not have to spend anything on the promotion of these medicines. There is a huge difference in the price of patent and generic drugs of the same company. Since the pricing of generic drugs is controlled by the government, they are cheaper, whereas the prices of patent drugs are fixed by the companies themselves, so they are expensive.

For example, if a doctor has prescribed a drug of the brand 'Glycave' for a patient with blood cancer, then the cost of a month-long course will be Rs. 1,14,400, while the cost of a month-long course of another brand of the same drug 'Venet' will be comparatively lesser at Rs 11,400. Cipla offers the equivalent generic drug 'Imitib' for Rs.8,000 and Glenmark for just Rs.5,720.

Some Name of Major generic drugs

CTZ,	Pirastat-100,	Merisulide,	Omsec-20,	Omiprazole,	Lignocaine,
Bupivaxin,	Acetyl Salicylic Acid	Diclofenac,		Ibuprofen,	Paracetamol,
Chloroquine,	Amlodipine,	Atenolelle,		losartan,	Metformin
Progesterone					

The Purpose of the Study:-

A Generic drug is a medication that has exactly the same active ingredient as the brand-name drug and yields the same therapeutic effect. It is the same in dosing, safety, strength, quality, the way it works, the way it is taken, and the way it should be used. Generic drugs do not need to contain the same inactive ingredients as the brand-name product.

A drug company develops new drugs as brand-name drugs under patent protection. This protects their investment in drug research by giving the drug company the sole right to manufacture and sell the brand-name drug while the patent is in effect.

Aim: This research paper aims at studying the awareness about generic medicine and the **reduction in expenditures without compromising health outcomes**. The study will create awareness at the time of purchasing medicine and show the availability of medical stores.

Review of Literature:

1. One of the articles found was a comprehensive and clearly presented narrative review, by Hassali et al. which collated international studies published between 1980 and 2008. This article coalesced the collective views of physicians as accepting of generic substitution (GS) under the policy and economic pressures, but have concerns regarding the overall quality, reliability, and switchability of generic drugs. This review further theorized that those concerns may prevent the full adoption of generic drug prescribing and substitution by physicians, which could lead to an escalation in healthcare costs for governments, insurers, or consumers directly.

This critical appraisal has gone further and has developed second-order constructs from the 17 included articles. During the appraisal process, it became clear that the articles could be defined as belonging to seven specific, non-mutually exclusive groups related to a) physician reservations regarding generic medicines b) physicians' confidence in their level of knowledge and understanding of generic medicines and associated topics c) reference by physicians to use of pharmaceutical industry source of information regarding generic medicines d) physicians' perceived influence of the pharmaceutical industry and company

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representatives e) physicians' experience of financial incentives provided to physicians to influence prescribing behavior f) physicians' experience of pressure applied by patients regarding branded products and g) physician belief that education (specifically regarding aspects of bioequivalence) is required for greater use of generics in their market (all papers). This classification emerged only as part of this appraisal; it was not commonly used before then by authors of any of the individual articles or in the aforementioned review by Hassali et al.

2. A recent study in Malaysia explored consumer perceptions and knowledge about the issues of generic medicines. Survey forms were given to 400 respondents at an annual university and it opened for 5 consecutive days. then get Analysis of the 396 usable forms revealed that only 28.3% of respondents were aware of the term generic medicine. Seventy percent of the respondents were unaware of the marketing of generic medicines with different names, and 34% of the respondents stated that information about generic medicines was passed to them by pharmacists. Most of the consumers (64%) showed their understanding about generics being less costly than their branded counterparts and 32% perceived generics to cause more side effects. This survey showed a gap in consumer knowledge and understanding about generic medicines; educational outreach by healthcare providers can be a key to increasing generic uptake.

Research Gap

There is find out that Several studies have been conducted on the medicine-buying behavior of customers by the medical store but nothing has been done regarding the customer's awareness of generic drug perceptions and satisfaction with medicines purchased from generic medical stores. This study will help to spread awareness of the use of generic medicines and also help customers to save their monthly medicine bills by saving.

OBJECTIVES OF THE STUDY

- 1 To Study the awareness of Generic drugs among people.
- 2 To examine the consumer perception of generic medicine.
3. To Understand the factors influencing consumer buying behavior pertaining to medicine.

Hypotheses of the study:

Hypothesis 1

H0:- Customers are aware of the benefits of Generic Medicine.

H1:- Customers are not aware of the benefits of Generic Medicine.

SIGNIFICANCE OF THE STUDY:

The study of the awareness of generic medicine is needed for Mumbai and it plays an important role to identifies factors why peoples are not interested to purchase generic medicine when it's available in medical stores at less price as compared to a brand.

Mumbai's lifestyle is very challenging. The ratio of health sectors with full facilities as compared to people is well enough and the availability of generic drugs is sufficient. Customers are well-educated but don't want to choose generic drugs. They think only prescribed medicine is good and they never ask their doctors to about generic drugs. For major diseases, they follow only doctors' prescriptions. This study will help them to calculate monthly savings on their medical bills.

The study will help them to understand the selling profit policy scheme of branded medicine and because of this profit margin scheme stores are also not suggesting purchasing generic

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medicine when available too. Here no type of promotion for generic medicine. All the factors are important to study about generic and it will be helpful to create awareness.

RESEARCH METHODOLOGY

Primary data is collected using a questionnaire. Data from 106 respondents were collected. A Questionnaire containing 22 questions (15 questions pertaining to awareness, and availability, of generic medicines, was designed using the pattern of questions from similar studies.

DATA ANALYSIS

This questionnaire-based cross-sectional study was conducted among the general public of Mumbai city in November 2022. The questionnaire was distributed among students of N R BHAGAT COLLEGE OF ARTS, COMMERCE & SCIENCE, NERUL their friends, and relatives. Responses were received from Teachers of the college and teachers of colleges in other regions of Mumbai city. A total of 90 responses have been collected. The data collected reflects a majority of responses from the Night College students. Hence the number of respondents in each annual income range reflects as follows.

Table 1

Sr. No.	Annual Income Range of Respondents	Number of Respondents in the range
1	Earning above 600000	25
2	Earning between the range Rs. 400000 - 6,00,000	12
3	Earning between the range Rs. 200000 - 400000	23
4	Earning below – Rs. 200000	38

Income Range of Respondents with Number of Respondents in each Range

Table 2

The list of a few lost-price generic drugs.

Name of the generic drug	Indication	Price
Paracetamol	Fever	Rs. 9.80/10 tablets
Cefixime	Bacterial infection	Rs. 225/10 tablets
Amoxicillin	Bacterial infection	Rs. 30.77/10 tablets
Ofloxacin	Diarrhea	Rs. 92/10 tablets

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DATA ANALYSIS

Q. Age

506 responses



Figure 1.1

Respondents' age is divided into groups and received responses up to 20 age groups”
39.6% of respondent age is up to 20 age, 29.2% of respondent age is between 21-40 group, 26.4% of respondent age is between 41-60 group, remaining respondent's age is above 60 age.

Q. Educational level

106 responses



Figure 1.2

Respondent's educational level is an important factor to increase awareness if we found that they are less educated so here 33% are the HSSC, 16% are graduate, 40.6% are postgraduate, and the remaining 10.4% are less educated. The result we get all maximum respondents are educated.

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Q. Annual Income of the family

106 respondents

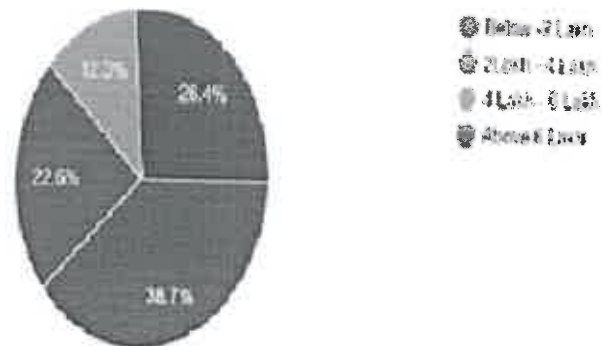


Figure 1.3

Earning below the range Rs. 200000 are 38.2%, earning between 2 lakhs to 4 lakhs are 22.6%, earning 4 to 6 lakhs is 12.3% remaining above 6 lakhs is 26.4. As received a maximum number of respondents are from low-income groups so they cannot afford more on their monthly medical bills.

Q. How healthy do you consider on a scale of 1 to 5?

106 respondents

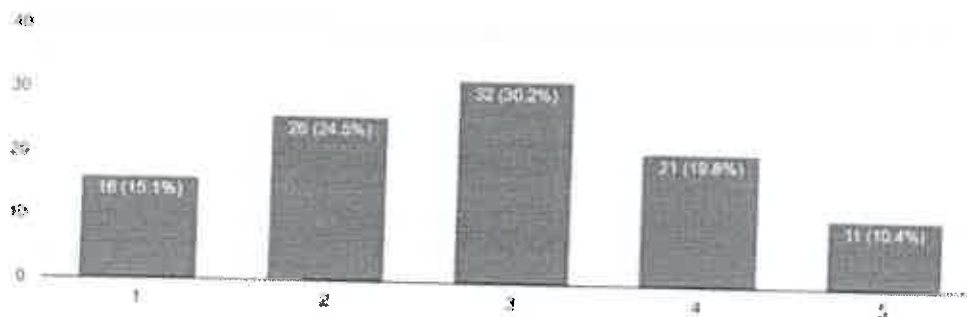


Figure 1.4

As we received a response from 106 respondents who answered they are healthy and don't have any health issues.

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Q. How often do you get a health checkup?

106 responses



Figure 1.5

58.5% responded share that they only get a health check-up when needed. That concludes that in India health priority is not on the top agenda.

Q. For what kind of illnesses do you prefer to buy generic drugs (symptoms to be mentioned)

56 responses

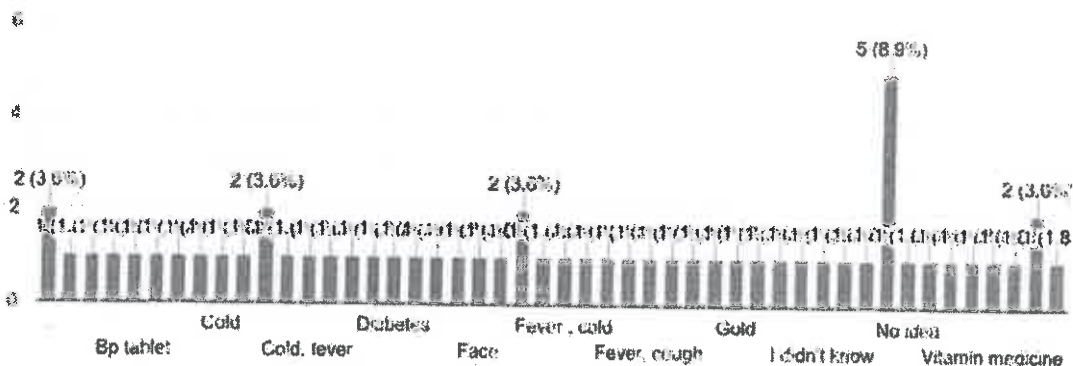


Figure 1.6

Respondents don't have the awareness to use generic medicine for regular use in Blood pressure, sugar, multivitamins, and other major diseases.

Q. Do you agree that Generic Medicine composition, dose, and an indication of generic medicine are the same as branded medicine

100 responses



Figure 1.7

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As per the response, 61.3% person agreed that generic medicine is the same as branded medicine in composition, dose, and indication wise.

Q. Do you think generic drugs are as safe as branded drugs?

106 responses

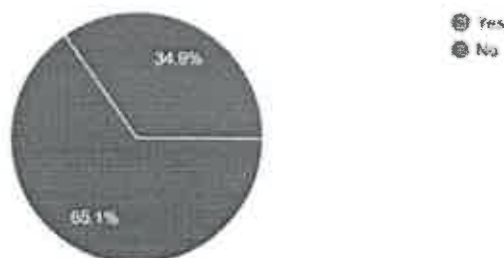


Figure 1.8

As per the response, 65.1% person agreed that generic drugs are as safe as branded drugs. It shows they are satisfied with the use of generic medicine.

Q. Do generic drugs take longer to act in the body compared to branded drugs?

100 responses

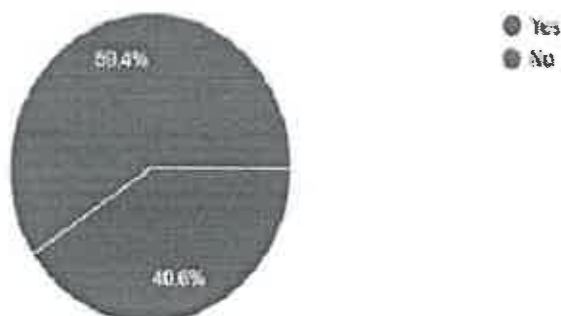


Figure 1.9

As per the response, 40.6% of people agreed that generic drugs take longer to act in the body compared to branded drugs.

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Q. Do you prefer to use generic medicine?

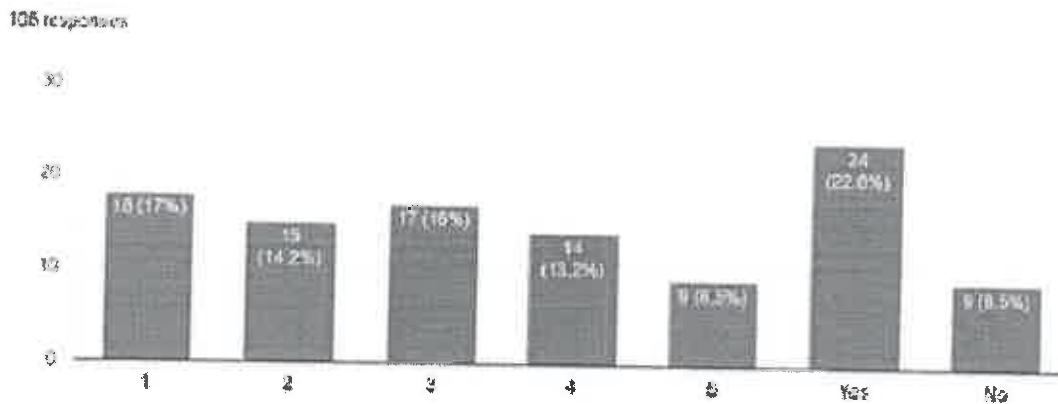


Figure 1.10

Yes, as per the 106 respondents 24% of participants use to prefer generic medicine.

Q. If you are a doctor, Do you prefer to prescribe generic medicines for your patient?

100 responses

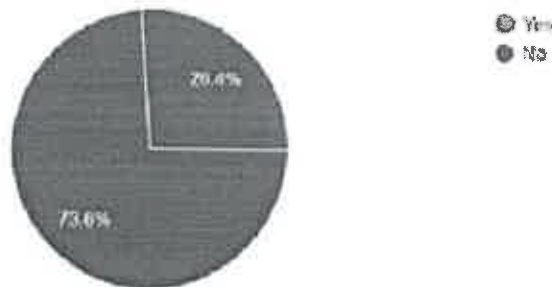


Figure 1.11

As per the response, 73.6% person agreed that they prefer or recommend generic medicine to others

Q. Which one of them is true about JAN AUSHEDHI SUGAM App?

100 responses

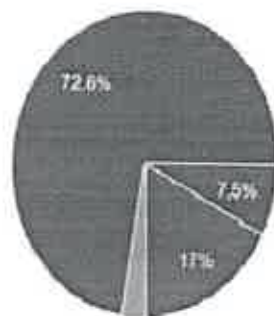


Figure 1.12

- It will enable people to search for generic medicines
- It will locate generic stores near you
- It will help in product comparison between generic vs branded medicines in the form of MRP and overall saving
- All of the above

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Findings:

1. As we added in our study all the different age groups like to prefer generic medicine. when they have different education levels and monthly earnings too that's why they prefer to use generic drugs.
2. We found in our study that a maximum number of respondents consider, they are healthy and don't have any chronic disease, and then only if it is needed do they go to visit for a health check-up.
3. As we found in our research customers generally use generics for the general flu, fever, and any other common diseases. But it is a need to spread more awareness about the use of generic medicine when it is available for all types of diseases.
4. In my research I found that a maximum no of people are aware of the composition, dose, and effectiveness of generic medicine but they do not prefer to go for purchase it. So here need to find the reason behind their decision why always select branded when generic is available at a comparatively low price and convince them to use it regularly.
5. In this research we found that the price is also very less compared to brand medicine and customer know this thing but they never tried to go with the selection option, if they go with generic it will help them to save more amount in monthly medical bills. More generic medicine stores are available in this city.

Result

In our research, we tried to collect data about the awareness of generic medicine we frame this in our research

Hypothesis H0 = Customers are aware of the benefits of Generic Medicine.

This we get with our data and it is proven that they are aware of the generic medicine available in the medical stores and they are using them.

Limitations of the Study

Some of the barriers to the marketing of generic drugs can be explained as under:

- **Ignorance:** Ignorance prevails among customers about generic drugs. They prefer branded drugs and feel generic as inferior.
- **Misunderstanding:** Though generic drugs are produced on the basis of patents, mischief prevails about their quality, which is wrong and leads to misunderstanding.
- **Lack of marketing centers:** Generic drugs do not have a proper marketing network. Hence they are lagging behind.
- **Lack of MR network:** The marketing network does not provide proper support for generic drugs. Hence these products lag behind in many ways.
- **Doctor's psychology:** Some doctor's ideas have based on benefits schemes based on the sale of medicine which supports branded
- **Mindset of customers:** The customers' mindset must be changed. Customers prefer branded drugs and they give a secondary treatment to generic drugs.
- **Stockiest negative approach:** Stockiest or middle shop owners prefer to sell branded drugs and they do not support generic drugs which is a basic problem.

Conclusion

Generic medicines are cost-efficient for the healthcare system and completely safe for consumption. While there are several advantages of generic medicines, it is also important to note that self-medication is not recommended and if you must have generic medicines, consult the doctor to discuss your health condition and only purchase good quality generic medicines as prescribed.


Generic medicines play an important role in the pharmaceutical market because they offer effective treatment at a low cost. According to both the National Medicines Agency (EOF) and the Panhellenic Association of Pharmacists, generics are bio-equivalent formulations and safe for human use.

some effective efforts During this year's financial budget, when the Prime Minister had talked about providing free medicines at all rural government dispensaries under the 12th Five Year Plan, his motive behind it was to reach the benefit of generic medicines to a large section.

For the past few years, NGOs in Rajasthan have been promoting generic medicines, which inspired Aamir to raise the issue in 'Satyamev Jayate'. Apart from this, an NGO named 'Low Cost' of Pune has also contributed a lot in this direction.

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Mahatma Night Degree College Of Arts & Commerce
Chembur, Mumbai - 400 071.



“A STUDY ON CUSTOMER PERCEPTION TOWARDS SELECTED ONLINE SHOPPING COMMERCIAL WEBSITES”

Mrs. Prabha Jasmine Nadar, Assistant Professor, Department of Management, Sree Narayana Guru College of Commerce - Chembur, Mumbai

Dr. Lata Krishnan, Associate Professor, Head Department of Commerce, Mahatma Night Degree College of Arts and Commerce - Chembur, Mumbai

ABSTRACT

Purpose – The study's primary goal is to examine customer perceptions of various commercial online shopping websites. As the website plays a very important role for an e-commerce business, this is where a customer makes the purchase; hence, it should be actively interactive and satisfy the customer's needs, which is required for online shopping. So, in order to create a highly effective commercial website, a study is done to learn how customers perceive online commercial websites.

Design/methodology/approach – This study looks at empirical studies of customer perceptions of commercial online shopping websites. The study conducts a literature review in order to gain a better understanding of the various factors involved, such as website design, product and information content, safety and security, and customer support, to measure customer perceptions of commercial websites. This paper analyses customer perceptions of commercial online shopping websites using primary data.

Findings- The study focused on selected commercial online shopping websites. The selected commercial websites are Nykaa, Snapdeal, Myntra, Meesho, and Ajio. It was determined through a systematic examination that, of the four different aspects taken into account, customers have positive perceptions of Myntra, which is why they rank it first, and unfavourable perceptions of Snapdeal, which is why they rank it fifth.

Practical implications – Online shopping can be done successfully if the commercial website is appropriately built and maintained in accordance with the demands and requirements of the customer. To update the website as frequently as is necessary, each firm must take independent action. Customers who voluntarily use a website to make purchases are the sign of a successful commercial website.

Keywords: Customer Perceptions, Online shopping, Commercial Websites,

I. INTRODUCTION

The best approach of purchasing today is online, and consumers choose it for a number of reasons, such as convenience, cost, variety, special offers, payment methods, customer service, etc. At the very first point when customers decide to do online shopping, they think about which commercial website they can approach to do their shopping. So commercial websites play a significant role in online shopping activities. To succeed in online retailing, where customer retention is one of the key success factors, it is necessary to develop an effective web presence and back-office operations. If a website offered high-quality services at reasonable prices with prompt delivery of items and/or improved job performance of customer support employees', customers would visit the website. (Ahn et al., 2007)

For the study, the commercial websites were segmented into four dimensions:

Website Design: - Customers go for online shopping because they believe that it can save them time and money, and they get a wide range of products at a competitive price. All these factors again depend on the website's design. If the website design is not impressive or easy to use. The customer may be given the option of visiting another commercial website. To impress or retain the customer, commercial website design needs to take certain factors into account, like easy access, attractive website design, easy navigation, interactive features, response time, processing speed, etc.

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Product / Information Content: - The customer visits the commercial website in order to purchase the product. Information about the product and merchandising of the product is the most important factor on any commercial website. If the product description, care instructions, and efficient presentation of the products (front view, back view, side view, zoom) are not properly specified, then it can lead to a loss for the business.

Safety and security: - Customers always check the safety and security of any commercial website before making a purchase. Customers will approach a commercial website only if the website is trustworthy and secure for sharing personal information and safe for making payments.

Customer support: - Customer support is mentioned on commercial websites in three stages: pre-purchase, during-purchase, and post-purchase, also known as "from entry to exit." In all the stages, we required customer support, which again is the backbone of any business. If the customer is not properly guided or heard, the chance of visiting and purchasing again will be less. The website should provide proper channels to contact customer service and give them prompt responses for handling and solving queries.

II. RATIONALE AND SIGNIFICANCE OF THE STUDY:

Commercial websites are improving their performance day by day because of technology development, and the customer's perception of online shopping is also changing in all aspects. However, some concerns about online shopping remain, such as a lack of confidence in making an online purchase through commercial websites. Finding a trustworthy website is the first step in any online shopping experience. The very first impression of the website can only build a positive/negative approach towards customer perception. For a better understanding of customer perceptions of commercial websites, certain factors are considered in studies like website design, product content, safety and security, and customer support. Customer perception of commercial websites varies from website to website. Because it is impossible to study all commercial websites, a few fashion and apparel commercial websites were chosen to understand customer perceptions of commercial websites. Such phenomena, such as Nykaa, Snapdeal, Myntra, Meesho, and Ajio, highlight the need for scientific research to determine customer perception of commercial websites in online shopping. Customers will be able to get a clear picture of various commercial websites' performances, which will assist them in identifying a good commercial website from the above-mentioned fashion and apparel commercial websites, and even be helpful 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.

III REVIEW OF LITERATURE

Marios Koufaris et al., (2014) "Consumer Behavior in Web-Based Commerce: An Empirical Study" This study looked at how consumer experience affected online impulsive purchases, attitudes, and buy intentions. The study found that perceived control and enjoyment of shopping were the two factors contributing to the rise in purchase intentions. According to the study, customers would return to the website due to its engaging shopping environment and wide range of products. The conclusion is that purchase intention is significantly influenced by either perceived control or shopping enjoyment.

Chia-Lin Hsu (2012) "The impact of website quality on customer satisfaction and purchase intention: perceived playfulness and perceived flow as mediators" This study looked at the relationship between perceived playfulness and perceived flow and website quality. It has been determined that perceived website flow and consumer satisfaction are influenced by website quality. This study shows that service quality has a bigger influence on customer satisfaction and purchase intention than information and website quality.

Urvashi Tandon (2017) "The influence of website functionality, drivers and perceived risk on customer satisfaction in online shopping: an emerging economy case" The research examined at how

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well websites functioned, how customers in India perceive risk, and what drives them to shop online. The study experimentally supports the functionality of the website, Cash-on-delivery mode of payment, convenience of ordering, and other aspects of perceived risk with Unified theory of technology adoption and use. The study's findings showed that perceived risk was negatively correlated with customer satisfaction, whereas the website's functionality and drivers were positively correlated.

Kim, J. U., Kim, W. J., & Park, S. C. (2010) "Consumer perceptions on web advertisements and motivation factors to purchase in the online shopping" The purpose of this study was to examine the mediating and moderating impacts of product involvement and website trust in connection to the effects of web advertisement qualities on consumers' intention to make a purchase. Research showed that customers with higher product involvement tended to shop at malls where they could access more product information, whereas those with lower product involvement tended to be more open to considering entertainment. Additionally, customers who trusted websites more stayed on purchasing sites longer and were more inclined to be influenced by perceived enjoyment;

IV OBJECTIVES OF THE STUDY

1. To study the customer perception dimension pertaining to website design of selected online shopping commercial websites
2. To study the customer perception dimension pertaining to Product/information content of selected online shopping commercial websites
3. To study the customer perception dimension pertaining to safety and security of selected online shopping commercial websites
4. To study the customer perception dimension pertaining to Customer supports of selected online shopping commercial websites
5. To study Online shopping in Commercial website is effective and efficient

V HYPOTHESIS

1. Online shopping in Commercial website is not effective
Online shopping in commercial website is effective

V RESEARCH METHODOLOGY

Sources of Data: - The study based on Survey method. The data is obtained from the primary and secondary data. The primary data is collected through questionnaire method whereas the secondary data is collected from the newspapers, magazines, research journal, websites etc

Selection of Sample :- The population of the study included only online shoppers who purchased fashion and apparel through online shopping from the commercial websites like Nyaka, Snapdeal, myntra, meesho, Ajio,


Sample Size: - The sample size 100 taken for analysis.

Sampling Technique: Random Sampling and Snowball sampling technique was used to collect the data.

Tools Used for Data Analysis: - For Data Analysis - Excel, Mega Stats, Power Query, Pivot table and other tools. Data is represented through Bar graph, Percentage.

Ranking: Evaluation of statements was done through ranking. Each statement was rated on its most preferred to least preferred through a five point rating scale. - **Weighted Mean Score (WMS):** To analyses the best fashion and apparel selected commercial websites, the weighted mean score was calculated.

The ranks were assigned as follow: Excellent -5, Above Average -4, Average -3, and Below Average 2, Poor 1


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**Limitation of the Study:**

1. The present study was restricted to Mumbai city
2. Only online shoppers were taken as samples
3. The study is limited to selected fashion and apparel commercial websites like Nykaa, Snapdeal, Myntra, Meesho, Ajio.

VI DATA ANALYSIS & INTERPRETATION**Table 1: Demographic Profile: - Socio- Economic Status of the Respondents**

Variables	Classification	Frequency	Percentage
Gender	Male	49	49%
	Female	51	51%
	Total	100	100%
Marital Status	Unmarried	49	49%
	Married	51	51%
	Total	100	100%
Education	Less than High School	5	5%
	High School	13	13%
	Under Graduate	40	40%
	Post Graduate	42	42%
	Total	100	100%
Age Group	Up to 20 Year	18	18%
	21-30 Year	34	34%
	31-40 Year	31	31%
	41-50 Year	15	15%
	Above 50 Year	2	2%
	Total	100	100%
Annual Income:	Below 1 Lakh	46	46%
	1 Lakh to 3 Lakh	21	21%
	3 Lakh to 5 Lakh	20	20%
	above 5 Lakh	13	13%
	Total	100	100%

Source: Primary Data

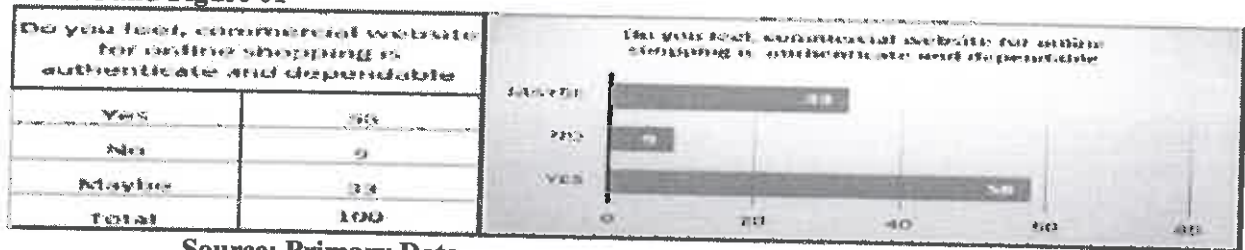
Interpretation Table 1:- The percentages of male and female, married and unmarried, are almost the same, and the results reveal that gender and marital status won't affect online shopping everyone is doing their shopping online. 82% of the respondents is postgraduate or undergraduate, indicating that the majority of people who shop online are well educated. 80% of the respondents is between the ages of 21 and 50 and actively purchases online, implying that those under 20 and over 50 do not do much online shopping. All the income groups are active online purchasers.

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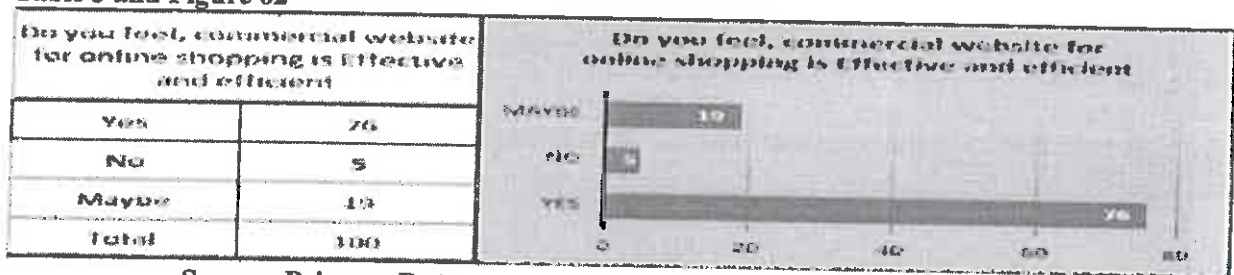
Table 2 and Figure 01



Source: Primary Data

Interpretation Table 2: The first step in any online purchase is choosing the best commercial website. 58% of respondents think the commercial website is appropriate for online shopping. 38% of survey participants are unsure of the legitimacy of the commercial website.

Table 3 and Figure 02



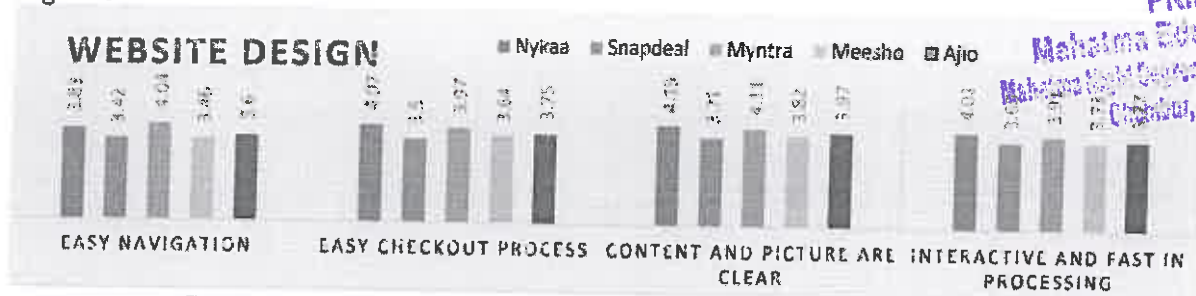
Source: Primary Data

Interpretation Table 3: 76% of respondents' perceptions of commercial websites' are positive; they believe the websites are effective and efficient for shopping online. Very few are uncertain about efficiency and effectiveness

Table 4: Weighted mean score and ranks assigned to selected fashion and apparel commercial websites on the basis of consumers perception towards Website Design (N=100)

WEBSITE DESIGN					
Particular	Nykaa	Snapdeal	Myntra	Meesho	Ajo
Easy navigation	3.83 (II)	3.42 (V)	4.04 (I)	3.46 (IV)	3.6 (III)
Easy checkout process	4.07 (I)	3.5 (V)	3.97 (II)	3.64 (IV)	3.75 (III)
Content and picture are clear	4.19 (I)	3.71(V)	4.11 (II)	3.82 (IV)	3.97 (III)
Interactive and fast in processing	4.02 (I)	3.68 (V)	3.91 (II)	3.73 (IV)	3.77 (III)
TOTAL	4.02 (I)	3.57 (V)	4.00 (II)	3.66 (IV)	3.77 (III)

Figure 3



Source: Primary Data

Interpretation Table 4: Five commercial websites have been chosen for study. The layout of a commercial website is divided into four categories: easy navigation, an easy checkout process,

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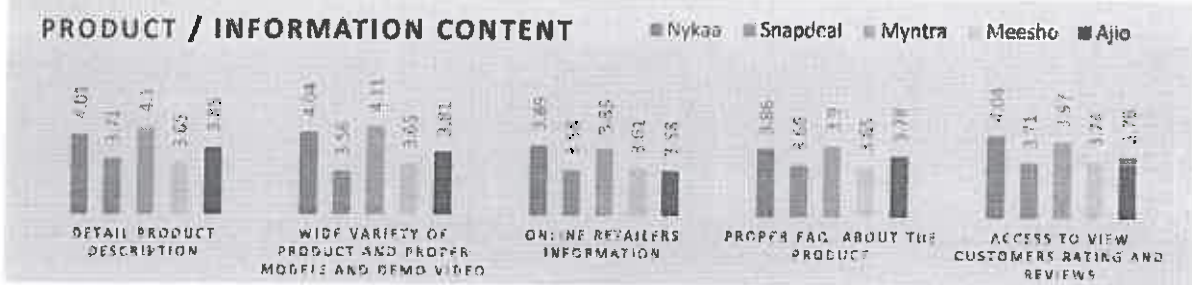


clarity of picture and content, and fast processing. In response, the respondent came to the conclusion that Snapdeal came in fifth, followed by Nykaa and Myntra, respectively, in terms of website design.

Table 5: Weighted mean score and ranks assigned to selected fashion and apparel commercial websites on the basis of consumers perception towards Product / Information Content (N=100)

Product / Information Content					
Particular	Nykaa	Snapdeal	Myntra	Meesho	Ajio
Detail Product description	4.01 (II)	3.71 (IV)	4.1 (I)	3.65 (V)	3.85 (III)
Wide variety of product and proper models and demo video	4.04 (II)	3.56 (V)	4.11 (I)	3.65 (IV)	3.81 (III)
Online retailers information	3.89 (I)	3.58 (IV)	3.85 (II)	3.61 (III)	3.58 (V)
Proper FAQ about the product	3.86 (II)	3.66 (IV)	3.9 (I)	3.65 (V)	3.78 (III)
Access to view customer rating/reviews	4.04 (I)	3.71 (V)	3.97 (II)	3.74 (IV)	3.78 (III)
Total	3.968 (II)	3.644 (V)	3.986 (I)	3.66 (III)	3.76 (IV)

Figure 4



Source: Primary Data

Interpretation Table 5: For the study, five commercial websites have been selected to understand customer perceptions of the informational or product content. Myntra and Nykaa are rated first and second, respectively, by respondents; Snapdeal is rated fifth.

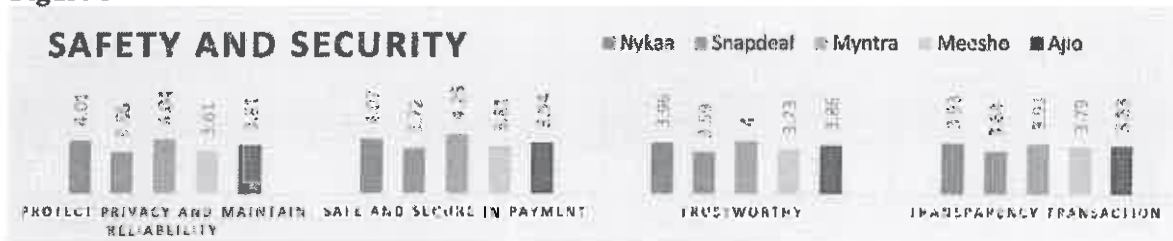
Table 6: Weighted mean score and ranks assigned to selected fashion and apparel commercial websites on the basis of consumers perception towards Safety and security (N=100)

Safety and security					
Particular	Nykaa	Snapdeal	Myntra	Meesho	Ajio
Protect privacy and maintain reliability	4.01 (II)	3.56 (V)	4.04 (I)	3.61 (IV)	3.85 (III)
Safe and secure in payment	4.07 (II)	3.72 (IV)	4.25 (I)	3.81 (V)	3.94 (III)
Trustworthy	3.96 (II)	3.59 (V)	4 (I)	3.73 (IV)	3.86 (III)
Transparency transaction	3.93 (I)	3.64 (V)	3.91 (II)	3.79 (IV)	3.83 (III)
TOTAL	3.99 (II)	3.62 (V)	4.05 (I)	3.73 (IV)	3.86 (III)

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Figure 5



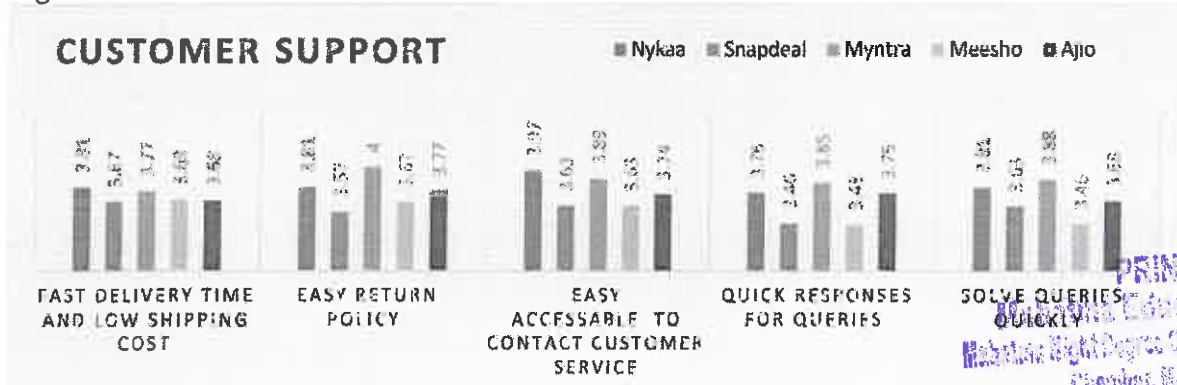
Source: Primary Data

Interpretation Table 6: To better understand consumer perceptions about safety and security, five commercial websites have been chosen for the study Myntra and Nykaa are ranked first and second, respectively, in the respondents' rankings, with Snapdeal coming in at number five.

Table 7: Weighted mean score and ranks assigned to selected fashion and apparel commercial websites on the basis of consumers perception towards Customer support (N=100)

CUSTOMER SUPPORT					
Particular	Nykaa	Snapdeal	Myntra	Meesho	Ajo
Fast delivery time & low shipping cost	3.81 (I)	3.67 (V)	3.77 (II)	3.69 (III)	3.68 (IV)
Easy Return Policy	3.81 (II)	3.57 (V)	4 (I)	3.67 (IV)	3.77 (III)
Easy contact to customer service	3.97 (I)	3.63 (IV)	3.89 (II)	3.63 (V)	3.74 (III)
Quick responses for queries	3.76 (II)	3.46 (IV)	3.85 (I)	3.45 (V)	3.75 (III)
Solve queries quickly	3.81 (II)	3.63 (IV)	3.88 (I)	3.46 (V)	3.68 (III)
Total	3.83 (II)	3.59 (IV)	3.87 (I)	3.58 (V)	3.72(III)

Figure 6



Source: Primary Data

Interpretation Table 7: Five randomly selected websites have been chosen for the study in order to analyse consumers' perceptions about customer support. Meesho is placed fifth, while Myntra and Nykaa are ranked first and second, respectively, by respondents.

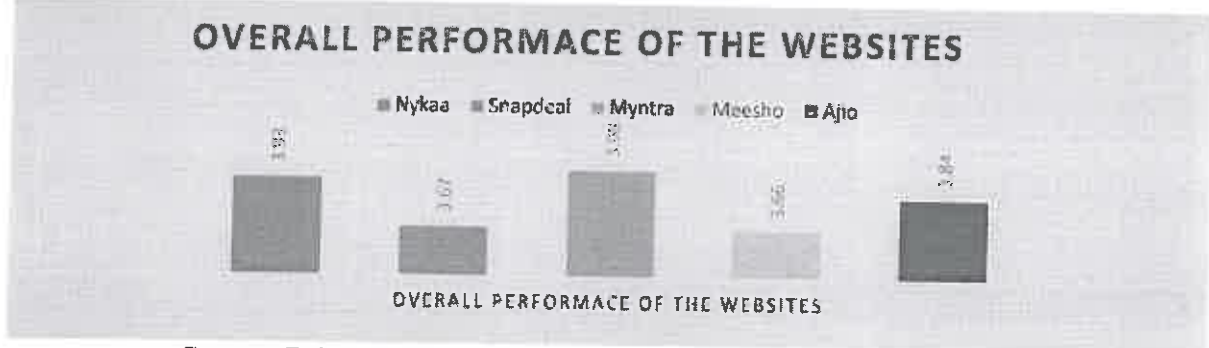
Table 8: Weighted mean score and ranks assigned to selected fashion and apparel commercial websites on the basis of consumers perception towards Overall Performance of the Websites (N=100)

Overall Performance of the Websites					
Particular	Nykaa	Snapdeal	Myntra	Meesho	Ajo
Overall performance of the websites	3.93 (II)	3.67 (IV)	3.98 (I)	3.66 (V)	3.84 (III)

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Figure 7



Source: Primary Data

Interpretation Table 8: The respondent is asked for feedback on the overall performance of the five commercial websites that were identified. Based on the responses, Myntra came in first, Nykaa came in second, while Meesho received the lowest ranking.

Table 9: Weighted mean score and ranks assigned to selected fashion and apparel commercial websites on the basis of consumers perception towards Product / Information Content (N=100)

Commercial Website Ranking					
Commercial Websites Rank	Myntra 1st	Nykaa 2nd	Ajo 3rd	Meesho 4th	Snapdeal 5th
Website Design	4	4.02	3.77	3.66	3.57
Product / Information Content	3.98	3.96	3.76	3.66	3.64
Safety and security	4.05	3.99	3.86	3.73	3.62
Customer support	3.87	3.83	3.72	3.58	3.59
Overall Performance	3.98	3.93	3.84	3.66	3.67
TOTAL	3.976	3.946	3.79	3.658	3.618

Figure 8



Source: Primary Data

Interpretation Table 9: To determine which commercial website is ranking first, an average ranking is calculated after taking into account the four dimension ranking and the overall performance ranking. Following investigation, it was determined that Mytra came out on top, Nykaa came in second, and Snapdeal came in last.

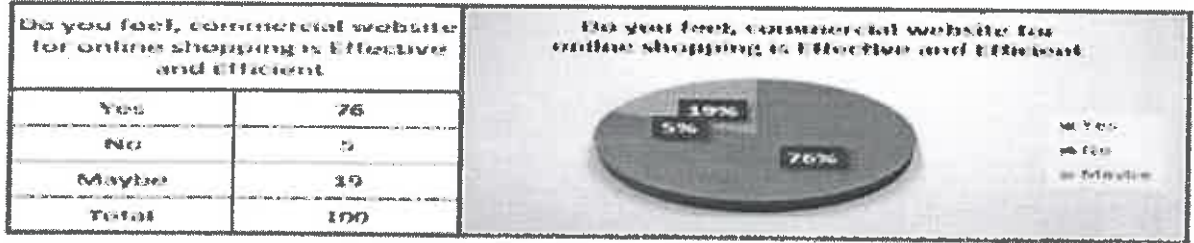
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**Hypothesis Testing 01**

H0- Online shopping in Commercial website is not effective

H1- Online shopping in Commercial website is effective

Table 10 and Figure 09



Interpretation Table 9: 76% of the respondent agree that the commercial website is efficient and effective which concluded that the null hypothesis is rejected and the alternative hypothesis is accepted

VII FINDING OF THE STUDY

1. 76% of respondents rated the online shopping website as effective and efficient, and 58% of respondents thought it was authentic.
2. The design of a website is assessed based on its processing speed, ease of checkout, and information clarity. The respondent gave Nykaa first position for website design among the selected commercial website, with Myntra coming in second.
3. Product and information content are significant factors to take into account while making purchases on a commercial website. After taking into account five separate divisions, this evaluation is completed. For the presentation of the product and information content, Myntra first stood out.
4. According to respondents, the Myntra website was chosen first for safety and security, and many other characteristics, like privacy, secure payment, trustworthiness, and openness, were taken into account to evaluate this.
5. Customer support is the lifeblood of any company, and with the prevalence of online buying, it must be efficient. According to respondents' perceptions, Myntra provides its clients with the best customer assistance.
6. Nykaa came in second place to Myntra in terms of how customers perceived the overall performance of the chosen commercial online shopping websites.
7. The chosen commercial websites are listed here in order of customer opinion: Myntra came in first, followed by Nykaa, Ajio, Meesho, and Snapdeal in that order.

VIII CONCLUSION

After examining the contributing aspects, it was determined that customers perception all of the chosen commercial websites were accurately representing their online stores. All of the selected commercial websites have subtle differences, such as some are good at website design, some are good at product merchandising, some are focused on a safe and secure website, and some are truly contributing to the development of good customer support. Customers have a favorable opinion of commercial websites because they all generally offer the greatest customer service and facilitate simple shopping. But in terms of the precise outcome, it can be argued that Myntra came out on top when compared to other well-chosen/selected commercial websites.

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Chandrapur - 430 071.



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Chembur, Mumbai - 400 071.

An Insight into the Social and Economic Determinants of Employment with Special Reference to Female Labour Workforce Participation

Dr. Harsh D. Shukla* Dr. Pooja Sikka**

[The present study aims to identify the main factors that affect employment, particularly female employment which is historically lower than male employment rates. The study focuses on selected states to gather data and insights and has used NSSO unit level data and PLFS data to analyse the economic and social determinants of employment. Logistic regression and Pearson chi square techniques are used to analyse the unit level data. The logistic regression analysis found that lower monthly per capita income, person dwelling in the rural areas and male category significantly increases the chance of being a working individual in majority of the select states. Further, the study found that women are still facing significant barriers to equal employment opportunities due to lower educational attainment and domestic duties. By addressing these factors, policymakers can help promote greater female labor force participation, which is not only important for gender equality but also for economic growth and development.]

The pattern of employment is changing very rapidly all over the world and Indian economy is no exception. The structural shift in India from agriculture to service led economy has resulted in shift in the pattern of employment. Indian economy is facing a grave challenge of employment in its various sectors and the focus has been shifted from the problem of unemployment to underemployment of youth and rampant in formalization as elaborated by the studies of World Bank (2010). Moreover, low labour force participation by females in the wake of demographic dividend and sluggish growth of manufacturing sector with increase in the capital intensity poses additional constraints as per Thomas (2014).

The rapid technological progress distorted the labour market all over the world. Internet of things changed the way we used to work and artificial intelligence is about to end the non-cognizant jobs in the near future. The digital world is still far away from many rural Indians. The existence of the unorganised sector, social dynamics and limited resources in the hands of the government poses great challenge to reap the demographic dividend. In addition to this, the different topography across the nation has its own role to play for the employment generation. The migration of the people from poor states to richer states is a common phenomenon in India. The present study attempts to understand the major economic and social determinants of employment particularly of female labour in the selected states of Bihar (BHR), Gujarat (GUJ), Kerala (KER), Madhya Pradesh (MP),

Maharashtra (MAH), Rajasthan (RAJ), Tamil Nadu (TN) and Uttar Pradesh (UP). The primary reason for selecting these eight states comes from the economically backward states and economically forward states concept. The backward states which are also known as BIMARU states are taken into consideration which includes Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh. In addition to this highly industrialised Gujarat, Maharashtra and Tamil Nadu were considered as the forward states. Kerala has been included in the study because of its highest literacy in the country.

Review of Literature

Ghosh (2004) explained that Indian labour market was different from the advanced countries. According to him unemployment rate in India did not make much sense because Indian poor cannot afford to remain unemployed. It was the educated youth especially women who remain unemployed because they belong to economically better off families. Himanshu (2011) suggested that the slow employment growth was largely due to a sharp decline in female labour force participation, while the number of male workers actually increased by a respectable 22 million between 2005 and 2010. Makandan (2013) wrote that the employment was not a panacea for the poverty reduction as number of working poor was very high in India. The condition of the working poor was extremely pathetic and needs policy attention. Mitra and Verick (2013) found that higher education leads to lower participation in the labour force. Similarly the participation of females was lower as compared to males. Further, participation rate was lower in the urban area and among the general caste candidates. Chand and Srivastava (2014) in their study examined that though

* Assistant Professor in Economics, Mahatma Night Degree College, Chembur-Mumbai.

** Assistant Professor in Economics, University Institute of Laws, Panjab University Regional Centre, Ludhiana.

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States	Bihar	Gujarat	Kerala	M.P.	Maharashtra	Rajasthan	Tamil Nadu	U.P.
2011-12								
Chi Square	7539.04	4323.13	4421.39	5274.23	6509.18	3697	4797.08	15551.80
P- Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017-18								
Chi Square	5469.45	4284.50	3176.76	3601.18	4955.71	3596.615	3374.96	11765.30
P- Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source- Calculated by Authors from NSSO 2011-12 Unit level Data

Table 3 shed light on very interesting reason of low female participation rate in the workforce. The study found that in almost all the state major part of female workforce attend domestic duties only and some time in addition to attending domestic duties they get involve in collection of free goods which is non-monetary in nature. Thus, a large workforce gets wasted inside their home and do not contribute to the GDP. This was one of the main cause of lower female labour participation rate in India. As we have seen that majority of female workforce in the state of Uttar Pradesh and Bihar were involved in attending domestic duties, how is it possible to have a higher female labour force participation rate in these state?

Table 3: percentage of Female attending domestic duties

Year/State	2011-12 Attended domestic duties only	2017-18 Attended domestic duties only
Bihar	35.2	70.1
Gujarat	39.6	60.6
Kerala	41.1	47.2
Madhya Pradesh	24.4	42.2
Maharashtra	47	50.5
Rajasthan	24.7	43.5
Tamil Nadu	40.2	46.1
Uttar Pradesh	29.9	48.4

Source- Calculated by Authors from NSSO 2011-12 Unit level Data

Economic and Social Determinants of Employment (Logistic Regression Technique)

In order to analyse the unit level data we have used the econometric technique of logistic regression. Logistic

Table 5: Variables in Equation for Select States 2011-12 (Results of Logistic Regression)

Variables	Dependent Variable Working Status – Log Odds Value						
	Bihar B	Gujarat B	Kerala B	M.P. B	Maharashtra B	Rajasthan B	B B
MCE	0.12*	0.26	0.27	0.32	0.29	0.16	0.37
Gender	4.53	2.83	2.29	2.85	2.28	2.47	2.21
Arca	0.30	0.35	0.09	0.47	0.58	0.57	0.31

regression technique used dichotomous dependent variable having its value 0 or 1. We have used working status of an individual as a dependent variable while gender, age, monthly consumption expenditure, literacy level, caste, religion, marital status and area of living are independent variables. The coding for each variable is given below in Table 4.

Table 4: Coding for Independent Variables

Variables	Categories	Code given	2011-12	2017-18
			Percent	
Gender	Male	1	51.10	50.70
	Female	0	48.90	49.30
Monthly	Less than Rs 10,000	1	74.00	68.70
Consumption Expenditure	More than Rs 10,000	0	26.00	31.30
Literacy Level	Illiterate	1	23.30	20.00
	Literate	0	76.70	80.00
Religion	Hindu	1	74.20	74.90
	Others	0	25.80	25.10
Caste	Reserved	1	67.70	68.40
	General	0	32.30	31.60
Marital Status	Single	1	24.20	28.20
	Married/ Divorced/ Window	0	75.80	71.80
Area of Living	Rural	1	61.80	55.90
	Urban	0	38.20	44.10
Age	Age is a numerical variable in the study.			

Source : Calculated by Authors with the help of SPSS Software

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e. **Marital status** - The marital status and its effect on the working status has a peculiar effect on working status of an individual. In the first analysis of 2011-12 this variable is insignificant for all the states but it becomes significant and negatively affects the working status in the 2017-18 analysis period.

f. **Religion** - The effect of religion is not very obvious for different states in both the study periods. In certain states religion is significantly affecting the working status while in other it is not. Further in some states it is positively affecting the working status while in other states it is negatively affecting the working status.

g. **Caste** - The effect of caste is positive on the working status and is insignificant in the state of Kerala in 2011-12 analysis. In 2017-18 analysis it is insignificant for Kerala, Bihar and Gujarat. The higher concentration of Muslim and Christian population in Kerala is one of the reason of caste being an insignificant determinant of working status of an individual. For other states caste is positively associated with working status.

h. **Age** - Age being a numerical variable in the analysis is insignificantly affecting the state of Kerala and Gujarat in first study period of 2011-12 while it is positively significant for all other states. It is to be noticed that log odd number for first period is very small lying between 0.00 to 0.05 in all the states. In the second study period the sign turns negative and it is significant for all the states

Conclusion

This gloomy picture that logistic regression had demonstrated lead us to believe that we are still far behind in the development path compared to all other countries as lower educational attainment and domestic duties are depriving women an equal employment opportunity in the labour market. In addition to this sexual and verbal abuse in the workplace, low social mobility and negative social attitude of women work culture in the society enhances social discrimination in the job market for females. The states which are lagging far behind in social justice for women are Bihar, Uttar Pradesh and Rajasthan performing poorly in terms of their female labour participation. The major reasons identified by the study is lower educational qualification and majority of female workforce were involved in attending domestic duties. Further, social discrimination in various forms discourage women to take part in the job market.

India, a patriarchal nation, indicates that men are the family breadwinners and are therefore better educated and more engaged in the labour market. As a result, they are unable to choose to stay at home and must work to

provide for themselves and their families. The male-dominated structure of the society may also increase men's egos to the point where they prevent their female counterparts from entering the job market. This area needs more investigation, which is presently beyond the purview of the study.

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A STUDY ON IMPACT OF INFLUENCER MARKETING ON THE BUYING BEHAVIOUR OF THE CONSUMERS WITH SPECIAL REFERENCE TO CONSUMER DURABLE GOODS

Authored By

Dr. (Mrs). Anaya Aditya Markandeya

Assistant Professor, Department of Commerce, MES's Mahatma Night Degree College of Arts and Commerce, Chembur, Mumbai - 400071

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**COMPARATIVE STUDY OF TEACHER'S PERCEPTION AND
EMPLOYER'S PERCEPTION ON EMPLOYABILITY SKILLS OF
COMMERCE STUDENTS GRADUATING DURING THE COVID -19
PANDEMIC PERIOD IN MUMBAI**

Mrs. Bhakti Batavia

Assistant Professor, Department of Commerce, Changu Kana Thakur Arts, Commerce and
Science College, (Autonomous), New Panvel.

Dr. Lata Krishnan

Associate Professor, Head, Department of Commerce, Mahatma Night Degree College of Arts
and Commerce, Chembur, Mumbai.

Abstract

Accounting Education Requirement and demand is changing day by day with the level of competition increasing in the market. There is a need to change teaching learning process in Accounting Education for enhancing Employability skills among students. Since March 2020 the entire World is facing the difficult situation of Covid -19. It is in the hands of our country how it can survive and overcome and make their economy strong again. Simultaneously, it is up to an individual person how to sustain their position in the market to avoid job loss. Also, every individual should know how he/she can develop more employability skills for survival and growth. Students graduating during Covid -19 pandemic are worried about their future. So, the need has arisen to make students employable in the market. This research is a first step to show a path on employability skills of Commerce students graduating during Pandemic. The research has investigated Perception of Commerce Faculty and Industrial Fraternity on employability skills of Commerce students graduating during covid-19 pandemic. A questionnaire was prepared and responses of teachers and Employers were analysed. Testing of Hypothesis is done by applying a Non-Parametric Test.

Keywords: Employability Skills, Communication Skills, Behavioural Skills, Personality Traits, IT Skills.

Introduction

During the past years the economy has suffered from downfalls and the unemployment rates have been increasing, result being a difficulty to find a job after graduation. It has become harder to find jobs in any specific field as well as in the field of business. The significance of education additionally became more required for getting a job in any fields of employment. Educational degree seems to be measuring the competency and commitment of a person on top of the concrete experience and understanding of the given field. Traditionally business education has been aiming to prepare students for different positions in the field. After graduation these students will start looking and applying for jobs that match their educational background. Since the current economic

situation is making it hard for everyone to find a new job, it is essential to know and have the skills and experience the employers are searching for at the moment. Therefore it was considered as a good idea to conduct a research on these questions about the employability of a business graduate and what kind of skills and experience is needed.(Srivastava, n.d.)

Employability Skills:

The Skills which is necessary to be an employable in the job Market. Employability skills are categorised into Hard Skills and Soft skills. Both hard skills and soft Skills are essentials to connect campus with corporate. These skills Varies from individual to Individual. The researchers have categorised employability skills into five categories which are as follows:

Knowledge Assimilation	Communication Skills	Behavioural Skills	Personality Traits	IT Skills
Understanding of Concepts	Oral Communication	Ethics and values	Professionalism	Awareness of Modern technology
Practical Implementation of concepts	Written Communication	Social Etiquettes	Leadership	Use of Modern Technology
Knowledge of Current Affairs	Presentation Skills	Emotional Intelligence	Positive Attitude	Application of software programmes
Intelligence quotient	Workplace Communication	Respect and dignity	Self-Management	Ethical issues in IT

Objectives:

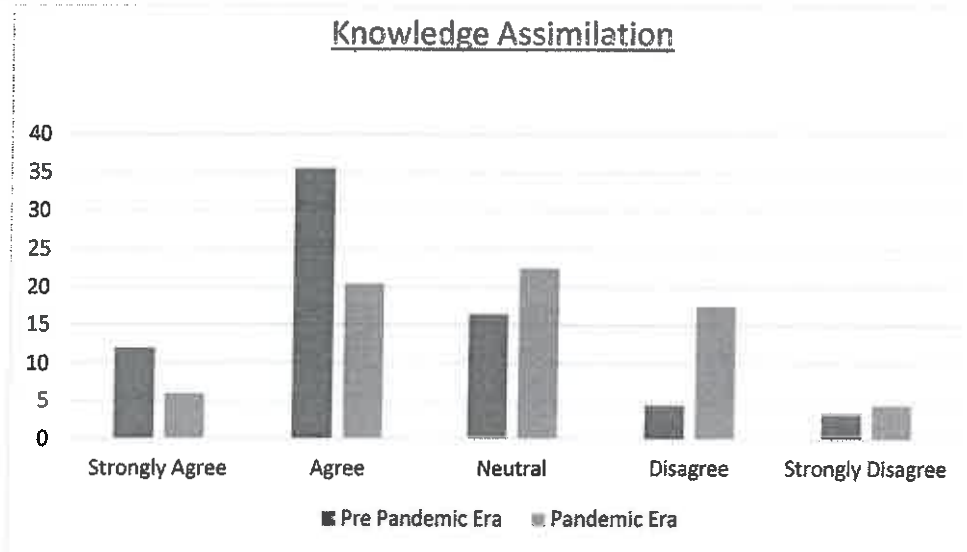
1. To Study the teacher's perception on the level of employability skills among Commerce graduates in pre pandemic era.
2. To Study the Employer's perception on the level of employability skills among Commerce graduates in pre pandemic era.
3. To Study the teacher's perception on the level of employability skills among Commerce graduates in the pandemic era.
4. To Study the Employer's perception on the level of employability skills among Commerce graduates in the pandemic era.

Hypothesis:

1. H_0 - There is no difference between the level of employability skills among graduates in pre-pandemic and pandemic era.
2. H_1 - There is a difference between the level of employability skills among graduates in pre-pandemic and pandemic era.

Research Methodology:

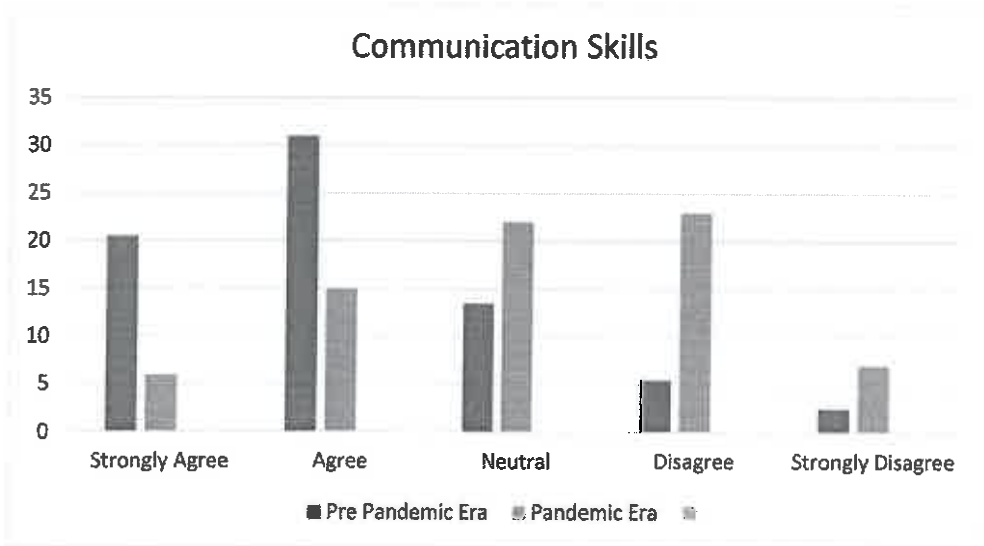
Research Type	Empirical Research
Sources of Data Collection	Primary Data
Data Collection Tool	Questionnaire
Sampling Method	Non-Probability Sampling Method (Convenience Sampling)
Sample Size	72 Teachers from Mumbai, Navi Mumbai and Thane. 70 Industrial Fraternity from Mumbai, Navi Mumbai and Thane.
Test Used	Non-Parametric Test (Wilcoxon Signed Rank Test)

Findings, Analysis and Interpretation:**1) Knowledge Assimilation:**

Knowledge is the base for every skillset. The candidate having sound knowledge will survive easily in the Job Market and will get succeed also. It has been observed that Knowledge was adversely affected in Pandemic era among Commerce Graduates. Students were able to gain more knowledge and concepts clarity in Pre pandemic era due to Physical classes. Both Teachers and Industrial Fraternity are having a same perception that Knowledge Assimilation varied in Pre pandemic era and Pandemic era.

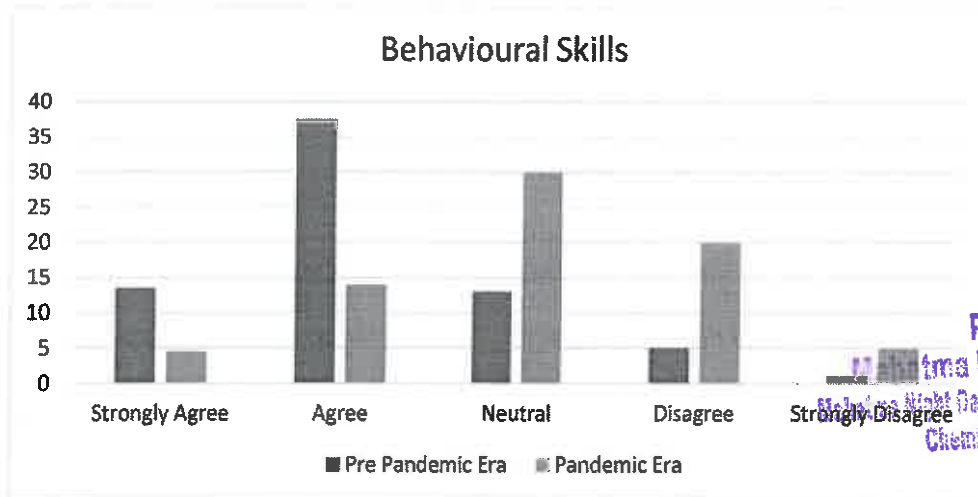

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2) Communication Skills:



Communication Skills are important skill set which is required in every field. This will help the candidate to share their ideas and feelings efficiently. Communication can be in the term of Oral Communication, Written Communication, Presentation Skills also Workplace Communication. Again, It was seen that Communication skills are developed more in Pre-Pandemic era as compared to Pandemic era. In Pre-Pandemic era Students were getting Chance to share their ideas and opinion physically that has resulted to Enhancement of Communication skills in Pre-pandemic era as compared to Pandemic.

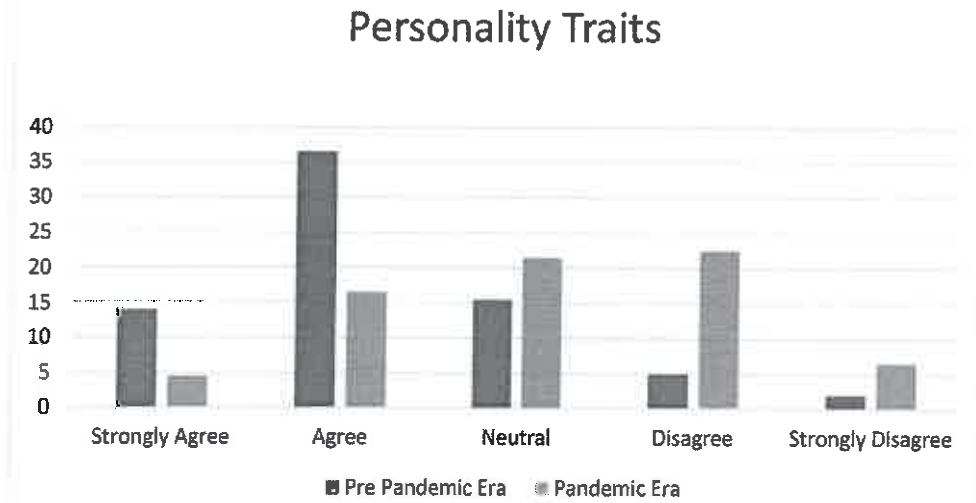
3) Behavioural Skills:



Behavioural skills are those interpersonal abilities which is very much essential in candidates' good performance. It includes ethics, values, social etiquettes, emotional intelligence, Respect and dignity. It has been observed that there is a drastic change in the behaviour in Pre pandemic era to pandemic era. Behavioural skills are not developed among students during Pandemic era.

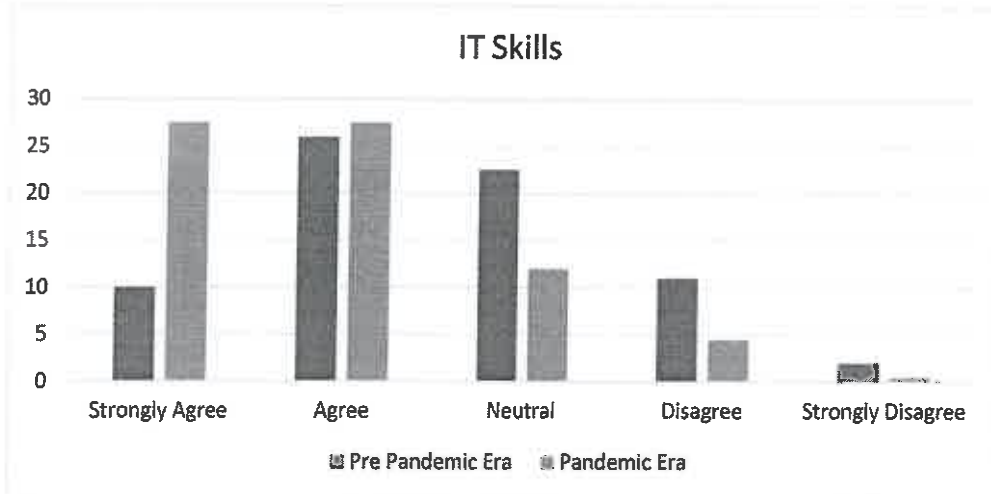
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4) Personality Traits:



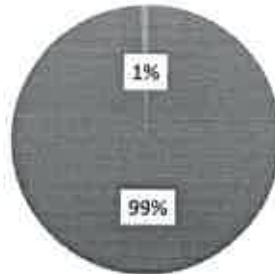
Personality Traits includes that interior characteristic of person which will make a person different than other. It includes Professionalism, Leadership, Positive Attitude, Self- Management. It has been observed that Personality Traits are not developed in the students in pandemic era as compared to Pre pandemic era.

5) IT Skills:

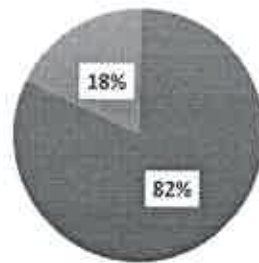


IT skills are those hard skills which is related with understanding Modern working technological environment. It includes Awareness of Modern technology, Use of Modern technology, Understanding and applying new software programmes also to understand new ethical issues in IT. It has been seen that there is a positive change only in IT skills during Pandemic era as compared to Pre pandemic era. Students are equipped with more technological abilities due to virtual transition.

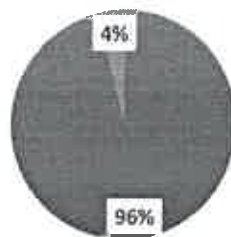
Importance of employability Skills in Working Life




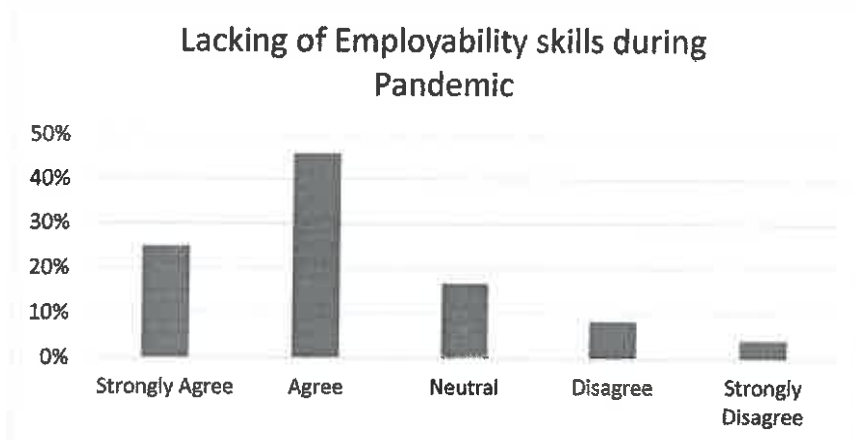
Employability skills enhances in classroom teaching



Importance of Teacher For enhancing employability




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Hypothesis Testing:

Non-Parametric Test (Wilcoxon Signed Rank Test) is used for testing the hypothesis. Data collected were analysed and interpreted in MS- Excel and Wilcoxon Signed Rank Test is applied for Testing Each attribute of employability skills.

Wilcoxon Signed Test Result:

Attributes	Table Value	Calculated Value	Conclusion
Knowledge Specific Skills	-1.96 - +1.96	0.00	Calculated value is less than Table value, therefore Null Hypothesis is rejected.
Communication Skills		-0.13	
Behavioural Skills		-0.13	
Personality Traits		0.13	
IT Skills		0.30	

1. H_0 - There is no difference between the level of employability skills among graduates in pre-pandemic and pandemic era. - Rejected
2. H_1 - There is a difference between the level of employability skills among graduates in pre pandemic and pandemic era. – Accepted

Suggestions and Conclusion:

- **Curriculum mapping:** Curriculum Mapping should be done according to the requirement of Market and Industry. There should be proper designing of curriculum at frequent interval. “Learning by doing” approach should be adopted in designing curriculum. Industrial visits can also be a compulsory part of a curriculum for every course.
- **Career Counselling:** Colleges should have a “diagnoses and counselling approach”. There should be an academic counsellor in every college. An academic counsellor will guide the students in identifying their interest and enhancing employability skills.

- **Training:** College should arrange training sessions for the students. Training should be a compulsory part of the curriculum. So that students will get the real approach to work and employability skills can be improved..
- **Expert Lectures:** The College should organize expert lectures from the corporate world, retired and experienced staff, Government officers etc.
- **MOU:** The College should have MOU with various government institutions of skill development, and various other Universities. So that students can learn different aspects apart from curriculum and employability skills can be enhanced.

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POST COVID CHALLENGES IN EDUCATION, INDUSTRY AND DIGITAL ECONOMY

Special Issue-Editors

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AN ANALYSIS OF MEASURES UNDERTAKEN DURING COVID-19 PANDEMIC WITH SPECIAL REFERENCE TO TEACHING LEARNING SYSTEM IN HIGHER EDUCATION IN INDIA

Dr. (Mrs.) ANAYA ADITYA MARKANDEYA
MES's Mahatma Night Degree College of Arts and Commerce
Chembur Naka, Mumbai 400071

ABSTRACT

The COVID-19 situation has a wide impact on all the sectors of the world. The education sector in India is not an exception to this. The schools and colleges were compelled to shut down. Various initiatives were introduced and measures were undertaken in higher education system to face the challenges in conducting regular educational activities. Adoption of ICT for teaching learning system converted the conventional method of teaching learning into Digital Teaching Learning System. The present research paper has focused on the measures undertaken during COVID-19 pandemic in higher education teaching learning system.

Keywords: COVID-19, Measures, Higher Education, Teaching Learning System

INTRODUCTION

The world has witnessed many pandemic situations since more than a century. Currently the entire world is fighting the battle with Covid 19 pandemic. More than just a health crisis it has turned out to be economic and social crisis too. The outbreak was first identified in December 2019 in Wuhan, China. WHO (World Health Organisation) declared COVID-19 as a pandemic on March 11, 2020. After analysing the pandemic situation WHO suggested social distancing as the first preventive measure.

The first case of the COVID-19 pandemic reported on 30 January 2020 in the state of Kerala in India. In India the first lockdown was declared on March 24, 2020.

The pandemic has created the biggest interruption in education system. It has affected around 1.6 billion learners in more than 200 countries. In India, around 32 crores learners have been affected due to pandemic situation. The norms of COVID-19 like social distancing, restrictions on movement and mass gathering have led to far-reaching changes in the traditional educational practices. Several schools and colleges discontinued the face-to-face teaching and learning. Initially there was a confusion and dilemma in the minds of teachers and learners with regards to methodology to be followed for teaching and learning.

However, the education system has come up with a new digital face to face and turned the challenge of COVID-19 pandemic into an opportunity. The pandemic situation has forced the teachers and learner to explore and strengthen the technological knowledge and entered into digital era of teaching and learning. The portals introduced by Government of India in higher education system have proven of great help and support to enhance the technical knowledge of teachers and students and to continue with all

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Measures by the Government of India

During the pandemic situation has impacted the education system badly. The teachers and learners do not have an access of learning resources through the conventional method of education. To face this challenge the Government of India as undertaken various ICT (Information and Communication Technology) initiatives with the Ministry of Education and UGC (University Grant Commission). The online platforms are made available for undergraduate and post graduate students and teachers containing live online lectures, workshops and online examinations. Some of the initiatives of MHRD (Ministry of Human Resource Development) for higher education are as follows.

1. SWAYAM - Study Webs of Active Learning for Young Aspiring Minds

The portal which was launched on July 9, 2017 under the "Digital India" campaign has proven to be a boon for the higher education system during the COVID-19 pandemic situation. The platform is designed to impart quality education to school students, undergraduate and post-graduate students in India.

2. e-PG Pathshala

e-PG Pathshala is an online portal for postgraduate courses started by the Ministry of Education under NME-ICT (National Mission on Education through ICT) and the UGC. Under this initiative the post graduate students can have an access to over 700 e-books, study material and postgraduate courses.

3. e-ShodhSindhu

e-ShodhSindhu is a digital library providing access to e-resources like journals, eBooks,

factual, bibliographies, citations, etc. for higher education.

4. Swayam Prabha

Consists of 32 DTH channels that telecast educational contents 24x7 for students across India. Each day, the channel telecasts a new content of 4-hours duration. The content is shown 5 times a day so that students can select the time and watch the programs at their convenience. The contents are available for class 12th, undergraduate and post-graduate students.

Measures by Management of colleges

The college Managements have come forward to facilitate flawless education to the students even during the pandemic situation. Many colleges purchased the software like Microsoft, Google for the conduct of curricular and co-curricular activities. Further, workshops, orientation for the teachers and administrative staff were organised by the Management to make them aware of the use of such tools in day-to-day activities. The teaching and non-teaching staff members are encouraged to attend and conduct online sessions, webinars, workshops organised by other institutions also.

The admission procedures and fee payments are made available online for the convenience of students and staff members.

Considering the unemployment and other financial problems, the Management of many colleges offer convenient instalments to students for payment of fees. Some Managements have gone one step ahead and waived off of the entire fees too.

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IMPACT OF COVID 19 ON INVESTORS DECISION MAKING

□ Kawaljeet Kaur Sygal**
Dr. Eknath Zhrekar**

ABSTRACT

Work from home, Homeschooling, virtual health consultations, and various other things have turned out to be the new way of living. The way individuals function and take decisions concerning various aspects of life has changed considerably due to this pandemic. Investing is one such area that has undergone a radical shift across the globe since the outbreak of this pandemic. This study attempts to ascertain the way investors have changed their decision-making process after COVID 19. It aims to identify if this crisis will push investors towards sustainable investment choices. The results indicate the development of a positive attitude amongst investors towards ESG factors while investing.

Keywords: COVID 19, Investment decision making, Sustainable investing

Introduction:

COVID 19 has substantially changed the way we live our lives and take decisions. Loss of income, market volatility, impaired transactions are some of the challenges investors were exposed to during this outbreak. Investments are meant to protect individuals during times of uncertainty. They provide a cushion to enable them to maintain their standard of living in times of crisis. Hence it becomes imperative for an investor to equip himself to make the right investment decisions. This research aims to understand the investment strategies followed by individuals during the crisis and the effects it leaves behind on their decision-making post the crisis.

Factors Influencing Individual Investors Decision Making:

Some common factors that affect investors of all types in making investment decisions are:

1. Risk: Risk is a part of investing. Each investment is exposed to different types of risk. The ability to accept risk varies from investor to investor. An investor chooses investments basis the risk he is willing to accept.
2. Return: High risk, high return is the fundamental principle of investing. Investors choose investment avenues depending on their return expectations fulfilling their investment goals.
3. Time Horizon: There are various investment avenues for different time horizons. Investors' decision to invest in a particular avenue is influenced by the preferred time period they are looking to invest their money for.
4. Investment goals: Investors' choice of Investment Avenue is directly influenced by their need to invest money. It is very crucial for one to align their investment plans with

*Assistant Professor, Department of Financial Markets, K.J. Somaiya College of Arts and Commerce

**Assistant Professor, Department of Commerce, Mahatma Night Degree College of Arts and Commerce, Chembur Naka, Mumbai

their objectives to make the most out of their investments. Clearly defined investment goals enable an individual to make the right investment choice.

5. **Financial Literacy:** Awareness about financial products and understanding their functioning enable investors to take prudent investment decisions. Many investors depend on external sources for financial information like brokers and financial advisors. Having financial knowledge prevents them from being misguided to choose the wrong investment options.

Sustainable Investing:

Sustainable investing is an investment strategy that considers the impact of one's investment on the environment, society, and different stakeholders of a company. It is also commonly referred to as ESG investing i.e Environment, Social, and Governance factors. The purpose of sustainable investing is to look beyond the financial outcomes of investment. It is a type of investing that is getting attention in recent times. Mutual fund houses in India have launched various funds catering to investors who are looking to invest based on ESG criteria but lack the knowledge to do so independently.

Review of Literature:

Himanshu et al. (2021) in their study identify the impact of covid on portfolio allocation decisions of individual investors by conducting a survey from respondents across Mumbai and Delhi. The study indicates that uncertainty during the pandemic has caused investors to make changes in their portfolios. Findings of the study reveal that there has been a shift in the preference of investors from risky investment avenues to risk-free ones post-pandemic. Insurance has emerged as the most preferred investment avenue post COVID. However, the study fails to shed light on the factors that have caused a shift in investor's preference.

Sohail et.al (2020) in their study determines the impact of factors that affect

individual investor's investment decisions. The study is based on interviews conducted from individual investors in Pakistan. The findings reveal that religious factors are the least significant in influencing investors' decision-making process. Whereas market factors influence investors' decisions the most during turbulent times. The study also states the experience of investors as a crucial factor in enabling them to take prudent investment decisions.

Gurbaxani & Gupte (2021) analyzed the investor behavior pre and post covid 19 by studying the number of investments made by individual investors in mutual funds through SIPs. The findings revealed a drop of 43% SIP investments during COVID 19 due to loss of family incomes. Age and gender are not significant in influencing investors' decisions and are also revealed by the findings. The authors conclude by recommending the need to promote financial literacy amongst investors to enable them to withstand the uncertainty during a crisis. Also being aware of the various investment avenues and how to invest in them would make investors confident in taking their investment decisions.

Mishra (2020) conducted a survey to understand the shift in investors' preference towards ESG investing post-COVID. Findings reveal that governance has emerged as the most preferred factor amongst all the three ESG factors for investments. However, the preference for social factors has increased among respondents post COVID. Overall the study reveals that investors are willing to consider ESG factors while investing and are also ready to pay a premium for them.

Dotling & Kim (2021) studied the individual investor behavior towards sustainable investments by analyzing the retail mutual fund flows into sustainability products. Surprisingly, the findings reveal a fall in investments by investors in sustainable mutual funds during the pandemic Individual investors did not hold on to ESG investments despite delivering superior returns. This reveals the lack of confidence

amongst individual investors towards ESG investments during a crisis. Also, the lack of motivation amongst them to fulfill their non-financial motives by staying invested in sustainable investments during a crisis is clearly evident from the findings.

Objectives of the Study:

1. To identify the factors affecting the investor's decision-making process.
2. To determine if there is any impact of COVID 19 on the decision-making of investors.
3. To ascertain if investors are conscious of the impact of their investments post-COVID 19.

Research Methodology:

This research is based on data collected from primary and secondary sources. Questionnaire was the research tool to collect primary data. A survey of 100 respondents from Mumbai city selected on the basis of convenience sampling methods was conducted. Online Journals and websites were used to present secondary data. The collected data was analyzed through percentage methods and graphs.

Demographic Profile of Respondents:

Gender	21-30 years	31-40 years	41-50 years	50 years and above	Total
Male	23	11	06	17	57
Female	14	16	09	04	43

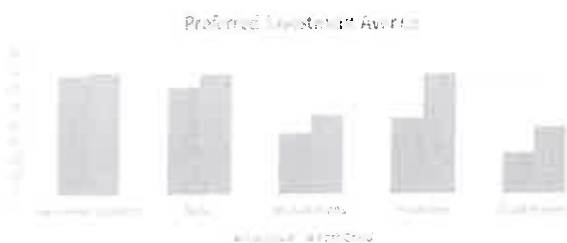


Figure 1

The above table indicates the change in preferences of investors while choosing investment avenues post COVID 19. Findings confirm with the studies done in past indicating increased preference for insurance amongst most of the respondents post COVID. Also there has been a noticeable increase in preference for stocks amongst many respondents. This signals the entry of new investors in stock market during COVID.



Figure 2

The above figure depicts the level of difficulty faced by investors in making decisions about their investments during the pandemic phase. It was found that authentication information was the greatest challenge facing investors in making financial decisions. This reveals the effect of rapidly spreading fake news during the pandemic on investors. Further seeking financial advice also was a hindrance in making investment decisions by most of the respondents. Respondents were comfortable in selecting investment options and rebalancing their portfolios.

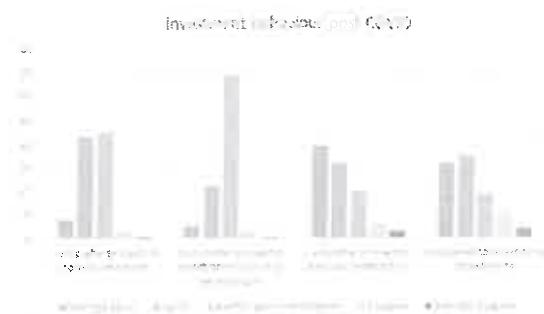


Figure 3

The above table exhibits the behavior of investors while choosing investments post COVID. The findings reveal that respondents are more likely to invest in investments which

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 Chhatrapati Shivaji Maharaj, Mumbai - 400 071.

are highly liquid post COVID. There was no considerable evidence indicating respondents' preference towards long term investments. Also considerable number of respondents would prefer choosing less risky investments revealing less risk appetite. Further majority of the respondents were willing to diversify their investments.

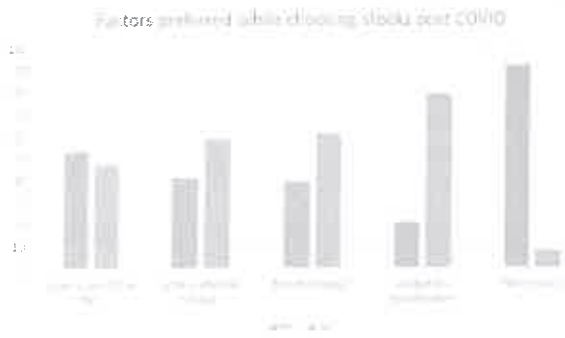


Figure 4

The above table shows the factors that investors would consider if they invest in stocks post COVID. Majority of the respondents consider returns as a primary factor before choosing to invest in stock market. A modest number of respondents would favor environmental and social impact that a company generates. Not many respondents were concerned about corporate governance while choosing companies. Reputation of the firm affecting decision making was unclear since respondents articulated mixed opinion.

Conclusion:

With numerous investment choices available, taking the right investment decision is crucial for every individual. One wrong decision can make an individual lose their entire wealth in no time. COVID 19 has left no direct significant impact on the decision making of investors. But the way investors handle their investments have changed post COVID. The study signals more realization amongst respondents about the significance of investing post COVID. Most of the respondents recognize the need to diversify their investments which indicates a prudent behavior amongst them. Also the increased participation of investors

towards stock market during the pandemic indicates that the market volatility and uncertainty could not impact investors' confidence towards stock market. Policymakers and financial institutions should take this opportunity to educate investors about financial products and how efficient financial planning can protect them to face such crisis in the future.

Whether this pandemic has made investors responsible and conscious towards the impact of their investments remains still vague with the findings of this study. However the findings reveals willingness of investors to consider the impact of their investments on environment and society. There is a need to create extensive awareness amongst investors towards various sustainable investment options and the consequences that their investments create on the society. It is important for investors to understand the non-financial outcomes that they can achieve through their investments.

Limitations and Future Directions:

This study is confined only to individual investors from Mumbai region. Hence the perception of institutional investors was outside the scope of this research. Also the study was not concentrated to individual investors investing in any specific instruments. Future studies can be directed to study the decision making of investors with respect to some particular investment avenue like mutual funds. Further there is a need to conduct extensive studies on sustainable investments and techniques to create awareness amongst people about them.

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Chembur, Mumbai - 400 071.



ANALYTICAL STUDY OF INDUSTRY 4.0 POST PANDEMIC AS A DIMENSION OF OPPORTUNITY TO CREATE EMPLOYMENT IN SECONDARY SECTOR WITH REFERENCE TO ATMA NIRBHAR BHARAT

Dr. Eknath Kundlik Zherkar*
Arvind Anubhav Shrivastava**

ABSTRACT

This paper provides a study of the employment provided by industry (secondary sector). It studied the employment provided by the sector from the data base of July 2007 to June 2019. Outstretching COVID-19 pandemic will be socially and economically calamitous for all, as every corner of the world get affected due to degradation resulted by the pandemic. The Government of India for improving business environment and to overcome this reluctant situation adopting action plans, strategies.

The fourth industrial revolution, Industry 4.0 which started with use of advance manufacturing and digital information technologies has the ability to satisfy needs during COVID-19 crisis. India is fighting with the COVID-19 situation with strong determination of self-reliance. The Special economic and comprehensive package Atma Nirbhar Bharat Abhiyan aimed to make the country and every citizen of the country independent and self-reliant in all directions.

The paper focuses on the Industry 4.0 revolution in relation to package announced under Atma Nirbhar Bharat campaign to create employment and to revive from the post pandemic situation.

Keywords: industry, Atma Nirbhar Bharat, employment

1.2 Introduction

Industrial sector is the one of the main contributor in the manufacturing is a major growth of the Indian economy. It is an activity of processing and the conversion of raw materials into semi-finished and finished products. The sector is being considered as an important source of creating employment. In due consideration of it's role in an economy the government made timely changes in the sector to make industries more liberalised and can move to maximum growth in number and betterment of the society.

Industrial Revolutions

1. The first Revolution 1765

It was started at the end of the 18th century to the beginning of the 19th emerged as mechanization. The invention of the steam engine brought new energy form and accelerated production process.

2. The second Revolution 1870

It was started at the end of the 19th century, emerged with new form of energy i.e. Electricity, gas, and oil along with inventions of the automobile, and the plane in

*Assistant Professor, Mahatma Night Degree College of Arts and Commerce, Chembur Naka, Mumbai

**Research Scholar, Pidal College of Arts, Commerce & Science, New Paval

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the beginning of the 20th century. This Revolution brought chemical synthesis and methods of communication, development for steel demand.

3. Third Revolution 1969:

It was started in the second half of the 20th century with the emergence of Nuclear energy.

It brought rise of electronics, tele communications, computers, space expeditions, research, and biotechnology.

4. Industry 4.0

Klaus Schwab, founder and executive chairman of the Geneva-based WEF, published a book in 2016 titled "The Fourth Industrial Revolution" and coined the term. The Fourth Industrial Revolution has the potential to raise global income levels and improve the quality of life for populations around the world. However, he made us aware of the serious note that the revolution could lead to greater inequality, interrupt labour markets.¹

Brief of Industry 4.0 technologies driving changes are:

a. Artificial Intelligence (AI)

It is wide-ranging branch of computer science that can "think" like humans but advancements in machine learning but use for learning and problem-solving.

b. Blockchain

Blockchain is a specific type of database which is a secure and transparent way of recording and sharing data, to make supply chain traceable, to secure medical data, combating voter fraud etc.

c. Faster computer processing

New technology in computer for fast processing vast data, use of the cloud to store and access data from anywhere safely.

d. Virtual reality and augmented reality

Augmented Reality (AR) is a mixture of

the digital world and the physical elements to create an artificial environment. Apps which are developed using AR technology for mobile or desktop to mix digital components into the real world.

e. Virtual Reality (VR)

It is a computer-generated simulation similar to the real world. It is used in 3D movies and video games. It plunge people in experiences, using expensive technology such as headsets.

Biotechnology

Biotechnology is cellular and biomolecular processes, involving the use of living systems and organisms used for developing new pharmaceuticals and materials, genomics, etc.

f. Robotics

Robotics is part of science and engineering related with designing, constructing and using of mechanical robots. Robotics makes machines that can depute humans and imitate human actions.

g. The Internet of Things (IoT)

It is a system of interrelated, internet-connected things that help to collect and transfer data over a wireless network without human intervention.

h. 3D printing

It is a process of creating physical objects by depositing materials in layers based on a digital model. It can be used to create everything from prototypes and simple parts to highly technical final products such as aeroplane parts, life-saving medical implants etc.

Atma Nirbhar Bharat Abhiyaan

When the world agonising because of pandemic COVID-19, India prepares to transmute the situation of contingency into an opportunity along with strengthen its Combat through Atma Nirbhar Bharat Abhiyaan.

1. Devan McGinnis, OCT, 2020, What Is the Fourth Industrial Revolution?, The 360blogSalesforce

On 13th May, 2020, India's Prime Minister Mr Narendra Modi published the Self-Reliant India Mission - Atma Nirbhar Bharat Abhiyan along with the economic package of ₹ 20 lakh crore which almost equal to 10% of GDP for managing with the pandemic and convert the contingency into an opportunity. He further added that the aid package would envelop farmers, the middle class, entrepreneurs, industry along with "land, liquidity, labour, and laws"

The package targeting mainly on agriculture to MSME, Non-banking Financial companies, Housing Finance Companies, defence, rural employment, migrant workers etc.

The five important pillars of The Atma Nirbhar Bharat campaign-

○ **Economy:** To bring an economy quantum jump

Infrastructure: As an identity of modern India.
System: Technology driven, Achieve 21st century dreams

Democracy: Instrument of energy to make Atma Nirbhar Bharat

Demand: Prospective application of demand-supply chain

1.3 Review of Literature

○ **Valitias S., Ambadi P., Bhoole S.(2018),¹** explored about efficient, customized production at reasonable cost, the concept of fourth industrial revolution Industry. It explained that Industry 4.0: transparent and organized supply chain, Data collection from the production lines for the effective use of machines etc. It brought into notice about challenges and issues with the implementation of Industry 4.0.

Sampson P. (June 2020)² highlighted all the trenches of the campaign along with

India not to be optimistic, positive mood-set for Atma Nirbhar Bharat Abhiyan as it helps to achieve survival, excellence as well as strengthening the economy.

Anwar, Mohd. (2015)³ indicated significant and positively correlation of credit disbursement to the sectoral output. It analyzed the effect of credit disbursement on the sectoral output of India especially in the case of working capital and number of workers for the industrial sector.

Pitke, M., Panigrahi, A. & Joshi, V. (2020)⁴ attempted to explain the fact that MSMEs can become the backbone of the economy provided that it should be supported with suitable policy measures. However, the implementation of Atma Nirbhar Bharat Campaign with suitable government support and offers can make MSME competitive to produce the required goods within the country.

1.4 Objectives of the study

- To study number of employment provided by secondary sector in rural and urban areas.
- To overview the package and compare contribution of primary and secondary sector in providing employment.
- To make conclusions and suggestions.

1.5 Research Methodology

1.5.1 Data Collection

Secondary data is collected from the publications and reports.

1.5.2 Sample Size

Samples were collected from official sources ranges from July 2007 to June 2019.

1.6 Limitations

- The sample collection restricted only to

1. Journal of Entrepreneurship Development, (2018), Industry 4.0 - A Glimpse, Elavasi B. V. The 4 Industrial Revolution

2. Sampson P. (June 2020), Self-Reliant India Mission - A Fulcrum In The Growth Of Indian Economy, Student Company Secretary

3. Anwar, Mohd. (2015), Effect of credit disbursement on sectoral output of the Indian economy, International Journal of Management Practice

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- employment provided by secondary industry.
- The sample collection restricted to survey periods and rounds from July 2007 to June 2019

3. The sample collection depended on survey periods and rounds which has no chronological order

1.7 Data analysis

A linear regression analysis.

Table-1: India's Employment - Per 1000 Distribution of Usually Employed in Urban areas

Survey Period	Secondary Sector		
	Male	Female	Total
July 2007-June 2008	343	323	666
July 2009-June 2010	346	333	679
July 2011-June 2012	353	340	693
July 2017- June 2018	360	301	661
July 2018-June 2019	353	293	646

Note: Secondary sector: Mining and quarrying, Manufacturing, Electricity, water, etc. and Construction
 Consistent data on NSS rounds 38, 43, 50, 55, 61, 66 and 69
 Source: National Statistical Office, Ministry of Statistics and Programme Implementation, GOI, NSS 50th and 61st Round, Periodic Labour Force Survey Report (PLFS)

Table-2: India's Employment - Per 1000 Distribution of Usually Employed in Rural areas

Survey Period	Secondary Sector		
	Male	Female	Total
July 2007-June 2008	162	97	259
July 2009-June 2010	193	130	323
July 2011-June 2012	220	167	387
July 2017- June 2018	232	136	368
July 2018- June 2019	235	154	389

Note: Secondary sector: Mining and quarrying, Manufacturing, Electricity, water, etc. and Construction
 Consistent data on NSS rounds 38, 43, 50, 55, 61, 66 and 69
 Source: National Statistical Office, Ministry of Statistics and Programme Implementation, GOI, NSS 50th and 61st Round, Periodic Labour Force Survey Report (PLFS)

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1.8 Hypothesis

1.8.1 Case -I - As Per table 1

- H₀: The change over the years in total employment provided in urban areas by secondary sector is not significantly different.
- H₁: The change over the years in total employment provided in urban areas by secondary sector is significantly different.

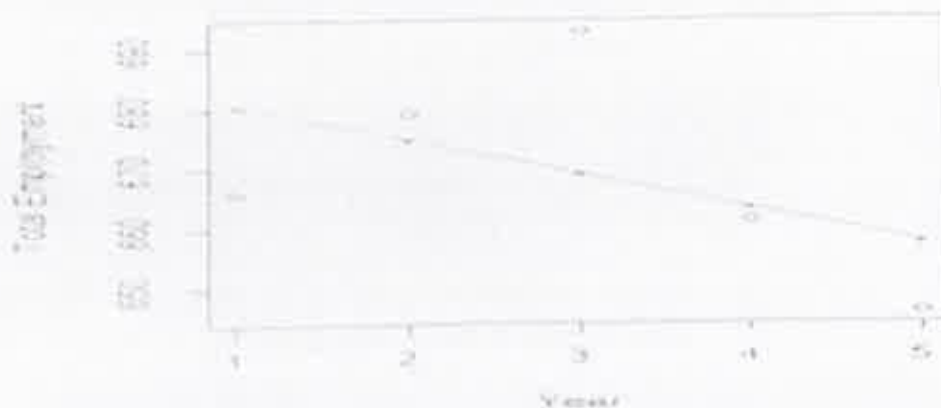
1.8.2 Case-II- As Per table 2

- H0: The change over the years in total employment provided in rural areas by secondary sector is not significantly different.
 H1: The change over the years in total employment provided in rural areas by secondary sector is significantly different.

1.9 Testing of Hypothesis

1.9.1 Case-I - As Per table 1

Employment in Urban



Coefficients:

	Estimate	Std. Error	t value	p-value
Year	-5.800	5.602	-1.035	0.377
Intercept	636.400	18.561	36.941	4.36e-05 ***

Residual standard error: 17.72 on 3 degrees of freedom, Multiple R-squared: 0.2632, Adjusted R-squared: 0.01763, F-statistic: 1.072 on 1 and 3 DF, p-value: 0.3767

Data Analysis and Interpretation

Negative value in estimate (-5.80) with p-value = 0.377 > 0.05 indicates non-significant but downward trend in urban data. The small adjusted R-Squared value indicates that the independent variable (Year) is explains very small change in the employment of urban areas.

Hence, we accept

H0: The change over the years in total employment provided in urban areas by secondary sector is not significantly different.

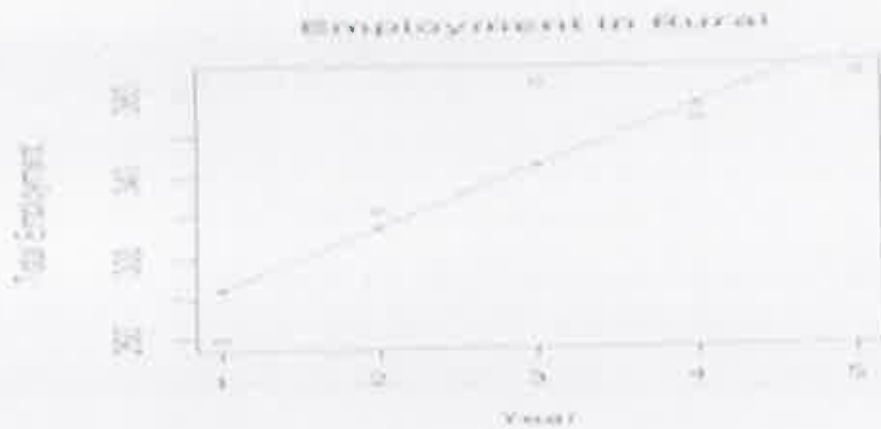
and we reject,

H1: The change over the years in total employment provided in urban areas by secondary sector is significantly different.

1.9.2 Case-II - As Per table 2

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Coefficients:

	Estimate	Std. Error	t-value	p-value
Year	30.500	9.672	3.154	0.05113
(Intercept)	253.700	32.078	7.909	0.00421 **

Residual standard error: 30.55 on 3 degrees of freedom, Multiple R-squared: 0.7682, Adjusted R-squared: 0.6901, F-statistic: 9.945 on 1 and 3 DF, p-value: 0.05113

Data Analysis and Interpretation:

Positive value in estimate (30.50) with p-value $> 0.0511 > 0.05$ indicates non-significant but upward trend in rural data. The large enough adjusted R-Squared value indicates that the independent variable (Year) is explaining good change in the employment of rural areas.

Hence, we accept

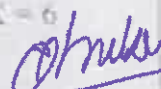
H0: The change over the years in total employment provided in rural areas by secondary sector is not significantly different.

and we reject,

H1: The change over the years in total employment provided in rural areas by secondary sector is significantly different.

Estimate to establish linear trend

Regression Equation	
Estimate Urban areas	Estimate Rural areas
$Y = a + bx$ $Y = 686.4 + (-5.8) X$ Let, for 2020 we assume $X = 6$ $Y_{2020} = 686.4 + (-5.8) \cdot 6$ $Y_{2020} = 686.4 - 5.8 \cdot 6$ $Y_{2020} = 686.4 - 34.8$ $Y_{2020} = 651.6$	$Y = a + bx$ $Y = 253.7 + 30.5 X$ Let, for 2020 we assume $X = 6$ $Y_{2020} = 253.7 + 30.5 \cdot 6$ $Y_{2020} = 253.7 + 183$ $Y_{2020} = 436.7$
The estimate value for the year 2020 is nearly 652	The estimate value for the year 2020 is nearly 437


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Analysis of Atma Nirbhar Bharat campaign Package consists of five tranches.

Tranche 1 - Businesses including MSMEs)

Tranche 2 - Poor, including migrant and farmers)

Tranche 3 - Agriculture)

Tranche 4 - New Horizon of Growth)

Tranche 5 - Government Reforms and Enablers)

Tranche 1 - Businesses including MSMEs)

The first idea on being focused was to facilitate MSME to get back to production and workers back to gainful employment. Pradhan Mantri Garib Kalyan Package (PMGK) was introduced in April 2020 in order to provide relief to underprivileged and help them fight the battle against COVID-19. The budget allocated to the scheme was ₹ 1.70 lakh crores.

Pradhan Mantri Garib Kalyan Package (1)

₹ 1.70 Lakh Crore relief package under Pradhan Mantri Garib Kalyan Yojana for the poor to help them fight the battle against Corona Virus.

Pradhan Mantri Garib Kalyan Package (2)

1. Building and Construction Workers Welfare Fund allowed to be used to provide relief to workers.
2. 30% of monthly wages to be credited into their PF accounts for next three months for wage-earners.
3. Below ₹ 15,000 per. in businesses having less than 100 workers.
4. Five crore workers registered under Employee Provident Fund EPF to get non-refundable advance of 75% of the amount of three months of the wages, whichever is lower, from their accounts.

Other Measures - 1

On the request of the Government of India, RBI raised the Ways and Means advance limits of States by 60% and enhanced the Overdraft duration limits.

Other Measures - 2

1. Extending last date for Income Tax Returns to June 30, 2020.
2. Extending filing GST returns to end of June 2020.
3. 24*7 custom clearance till 30th June, 2020.
4. Mandatory Board meetings extended by 60 days till 30 September.
5. Moratorium of three months on payment of instalments and payment of Interest on Working Capital.

Facilities in respect of all Term Loans

1. Easing of Working Capital Financing by reducing margins.
2. For loans by NBFCs to commercial real estate sector, additional time of one year has been given for extension of the date for commencement for commercial operations (DCCO)

I) Businesses including MSMEs

Decision - Emergency Credit Line to Businesses/ MSMEs from Banks and NBFCs up to 20% of entire outstanding credit as on 29.2.2020.

1. 100% credit guarantee cover to Banks and NBFCs on principal and interest.
2. Scheme can be availed till 31st Oct 2020.
3. No guarantee fee, no fresh collateral.

II) ₹ 20,000 crores Subordinate Debt for Stressed MSMEs

III) ₹ 50,000 crores Equity Infusion for MSMEs through Fund of Funds

Fund of Funds with Corpus of ₹ 10,000 crores will be set up.

IV) New Definition of MSMEs

1. Definition of MSMEs to be revised upwards.
2. Investment limit will be revised upwards.

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3. Additional criteria of turnover also being introduced.
4. Distinction between manufacturing and service sector to be eliminated.

V) Global tenders to be disallowed upto ₹ 200 crores

Global tenders will be disallowed in Government procurement tenders upto ₹ 200 crores

VI) Other interventions for MSMEs

1. E-market linkage for MSMEs to be promoted to act as a replacement for trade fairs and exhibitions.
2. Fintech will be used to enhance transaction based lending using the data generated by the e-marketplace.

VII) ₹ 2500 crore EPF Support for Business & Workers for 3 more months

Under Pradhan Mantri Garib Kalyan Package (PMGNP), payment of 12% of employer and 12% employee contributions was made into EPF accounts of eligible establishments.

VIII) EPF contribution reduced for Business & Workers for 3 months - ₹ 6750 crores Liquidity Support

IX) ₹ 50,000 crore Special Liquidity Scheme for NBFCs/HFCs/MFIs

X) ₹ 45,000 crore Partial Credit Guarantee Scheme 2.0 for NBFCs

XI) ₹ 90,000 Cr Liquidity Injection for DISCOMs

XII) Relief to Contractors

Extension of up to 6 months (without costs to contractor) to be provided by all Central Agencies (like Railways, Ministry of Road Transport & Highways, Central Public Works Dept, etc.)

XIII) Extension of Registration and Completion Date of Real Estate Projects under RERA

1. Extend the registration and completion date sup-moto by 6 months for all registered projects expiring on or after 25th March, 2020 without individual applications.
2. Regulatory Authorities may extend this for another period of upto 3 months, if needed
3. Issue fresh 'Project Registration Certificates' automatically with revised timelines etc.

1.11 Conclusion

It has been observed that from July 2007 to June 2019, the scale of providing employment by the sector in urban areas is downward slope (rate), upward slope (rate) for rural areas however still considered as prominent in creating employment. Despite of the sector, performing not significantly different in providing employment for these two areas against each other, still it has been observed that it's contribution in employment play important role at their individual level.

1.12 Suggestions and Recommendations

1. There is a need of secondary sector to focus on provision of employment in both the areas especially in urban areas.
2. The efforts like should be taken to balance the diversity of employment by the secondary sector in rural and urban areas.

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Do Social Milieu and Attitude towards Females Create Obstacles in Attaining Sustainable Development?

Prof. Dr. Dolly Sunny

Professor of Economics, Kalina Campus, University of Mumbai
Ex.Hon.Director, Western Region, ICSSR.

Harsh Shukla

Assistant Professor, MahatmaNight College of Arts and Commerce, Chembur, Mumbai

Abstract

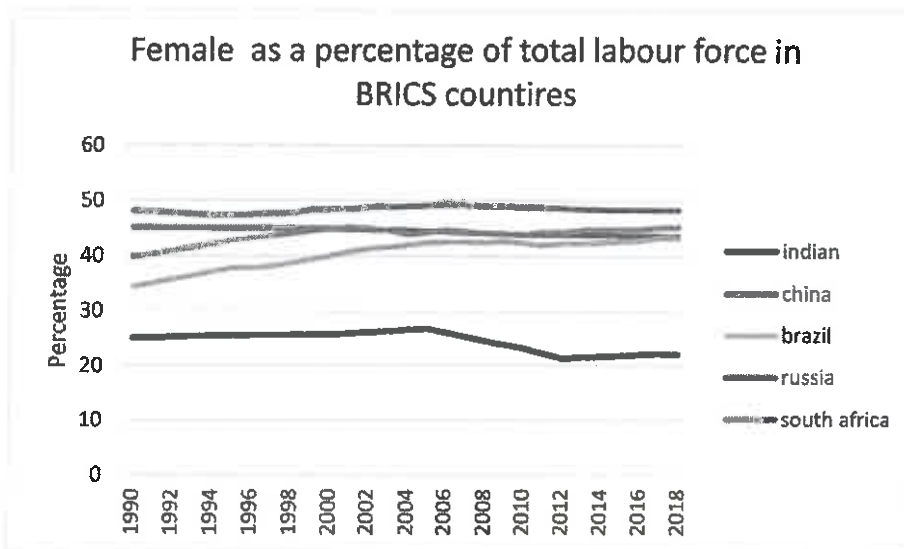
India is the sixth largest economy in the world with low female labour participation rate. The Logistic regression performed in this paper reveals gender as the most important variable determining the working status. It is owing to the fact that females have lower probability to participate in labour market. The LFPR is low for the states of Bihar and Uttar Pradesh. The increased level of income and patriarchal mind set in the society did not allow females to enter the labour market. There is a lot of scope to improve our labour force participation rate. Increase in the female labour force participation rate can enrich the contribution towards GDP and the attainment of sustainable development.

Introduction

The social milieu plays a deterministic role in contributing to the employment and unemployment of females. Social attitude, ideology, beliefs and behaviour are set by the old traditions and customs. In the absence of adequate education and exposure to outer world, these ideas and beliefs about females are hard to dilute till date. In the modern India, still we have group of patriarchal mind set who believe that females should not be highly educated, they must not engage in remunerative labour market activities and their activities should be restrained to domestic affairs. The resemblance of social behaviour can be observed in the labour market where female participation rate is quite low as compared to other developed countries. The average female labour participation rate between 1990 to 2017 was 32.50 percent. If we compare India with the world according to world bank data series, India ranks 163 out of 181 countries in female labour participation rate. The female labour force participation rate in India was 27.21 percent in 2017. Even Nepal ranks 3rd in the global female labour participation rate in 2017 with 82.73 percent. The figure 1.1 is of female as a percentage of total labour force in the BRICS countries. Figure itself clears half of the picture

about female LFPR in the BRICS countries. The Female LFPR in India is predominantly lower than the other BRICS countries. In the year 2018, the female was only 22 percent of the total labour force. On the other hand if we compare other BRICS countries female as a percentage of total labour force was 43 percent in China and Brazil, 48 percent and 45 percent in Russia and South Africa respectively. Thus, in all other country coming under BRICS nation, India is the worst performer. Female as a percentage of total force actually declined in India since 1990. In 1990, female was 25 percent of the labour force while in 2018 the percentage came down by 3 percent. There was a marginal decline of 2 percent in the female as a percentage of total labour force in China while this ratio remained stagnant in Russia over a period of time. In the case of Brazil and South Africa female as a percentage of labour force increased remarkably by 10 percent and 6 percent between the year of 1990 to 2018.

Figure 1.1 : Female as a Percentage of Labour Force in BRICS Nations



Source – Derived from World Bank Data Series based on ILO modelled estimates

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Review of Literature

Chand and Srivastava (2014) in their study examined that though population of females was increasing, their participation in labour force continued to decline. The authors discussed that the enrolment of girls increased in the school and thus their labour entry in the labour market delayed. Desai and Joshi (2019) argued that NSSO underestimate the work undertaken by females. It was found through econometric analysis on Indian Human Development data that as the family income increases they prefer to keep their family female stuck at household work. Himanshu (2011) suggested that the slow employment growth was largely due to a sharp decline in female labour force participation, while the number of male workers actually increased by a respectable 22 million between 2005 and 2010. Goldar and Sadhukhan (2015) examined that the female participation rate in the aggregate manufacturing was around 30 percent and their share was exceptionally higher in the traditionally labour intensive sector. The wages of female were half compare to their male counterparts. Mehrotra and Sinha (2019) in their paper noted that growth and inclusiveness were interlinked and Indian can not keep female out of its growth trajectory with declining female labour participation rate. Mitra and Verick (2013) in their study on youth employment and unemployment in India constructed a logistic regression model and found that higher education leads to lower participation in the labour force. Similarly the participation of female were lower as compared to males. Nathan et al (2016) analysed the firm level situation of the women workers and found that their condition was more vulnerable at low skilled industry such as garment or cashew nut industries. They got meagre wages and were subject to physical and sexual abuse. Rangarajan et al (2014) examined that the trend of female labour force participation continued to decline and their education enrolment increased in the study period. The authors argued that as the economic situation improved in the family women engaged in the casual employment withdrew their labour. Thomas (2012) added that decline in the last decade in the agricultural labour force mainly accounted for withdrawal of distressed female labour.

Data Source and Methodology

The most important source of secondary data is National Sample Survey Organisation (NSSO). The National Sample Survey Organisation conducted employment and unemployment survey in every five year. This is the most reliable source of information available from the government agency. The last employment and unemployment survey was conducted in the year 2011-12. In order to get the fast frequency data on employment

situation government of India has started Periodic Labour Force Survey (PLFS) in 2017-18. The NSSO reports provide information about various NSSO Round and this information can be obtained from Ministry of Statistics and Program Implementation (MOPSI). On the basis of NSSO data major employment dynamics have been captured since the post reform period. Further we have used NSSO unit level data of 2011-12 round and 2017-18 PLFS of all India level and eight states for Logistic Regression purpose. The sample size for logistic regression for India and eight states have been given below in Table 1. It is to be noted that in order to avoid child labour problem, we have included 15 years and above individuals in the sample.

Table 1 : Sample Size for NSSO and PLFS Unit Level Data

State	2011-12 NSSO Round	2017-18 PLFS
Bihar	15661	15186
Gujarat	12760	12434
Kerala	16537	13672
Madhya Pradesh	16270	16242
Maharashtra	29354	25923
Rajasthan	15128	15194
Tamil Nadu	22039	19031
Uttar Pradesh	35593	31618
India	364367	330562

Source – Derived by from NSSO 2011-12 and PLFS 2017-18 unit level data

For the logistic regression model developed for the purpose of this research, working status of an individual was considered as dependent variable while Gender, Age, Monthly Consumption Expenditure, Literacy, Caste, Religion, Area of Living, and Marital Status were considered as independent variable. Appropriate coding was performed as mandated for running logistic regression by assigning values “0” and “1”.

The Labour Force Participation Rate In India

According to NSSO labour force participation rate (LFPR) in usual status and subsidiary status includes the person who worked or available for work for a relative long part of 365 days preceding the date of survey and those person from among the remaining population who had worked at least 30 days during the reference period of 365 days preceding the date of survey (NSSO, 2011-12). There LFPR for rural male slightly declined from 56.10 percent in 1993-94 to 55.30 percent in 2011-12. It further declined in 2017-18 PLFS to 54.90 percent. On the other hand, there was sharp decline in the LFPR of women in the rural area i.e. from 33.00 percent in 1993-94 to 26.50 percent in 2011-12. It further declined to 18.20 percent

points in during 2017-18 PLFS. On the other hand LFPR of urban male has increased in 2011-12 when compared to the year 1993-94. The increase continued in PLFS to 54.00 percent for urban males. For urban male LFPR continued to be around 16.00 percent. The sharp decline of LFPR of women in the rural areas can be attributed higher school enrolment rate of girls. In the villages women prefer to be home makers. They enter into labour force when need arises to support spouse during financial emergencies. There is small decline the LFPR of urban female compared to rural female from 1993-94 to 2011-12. Thus, it can be concluded that males do participate in an equal ratio both in urban and rural areas i.e. 55.00 percent while female participation is far less in both the areas. In addition to this the participation of rural female is 10.00 percent greater than the urban females in 2011-12. However this gap narrowed down in PLFS to 3.00 percent among rural and urban females. In the rural areas females are engaged in the field work, dairy farming and other household activities.

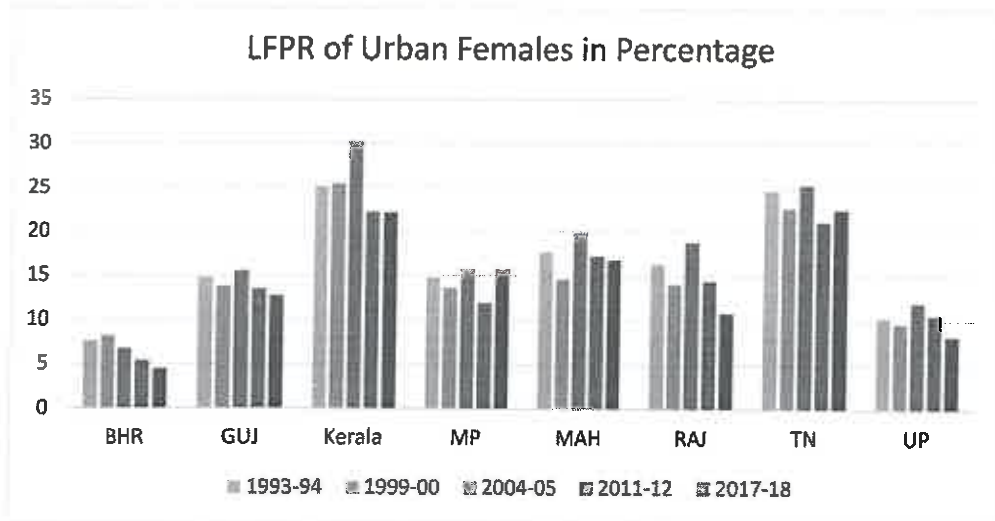
Labour Force Participation of Females in Select States

The overall female LFPR is found to be higher in rural areas compared to urban areas. Moreover, there has been a steady decline in the female LFPR in both rural and urban areas. When we look into the individual LFPR rate of individual states some mind boggling facts can be seen. The LFPR of urban females was extremely low in the state of Bihar which also came down in the recent past. The LFPR came down from 7.6 percent in 1993-94 to 4.5 percent in 2017-18 PLFS period. Whereas the trend for rural areas for the state of Bihar shows drastic fall in LFPR from 17.3 percent in 1993-94 to 2.6 percent in 2017-18 period. Bihar has been a part of BIMARU states since 1980s, however the situation of LFPR has not shown an improvement in spite of three decades of policy orientation. Similar trends can be seen for the state of Uttar Pradesh which showed slight decline of LFPR of 2 percent in urban area and huge decline of 11 percent in rural area in the survey period from 1993-94 to 2017-18 . It is important to note that in both areas female LFPR in the state of Uttar Pradesh remained less than 10 percent in the latest survey period. For the state of Gujarat LFPR rate showed a slight decline from 14.8 percent in 1993-94 to 12.7 percent.



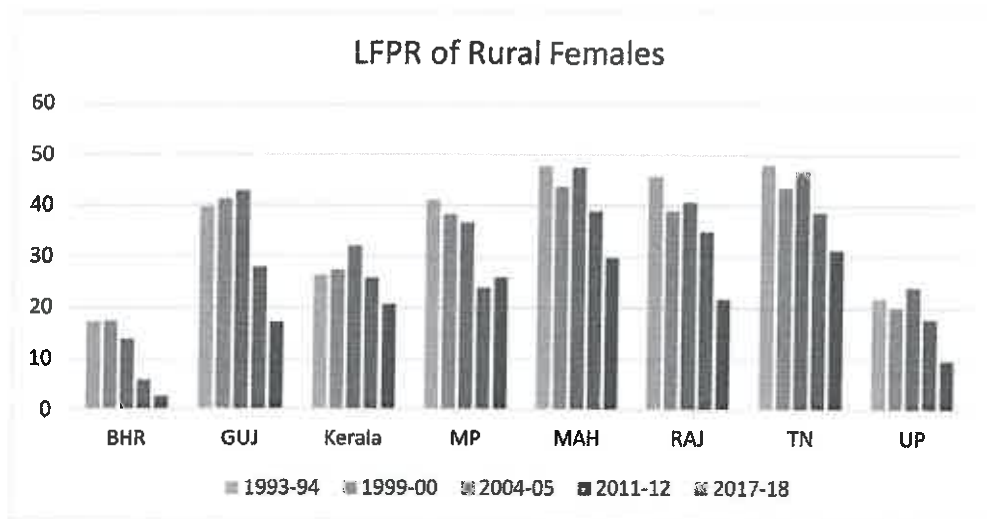
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Figure 2 : LFPR of Urban Females in Percentage



Source : Derived from various NSSO rounds and PLFS

Figure 3 : LFPR of Rural Females in Percentage



Source : Derived from various NSSO rounds and PLFS

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Gender and Employment Relationship

Table 2 : Gender Employment Crosstabulation - India

Details			Employment 2011-12			Employment 2017-18		
			Non-Working	Working	Total	Non-Working	Working	Total
Gender	Female	Count	135571	42619	178190	132416	30589	163005
		% within gender	76.10%	23.90%	100.0%	81.20%	18.80%	100.0%
	Male	Count	41941	144236	186177	52822	114735	167557
		% within gender	22.50%	77.50%	100.0%	31.50%	68.50%	100.0%
Total		Count	177512	186855	364367	185238	145324	330562
		% within gender	48.70%	51.30%	100.0%	56.0%	44.0%	100.0%

Source- Calculated from NSSO 2011-12 and PLFS 2017-18 Unit level Data

Table 3 : Percentage of Non- Working Male and Female for Select States

2011-12								
Gender	Bihar	Gujarat	Kerala	Madhya Pradesh	Maharashtra	Rajasthan	Tamil Nadu	Uttar Pradesh
Females	95.00	76.30	74.50	78.50	70.40	74.80	64.50	87.80
Males	26.40	18.20	22.80	21.50	22.10	25.40	18.50	21.90
2017-18								
Females	96.10	85.60	82.80	75.50	73.90	82.00	71.90	91.00
Males	39.10	27.20	35.70	28.40	30.20	33.80	29.70	31.40

Source- Calculated from NSSO 2011-12 and PLFS 2017-18 Unit level Data

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Table 4: Usual Principal and Subsidiary Status of Females in India

Status of Females	2011-12		2017-18	
	Frequency	Percent	Frequency	Percent
Usual principal & Subsidiary Status				
Worked in household enterprise (self-employed): own account worker	10461	5.90	6738	4.10
Employer	255	0.10	184	0.10
Worked as helper in household enterprise (unpaid family worker)	13328	7.50	8054	4.90
Worked as regular salaried/ wage employee	8278	4.60	9510	5.80
Worked as casual wage labour : in public works	716	0.40	464	0.30
Worked as casual wage labour : In other types of work	9581	5.40	5621	3.40
Did not work but was seeking and/or available for work	2404	1.30	3299	2.0
Attended educational institution	18812	10.60	21387	13.10
Attended domestic duties only	58761	33.00	76367	46.90
Attended domestic duties and was also engaged in free collection of goods	45680	25.60	19973	12.30
Rentiers, pensioners , remittance recipients, etc.	2596	1.50	7057	4.30
Not able to work due to disability	2671	1.50	1682	1.00
Others (including begging, prostitution, etc.)	4647	2.60	2626	1.60
Total	178190	100.0	162962	100.0

Source- Calculated from NSSO 2011-12 and PLFS 2017-18 Unit level Data

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Table 5 : Female attended domestic duties/ involved in free collection of goods (percent)

2011-12								
	Bihar	Gujarat	Kerala	Madhya Pradesh	Maharashtra	Rajasthan	Tamil Nadu	Uttar Pradesh
Attended domestic duties only	35.20	39.60	41.10	24.40	47.00	24.70	40.20	29.90
Engaged in free collection of goods	45.10	23.00	10.70	38.20	6.40	34.10	8.50	41.30
Total	80.30	62.60	51.80	62.60	53.40	58.80	48.70	71.20
2017-18								
Attended domestic duties only	70.10	60.60	47.20	42.20	50.50	43.50	46.10	48.40
Engaged in free collection of goods	6.00	9.60	3.70	13.20	2.70	18.30	2.80	21.70
Total	76.10	70.20	50.90	55.40	53.20	61.80	48.90	70.10


Source- Calculated from NSSO 2011-12 and PLFS 2017-18 Unit level Data

It is found in table 2 that 76.10 percent females do not work during NSSO round 2011-12. On the other hand 22.50 percent male were not working. Thus substantial amount of females are not into labour force as one of the cause of low labour force participation rate in India. 58.6 percent of the females were engaged in the attending domestic duties and in addition to this collecting free goods from the nearby area according the usual principal and subsidiary status in 2011-12 round. Further 10.60 percent girls were the part of educational institutes. The adverse condition of job market for women further disappointed them and they do not take entrepreneurial venture as merely 0.10 percent female were employer in NSSO 2011-12 round. An analysis of 2017-18 data in Table 2 explain that percentage of non-working females increased from 76.10 percent in 2011-12 to 81.20 percent in 2017-18. Thus, in this period more females left the labour force. In addition to this percentage of non-working males also increased in the 2017-18 period i.e. 31.50 percent. Thus the participation of male and females in the labour market declined in 2017-18 PLFS. The situation of female participation is more grave compared to males. A detail study of usual principal and subsidiary status of employment of females in 2017-18 in Table 4 shows like 2011-12 survey period 59.20 percent of the female workforce were doing domestic duties and 13.10 percent girls were enrolled in the education institutes.

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Table 3 shows that percentage of non- working female was very high in Bihar in both periods i.e. 95.00 percent and 96.10 percent in 2011-12 and 2017-18 respectively. It was followed by Uttar Pradesh where 87.80 percent and 91.00 percent female were not working in 2011-12 and 2017-18 respectively. The percentage female who were in non-working category increased in 2017-18 period compared to 2011-12 period. Overall all states were doing badly in terms of female work participation rate. However, situation in Tamil Nadu was little better as this percentage was lower than other state. i.e. 64.50 percent and 71.90 percent in 2011-12 and 2017-18 respectively. On the contrary the condition of men was far better than women. The percent of non-working men increased in the study period as 2017-18 PLFS reported highest percentage of non-working men. Highest percentage of non-working men were from Bihar in both survey period i.e. 26.40 percent in 2011-12 and 39.10 percent in 2017-18. The lowest percentage of non-working men was observed in Gujarat State i.e. 18.20 percent in 2011-12 and 27.20 percent in 2017-18.

Table 5 shed light on very interesting reason of low female participation rate in the workforce. The study found that in almost all the state major part of female workforce attend domestic duties only and some time in addition to attending domestic duties they get involve in collection of free goods which is non-monetary in nature. Thus, a large workforce gets wasted inside their home and do not contribute to the GDP. The state of Bihar in 2011-12 registered 80.00 percent of its female workforce in this category. This percentage dropped by 4.00 percent when Bihar's 76.00 percent female population was engaged in attending domestic duties. It is followed by the state of Uttar Pradesh were approximately 70.00 percent of female workforce was engaged in attending domestic duties in both the period. Gujarat seen a surge in female population in attending domestic duties and collection of free goods in 2017-18. This percentage was 62.00 percent in 2011-12 which rose to 70.00 percent in 2017-18. The percentage of women in this category was lowest in the state of Tamil Nadu which recorded only 48 percent females were involved in attending domestic duties and collection of free goods in both the period. This was one of the main cause of lower female labour participation rate in India. As we have seen more than 70 percent female workforce in the state of Uttar Pradesh and Bihar were involved in attending domestic duties, how is it possible to have a higher female labour force participation rate in these state?


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Gender and Literacy Relationship

Table 6 : Gender and Literacy level Crosstabulation - India

Literacy Level			2011-12			2017-18		
			Literate	Illiterate	Total	Literate	Illiterate	Total
Gender	Female	Count	121237	56953	178190	118178	44827	163005
		% within gender	68.0%	32.0%	100.0%	72.5%	27.5%	100.0%
	Male	Count	158105	28072	186177	146358	21199	167557
		% within gender	84.9%	15.1%	100.0%	87.3%	12.7%	100.0%
Total		Count	279342	85025	364367	264536	66026	330562
		% within gender	76.7%	23.3%	100.0%	80.0%	20.0%	100.0%

Source- Calculated from NSSO 2011-12 and PLFS 2017-18 Unit level Data

we can see in Table 6 that illiteracy level of females was higher i.e. 32.00 percent compared to their male counterpart who share 15.10 percent illiteracy level according to 2011-12 survey period. 84.90 percent male and 68.00 percent female were literate according to NSSO 2011-12 round. we can see in the cross tab that illiteracy level of females was higher i.e. 32.00 percent compared to their male counterpart who share 15.10 percent illiteracy level according to 2011-12 survey period. 84.90 percent male and 68.00 percent female were literate according to NSSO 2011-12 round. In addition to this the educational qualification of females was not very promising at national level as 5.90 percent women were graduate as per the survey.

An analysis of PLFS 2017-18 in Table 6 shows was a slight positive development in education aspect as literacy level increased among women from 68.00 percent in 2011-12 to 72.50 percent in 2017-18. Table 7 explains the education level of surveyed women in 2017-18 survey period. The table reveals that 27.50 percent women were illiterate. Further 61.80 percent women were having education up to or less than graduation. Only 7.50 percent women were graduate in the survey while 2.60 percent were post graduate. Thus, the educational qualification was quite low among women. Lower educational qualification might adversely affect female labour force participation rate in the labour market.

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Table 7 : General Education Level of Females in India

	2011-12		2017-18	
	Frequency	Percent	Frequency	Percent
Not literate	56953	32.0	44817	27.50
Literate without formal schooling: EGS/NFEC/AEC	366	.2	179	0.10
Literate without formal schooling: TLC	86	.0	54	0.0
Literate without formal schooling: Others	360	.2	377	0.20
Literate: below primary	14929	8.4	7558	4.60
Literate: primary	20516	11.5	17952	11.0
Literate: middle	29355	16.5	33608	20.60
Literate: secondary	24105	13.5	23036	14.10
Literate: higher secondary	16211	9.1	17656	10.80
Literate: diploma/certificate course	1553	.9	1268	0.80
Literate: graduate	10441	5.9	12201	7.50
Literate: postgraduate and above	3304	1.9	4256	2.60
Total	178179	100.0	162962	100.0

Source- Calculated from NSSO 2011-12 and PLFS 2017-18 Unit level Data

Table 8 , explains the percentage of illiterate female in different states. As it was discussed in the previous tables that majority of females spend their time at their home attending domestic duties, sneak peek into the educational background of female workforce was necessary. We went forward with very basic literacy level of female workforce. The study revealed that a large percent of female was not literate. The large state of Uttar Pradesh, Bihar and Rajasthan have lion's share of illiterate women. The two survey periods show that the percentage of illiterate women came down in 2017-18 PLFS. However we need to understand that the women who were in the literate category were not very highly qualified. The percentage of illiterate women were 44.90 percent in Bihar, 52.60 percent in Rajasthan and 48.50 percent Uttar Pradesh during 2011-12 survey period. This percentage came down to 37.90 percent, 42.40 percent and 39.40 for each state respectively. Lowest level of illiteracy among women was seen in Kerala for which the state is famous . The illiteracy level were lower among males in both the period. Highest illiteracy level among male was seen in the state of Uttar Pradesh and Bihar in both the survey period. In the case of men also Kerala has shown the best figure of lowest illiteracy level.

Table 8 : Illiterate Male and Female (Percent)

2011-12								
Gender	Bihar	Gujarat	Kerala	Madhya Pradesh	Maharashtra	Rajasthan	Tamil Nadu	Uttar Pradesh
Females	44.90	31.80	7.80	38.50	25.20	52.60	28.20	48.50
Males	20.50	13.10	3.20	17.30	9.30	20.30	13.20	24.20
2017-18								
Females	37.90	27.20	7.70	31.70	24.70	42.40	22.30	39.40
Males	17.50	8.50	3.30	13.10	10.70	15.10	10.90	17.30

Source- Calculated from NSSO 2011-12 and PLFS 2017-18 Unit level Data

Table 9 : Graduate and Postgraduate Females (Percent)

2011-12								
Gender	Bihar	Gujarat	Kerala	Madhya Pradesh	Maharashtra	Rajasthan	Tamil Nadu	Uttar Pradesh
Graduate	3.3	5.0	9.3	4.8	6.5	4.2	6.0	5.5
Postgraduate	0.4	1.3	2.9	2.3	1.9	2.1	2.1	2.4
Total	3.7	6.3	12.2	7.1	8.4	6.3	8.1	7.9
2017-18								
Graduate	4.80	6.80	10.70	6.0	8.3	5.5	9.8	7.2
Postgraduate	0.90	2.30	3.30	2.90	2.9	3.3	3.9	2.9
Total	5.70	9.10	14.00	8.90	11.20	8.80	13.70	10.10

Source- Calculated from NSSO 2011-12 and PLFS 2017-18 unit level data

The table 9 looks into the decent educational qualification to be eligible to enter into formal job market or government jobs in today's era. It is to be noted that table shows the most disappointing picture females in terms of their educational qualification in the job market. The percentage of graduate and post graduate was very low in the survey in both the survey periods. However, the second PLFS period showed slight improvement in the educational qualification. Lowest percentage of graduates and postgraduates were seen in Bihar i.e. 3.70 percent in 2011-12 and 5.70 percent in 2017-18. Kerala showed a 12.20 percent and 14.00 percent graduates and post graduates 2011-12 and 2017-18 period. The overall picture was very pessimistic in terms of educational qualification as all other states except Kerala were having less than 10.00 percent of female graduates in 2017-18 PLFS. This gloomy picture explains us that we are still far behind in the development path compared to all other countries as lower educational attainment and domestic duties are depriving women an equal employment opportunity in the labour market. In addition to this sexual and verbal abuse in the workplace, low social mobility and negative social attitude of women work culture in the society enhances social discrimination in the job market for females. The states which are

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lagging far behind in social justice for women are Bihar, Uttar Pradesh and Rajasthan performing poorly in terms of their female labour participation. The major reasons identified by the study is lower educational qualification and majority of female workforce were involved in attending domestic duties. Further, social discrimination in various forms discourage women to take part in the job market. India being a nation following patriarchal structure, shows that men are the earning member of the family, hence are better educated and actively involved in the labour market which is why they do not have a choice to sit at home and they have to work to feed themselves and their family. It is also a possibility the patriarchal structure of the society intensifies the ego of men hence not allowing their female counterparts to enter into the labour market. This aspect requires further research which is at present beyond the limit of the study.

Logistic Regression Model

In order to analyse the impact of socio-economic factor on the working condition 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 order to apply logistic regression we have taken converted usual status of employment as working and non – working individuals. Thus, working status of an individual is an dichotomous binary dependent variable where code 1 is given if the person is working and code 0 is given if the person is non- working. The independent variables which were regressed on working status of an individual are gender, age , monthly consumption expenditure, literacy level, caste, religion, marital status and area of living i.e. urban or rural area. In all the independent variables considered for analysis only age is a numerical variable while all other variable are categorical variables. Let's start with gender. If a person is male then code 1 is given and for females code 0 is given. For monthly consumption expenditure if a person earning less than 10,000 Rs a month code 1 is given while above 10,000 Rs monthly consumption expenditure given value 0. For educational qualification, if a person is illiterate code is 1 and for literate person code 0 is given. With respect to caste Reserve categories are given code 1 and general category code 0 is given. People following Hindu Religion were given code 1 and other religions were given the value 0. For unmarried individuals code 1 is given and for married code 0 is given. Last independent variable is area of living. Here if a person lives in the rural area code 1 is given and he belongs to urban area code 0 is given. Thus all the independent variable except age of an individual are transformed to categorical variable in order to perform binary logistic regression.

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Logistic Regression- 2011-12 unit level data

In the model we are using NSSO 2011-12 unit level data and trying to predict that whether a person is working or non-working on the basis of certain socio-economical factors.

Table 10 : Variables in Equation 2011-12

Variables	B	S.E.	Wald	df	Sig.	Exp(B)
Monthly Consumption Expenditure	.328	.009	1195.168	1	.000	1.389
Gender	2.497	.008	89040.491	1	.000	12.148
Area	.265	.008	976.307	1	.000	1.303
Literacy Level	.096	.011	84.117	1	.000	1.101
Marital Status	-.025	.009	7.406	1	.007	.975
Religion	.062	.009	45.129	1	.000	1.063
Caste	.310	.009	1246.914	1	.000	1.363
Age	.018	.000	4137.862	1	.000	1.018
Constant	-2.546	.017	23005.236	1	.000	.078

Source- Generated with the help of SPSS Software

Table No 10 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 multi-co linearity problem. The third column deals with Wald Chi Square statistic which explains the significance of each independent variable holding other independent variables constant. The fourth and fifth column represents degree of freedom and P-values respectively. The last column shows exponential of β coefficients and more specifically known as odds ratio. First we will analyse the impact of monthly consumption expenditure on working category. While analysing the variable in the equation we need to make note of the fact that SPSS interpret the value of higher number while dealing in the categorical variables. In simple words when we analysed the result we have kept code 1 in every variable as a reference category. At first when we glance through the standard errors of the model we see that no variables is having standard error of more than 2 percent. It means that our model is free from the multi-collinearity problem. The first variable of monthly consumption expenditure of an individual significantly affects the working status of an individual as we can not reject the null hypothesis at 5 percent level of significance. The result can be interpreted as one more person belongs to monthly consumption expenditure of 10,000 Rs, log odds he or she belonging to working

category increases by 0.32 units, holding all independent variables constant. In other words, if one more person belongs to monthly consumption expenditure of less than 10,000 Rs he is 1.38 times more likely to belong to working category, holding all other independent variable constant. In percentage terms result can be interpreted as if one more person belongs to less than 10,000 Rs monthly consumption expenditure category, odds in the favour of him or her belonging to working category increases by 380 percent. The second variable is gender and its impact on the working status is very significant. The result can be interpreted as one more individual belongs to male category, he is 12.14 times more likely to be working compared to females, holding all other independent variable constant. In other words, males are 1114 percent more likely to be working compared to females. It is to be noted that beta coefficient or odds ratio of gender is highest when we analysed the impact of all socio-economic variables on working status of an individual.

The next variable is area where individual is living. The area of living also significantly affecting the working status of an individual. The result can be interpreted as people living in the rural areas are 1.30 time are more likely to be in the working category compared to people living in the urban areas holding all independent variables constant. While analysing the impact of literacy level on working status we found that illiterate persons are 1.10 times are more likely to be in working category compared to literate people, holding all other independent variables constant. The impact of single individuals is negative. The result can be interpreted as one more individual is single log odds of him or her belonging to working category decreased by 0.025 units. In other words, single people are 0.97 times less likely to be working compared to married people, holding all other independent variables constant. The result fulfils the common logic that single people are more involved in the studies thus their chances of working reduces compared to married people.

While analysing the impact of religion, result can be interpreted as Hindus are 1.06 times more likely to be under working category compare to other religions, holding all other independent variables constant. Similarly while analysing the caste it is found that people from reserved categories are 1.36 times more likely to be under working category compared to general category. The last independent variable considered for study is age which numerical in nature. As age increases by 1 year odd in the favour of individual belonging to working category increases by 1.01 times, holding all other independent variable constant. In other words, as the age increases by 1 year, a person is 01 percent more likely to join the labour force, holding all other independent variables constant.

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Logistic Regression 2017-18 unit level data

Table 11 : Variables in Equation

Variables	B	S.E.	Wald	Df	Sig.	Exp(B)
Monthly Consumption Expenditure	.122	.010	144.991	1	.000	1.130
Gender	2.998	.011	78137.850	1	.000	20.044
Area	.095	.009	101.758	1	.000	1.100
Literacy Level	.111	.012	80.045	1	.000	1.118
Marital Status	-2.607	.014	32605.063	1	.000	.074
Religion	.100	.010	95.662	1	.000	1.105
Caste	.139	.010	204.814	1	.000	1.149
Age	-.024	.000	4025.822	1	.000	.976
Constant	-.576	.020	805.443	1	.000	.562

Source- Generated with the help of SPSS Software

Table 11 explains the individual variables and their significance level in the model. All variables in the model significantly affect the dependent variable as we fail to reject null hypothesis at 5.00 percent level of significance. The result can be interpreted as one more person belong to monthly consumption expenditure of 10,000 Rs, log odds that he or she belonging to working category increases by 0.12 units, holding all independent variables constant. In other words, if one more person belongs to monthly consumption expenditure of less than 10,000 Rs he is 1.13 times more likely to belong to working category, holding all other independent variable constant. The second variable is gender and its impact on the working status is very significant. The result can be interpreted as one more individual belong to male category, he is 20.44 times more likely to be working compared to females, holding all other independent variable constant. It was seen that in 2011-12 analysis also gender was a most significant factor, and its significance level has increased in 2017-18 compared to 2011-12 period.

The next variable is area where individual is living. The area of living also significantly affecting the working status of an individual. The result can be interpreted as people living in the rural areas are 1.1 time are more likely to be in the working category compared to people living in the urban areas holding all independent variables constant. While analysing the impact of literacy level on working status we found that illiterate persons are 1.11 times are more likely to be in working category compared to literate people, holding all other independent variables constant. The impact of marriage on the working status is negative.

This is because we have taken unmarried people as a reference category. The impact of unmarried people on working status intensified in 2017-18 period compared to 2011-12 period. The result can be interpreted as one more individual belonging to unmarried category odds are in the favour of him belonging to working category decreases by 0.074 times. In other words, unmarried people are 92.60 percent less likely to be in a working category compared to married people, holding all other independent variables constant in the model. Assessment of impact of religion on the working status can be interpreted as Hindus are 1.10 times more likely to be under working category compare to other religions, holding all other independent variables constant. Similarly while analysing the caste it found that people from reserved categories are 1.14 times more likely to be under working category compared to general category. The last independent variable considered for study is age which numerical in nature. As age increases by 1 year odd in the favour of individual belonging to working category decreases by 0.97 times, holding all other independent variable constant. In other words, as the age increases by 1 year, a person is 3.00 percent lesslikely to join the labour force, holding all other independent variables constant.

Conclusion

India is the sixth largest economy in the world with low female labour participation rate. The Logistic regression performed reveals gender as the most important variable deciding the working status. It is owing to the fact that females have lower probability to participate in labour market. The LFPR is low for the states of Bihar and Uttar Pradesh. The increased level of income and patriarchal mind set in the society did not allow females to enter the labour market. It has been observed in the rural areas that females enter the labour force at the time of economic distress and exit the labour force as the situation improves. The educated females finds it difficult to join the labour force after their maternity. The maternity forces the females to spend a considerable time at home and their employment prospect becomes uncertain keeping in mind the unorganised sector of Indian Labour Market. What is difficult to change is the social attitude towards females in the male dominated society. Many women leave their jobs because of the family pressure and house hold work is not calculated in the GDP. Thus, the social environment and family works as a major obstacles in the entry of females in labour force thereby blocking the road towards prosperity of the country. Thus, the predominant reasons are the general preference of boys over girl child in India, social customs that prevent women from working out. Of late, the lower female labour participation rate is looked at in a positive way owing to higher school enrolment rate of girls in the recent years. The government programs of free education of girl child, scholarship,

midday meal scheme and betibachao-betipadhaoabhiyan were successful in bringing the girls to school. This has delayed the entry of females in the labour market. However, it has been observed that even educated girls from well to do families acquire education but do not take part in labour market activities. There is a lot of scope to improve our labour force participation rate. Increase in the female labour force participation rate can enrich the contribution towards GDP and the attainment of sustainable development.

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“A ROLE OF INDIA POST PAYMENT BANK (IPPB) IN FINANCIAL INCLUSION”

□ Dr. Anaya Aditya Markandeya*

ABSTRACT

Sustainable development of a nation depends on inclusion of the population into the financial network. Financial inclusion is assumed to be one of the key drivers of our vision of an inclusive society and inclusive economy. To achieve the objective of Financial Inclusiveness, there is need to focus on the network which is the most accessible, reachable and affordable to all sections of the society especially people in rural and remote areas. The India Post is the oldest and largest network in a world. For more than 150 years, the Department of Posts (DoP) has been the backbone of the country's communication and has played a crucial role in the country's social economic development. From the year 2018, the India Post has come up with a new and vital role to play in in financial inclusion policies in the form of 'India Post Payment Bank'. The present research paper covers the role of IPPB in the financial inclusion of Indian economy.

Key Words: Financial inclusion, India Post, the India Post Payment Bank (IPPB), Department of Post (DoP)

Introduction

The Pradhan Mantri Jan Dhan Yojana, the historic step taken towards the financial inclusion resulted into opening of a bank accounts in a very short period of time. Undoubtedly the banks play a vital role in financial inclusion. However, there a section of the society which is still away from the 'Traditional Banking Services' due to unavailability or inaccessibility. The work of reaching the unreachable is continuously done by the oldest, largest and the most reachable network in the world i.e. 'India Post'. Thus, apart from

providing the traditional postal services the India Post office is grooming with the modern financial services converting it into 'India Post Payment Bank'.

Sustainable development of a nation depends on inclusion of the population into the financial network. Financial inclusion is the concept where individuals and businesses are expected to have access to useful and affordable financial products and services that are delivered in a responsible and sustainable way to meet their needs. Financial inclusion can be

*Asst. Prof. MES's Mahatma Night Degree College of Arts and Commerce Chembur Naka, Mumbai 400071

Dhan Yojana in August 2014, moved into the next gear. The India Post Payments Bank (IPPB) has been incorporated as a public sector company under the department of posts with 100% government equity and is governed by Reserve Bank of India.

The IPPB would get the following benefits of India Post features.

- With a network of 1.55 lakh post offices countrywide, and more than 3,00,000 Postmen and Gram Daak Sevaks servicing the last mile, IPPB will be India's most accessible bank.
- Vast network and reach of India Post with a rural India penetration of 1,30,000 access points (Post Offices), is nearly 2.5 times the number of bank branches in rural India.
- The Post offices have 80% rural penetration, which is critical in enabling a digital economy at scale.
- The DoP has been a pioneer of Financial Inclusion in the country. It services over 40 crore customers in India with over 17 crore Post Office Savings Bank accounts, making it the largest financial inclusion enabler
- IPPB has built a strongly integrated model with DoP under which any Post Office Savings Bank Account holder will be able to avail additional services provided by IPPB by linking accounts
- The IPPB will provide DoP customers with a complete bouquet of banking services. In turn, Post Office Saving Bank accounts will become sweep out

accounts for customers when the balance exceeds Rs. 1 Lakh.

- For IPPB, the last mile service partner is the postman. The DoP represents sovereign trust, and partnering with such an institution will set the IPPB apart.

The IPPB has a significant role to play in financial inclusion of India.

- IPPB will make banking and payments simple. Using Aadhaar, it will open paperless accounts in minutes and allow customers to make digital transactions with the help of QR Cards and biometric authentication.
- The last mile delivery agent (Postman, Gram Daak Sevaks) is armed with financial knowledge, and equipped with a smartphone and biometric device, enabling him/ her to offer financial services and guidance with relative ease.
- IPPB's QR card eliminates the need for customers to remember their account number and PIN.
- IPPB beneficiaries include Senior Citizens, Students, Homemakers, Urban Migrants, Farmers, DBT Beneficiaries, Rural Influencers, Kirana Stores and Small Businesses.
- With IPPB's Doorstep Banking Services, customers don't even need to leave their homes
- IPPB will leverage public infrastructure (Reserve Bank of India/ National Payments Corporation of India (NPCI), Payments

Economic Growth & Unemployment: An Empirical Analysis of India

Harsh D. Shukla

Assistant Professor, Mahatma Night Degree College of Arts & Commerce, Chembur

ABSTRACT

The link between economic growth and employment generation had been testified in the post reform period. The research paper attempted to scrutinise the variation in unemployment and economic growth in the recent past. The data had been collected from Centre for Monitoring Indian Economy, Reserve Bank of India, NSSO rounds and Periodic Labour Force Survey for the study. It was observed that LFPR gradually declined for females in a greater proportion than males. Further, LFPR was higher in rural areas than the urban areas. The lower female LFPR is cause of concern. The recent economic slowdown was an amalgamation of various labour market and money market variables. The down turn in economic growth started from 2018-19. The structural changes of demonetisation and GST affected the GDP growth in the short run while global economic slowdown affected the long run growth. The domestic savings were not able to support the investment which forced the use of foreign savings to boost the growth process. The unemployment rate started increasing as the liquidity crunch emerged after the demonetisation and introduction of GST. The V shape unemployment rate shows the effect of demonetisation. The unemployment rate was higher for urban female who can afford to remain unemployed because of better economic condition. The unemployment rate was higher in urban areas when compared to rural areas. The domestic credit crunch emerged from corporate debts emerged as an obstacle for the economic and employment growth in last few years. The labour abundant country like India can not afford to waste demographic dividend in the absence of appropriate policy measure to tap the human capital in the country.

Keywords: Economic Growth, Unemployment Rate, LFPR, Demonetisation

1.1 INTRODUCTION

The lopsided economic development led to unequal distribution of income and wealth in India. The trickle-down effect envisaged by policy makers did not come true even after 30 years of new economic policy 1991. The growth along with it brought productive means of production which is highly capital intensive. The employment generation dampened by substitution of labour for capital in domestic industries while cheap imports from abroad superseded local products. In addition, there are factor like inadequate infrastructure, low level of literacy and poor policy execution across the country which adversely affected employment situation in India. India's growth story is a service led growth and not a manufacturing led growth. Since the attainment of independence the share of Industry has remained constant in India's GDP. This infers the fact that manufacturing sector has never optimally expanded as per the development needs of the country. The shift of manufacturing to China snatched away the jobs of unskilled and medium skilled labours in the country. Manufacturing sector has a potential to provide more stable employment opportunities when compared to service sector. A large number of employment in the service sector is of informal nature and formal employment is limited in Banking, Insurance, ICT and Administrative services. The informal nature of employment in the services deprived the individual from any kind of social benefit. Thus, we face formidable challenge of creating organised sector employment opportunities in the country over the coming year. Indian has a demographic dividend but the educational infrastructure is not evenly distributed in the country (Thomas, 2014). The is huge gap between skill demanded by industry and supplied by educational institution. (Unni, 2012). The public sector employment became scare due to disinvestment policy of government. Under this backdrop, the study attempts to analyse the trends of economic growth and employment nexus in the recent past.

2.1 SOURCES OF DATA

In order to provide regular employment information, Centre for Monitoring Indian Economy in association with Bombay Stock Exchange started conducting regular employment and unemployment survey from January 2016 onwards. The methodology of the CMIE survey is almost similar to NSSO survey. The data on macro-economic aggregates have been collected from Reserve Bank of India with 2011-12 as a base year. Quarterly GDP growth rate numbers have been obtained from Ministry of Statistics and Program Implementation (MOPSI).

3.1 LABOUR FORCE PARTICIPATION RATE (LFPR)

The LFPR in usual and subsidiary status shows the number of labour force available for work for a major part of a year. The LFPR in India declined for rural and urban females during various NSSO rounds and the recent Periodic Labour Force Survey (PLFS). For e.g. LFPR of rural female declined from 33 percent in 1993-94 to 18.2 percent in PLFS of 2017-18. Similarly 15.9 percent urban females were the part of labour force according to PLFS. It is to be noted that the female LFPR is lowest in India then other emerging market economies. The minimum participation of female in the labour force adversely affected the national income. Table 1 shows the LFPR on quarterly basis using CMIE data base. It is observed in table 1 that LFPR has declined in all four category of workforce. LFPR is greater in rural area than the urban area in both the categories of rural male and rural female. The LFPR of male is greater than the females but both showed the gradual decline in the recent years. The gap of LFPR of male and female is worrisome i.e. gap of 60 percent in last quarter of May-August 2018.

4.1 ECONOMIC GROWTH IN THE RECENT PAST

Table 2 throws light on select macro-economic aggregate at constant prices with base year 2011-12. The year 2012-13 was peculiar because of 5.46 percent growth of GDP and high capital formation rate i.e. 39.50. The low economic performance led to change of government in 2014-15. The first half of the NDA regime showed decent economic growth but the second term of NDA led government is far more challenging as they could not transform economic growth into employment. It is observed that gross capital formation as a percentage of GDP was highest in 2012-13 when the economic growth was weak while the gross capital formation continued to decline thereafter. Gross saving rate was 33.88 percent in 2012-13 while it declined to 30.51 percent in 2017-18. Thus, the domestic savings was not sufficient to meet investment demand in the country. Table 3 displayed the scenario of GDP growth rate in the last 3 years of economy. It started from first quarter of 2017-18 to second quarter of 2019-20. An analysis of table 3 confirmed that economic slowdown in India started from second quarter of 2018-19 and situation deteriorated in the second quarter of 2019-20 when GDP growth was only 4.5 percent. The bank frauds, contraction of aggregate demand, lower labour force participation rate of females and slowdown in the automotive sector were some of the reason of the downturn of the GDP growth rate. Figure 1 shows the recessionary phase of Indian economy.

Table 1 : Labour Force Participation Rate In the Recent Time Period

TIME PERIOD	Urban Male	Urban Female	Rural Male	Rural Female	INDIA	URBAN	RURAL	MALE	FEMALE
Jan- Apr 2016	72.7	15.8	75.5	15.8	46.9	45.3	47.8	74.8	15.8
May- Aug 2016	72.6	16.4	75.8	16.3	47.17	45.6	48	74.8	16.4
Sep-Dec 2016	72.5	14.2	75.1	14.6	45.91	44.4	46.7	74.2	14.4
Jan- Apr 2017	71.2	12	73.5	13	44.29	42.7	45.1	72.8	12.7
May- Aug 2017	70.5	11	73.3	11.7	43.5	42	44.3	72.3	11.4
Sep-Dec 2017	70.7	11.4	73.7	12.3	43.91	42.2	44.8	72.7	12
Jan- Apr 2018	69.9	10.8	73.5	11.7	43.38	41.6	44.3	72.3	11.4
May- Aug 2018	69.6	10.3	72.8	10.8	42.7	41.2	43.5	71.7	10.7

Source: Various Report of Unemployment in India CMIE

Table 2: Macro Economic Aggregates of Growth and Investment Rates in Percentage
(Constant Prices)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18

Gross Domestic Product	5.46	6.39	7.41	8.00	8.17	7.17
Per Capita NNI	3.27	4.63	6.17	6.67	6.79	5.66
As % of GDP						
Gross Capital Formation	39.50	35.18	34.76	34.45	33.71	35.51
Net Capital Formation	28.53	23.95	23.57	23.28	22.48	24.10
As % of GDP	(Current Prices)					
Gross savings	33.88	32.12	32.24	31.09	30.26	30.51
Net savings	23.21	21.47	21.48	20.57	19.9	20.09

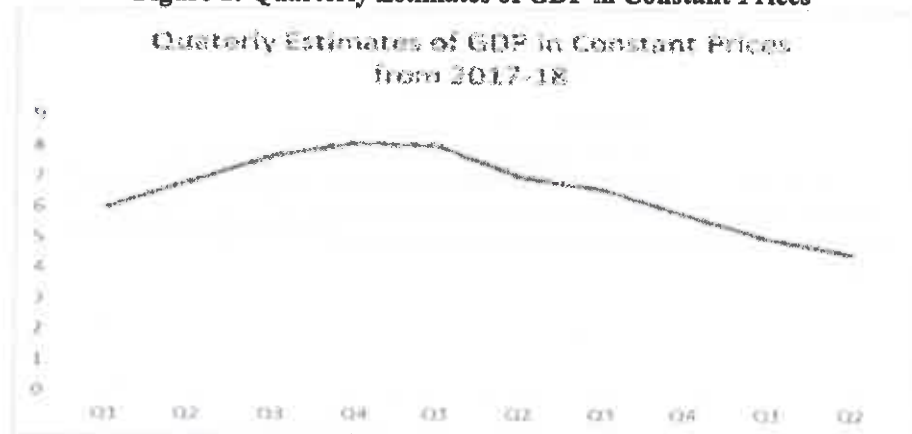
Source- Reserve Bank of India

Table 3: Growth Rate of Quarterly Estimates of GDP at Constant Prices

2017-18	Q1	6.00
2017-18	Q2	6.80
2017-18	Q3	7.70
2017-18	Q4	8.10
2018-19	Q1	8.00
2018-19	Q2	7.00
2018-19	Q3	6.60
2018-19	Q4	5.80
2019-20	Q1	5.00
2019-20	Q2	4.50

Source: Ministry of Statistics and Program Implementation


Figure 1: Quarterly Estimates of GDP in Constant Prices

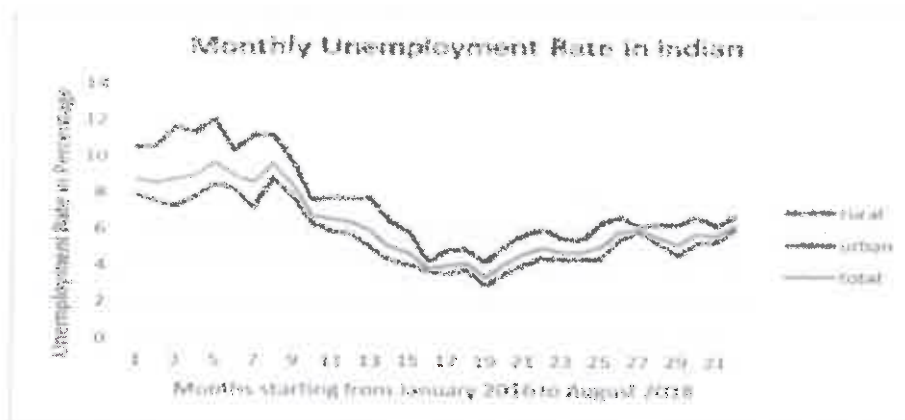


Source: Derived from Table 4

4.2 UNEMPLOYMENT RATE

Figure 2: Monthly Unemployment Rate in India


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Source: Derived from monthly data on unemployment from CMIE

Table 4: Unemployment Rate In the Recent Time Period

TIME PERIOD	Urban Male	Urban Female	Rural Male	Rural Female	INDIA	URBAN	RURAL	MALE	FEMALE
Jan- Apr 2016	6.3	31.6	5.4	20.4	8.67	10.7	7.7	5.7	24.3
May- Aug 2016	6.7	31.1	5.9	21.4	9.23	10.9	8.4	6.2	24.8
Sep-Dec 2016	4.9	24.1	4.5	16.2	6.79	7.8	6.3	4.7	18.9
Jan- Apr 2017	4	15.6	3.2	11.2	4.71	5.6	4.3	3.5	12.7
May- Aug 2017	3.5	12.3	2.9	8.1	3.91	4.6	3.5	3.1	9.5
Sep-Dec 2017	4.1	16.2	3.8	9.3	4.92	5.7	4.5	3.9	11.6
Jan- Apr 2018	4.6	17	4.3	11.6	5.6	6.2	5.3	4.4	13.4
May- Aug 2018	4.8	17.8	4.5	11.4	5.67	6.3	5.3	4.6	13.6

Source: Various Report of Unemployment in India CMIE

Table 4 explains unemployment situation in India. As we can see in Table 4 unemployment rate was lowest between May to August 2017 . Before this period, unemployment rate was declining and after this period unemployment rate started to increase. Unemployment rate was higher in urban female compared to rural female similarly unemployment rate was higher among urban male than it rural counterpart. Compared to males unemployment rate was higher among females. Unemployment rate in India was 8.74 on January 2016 which fell to 3.39 percent on July 2017 and further started increasing their onwards. On August 2018, unemployment rate in India was 6.32 percent. the unemployment rate was far greater than the unemployment rate of NSSO 2011-12. The PLFS 2017-18 witnessed unemployment rate of 6.1 according to usual status . CMIE and PLFS are different and independent agencies. Both of them displayed higher unemployment rate with new methodological changes. However further discussion will be based on CMIE data which is more frequently available. If we look at unemployment rate in urban India, it was 10.52 percent on January, 2016 which came to 4.25 on June, 2017 and again started increasing. On August 2018 it went up to 6.81. in the rural areas unemployment level was less than the urban areas. On January 2016, unemployment rate was 7.86 percent which slowly came down on 2.98 percent on August, 2017 and there onwards started to increase and reached at 6.06 percent on august 2018. The recent changes in unemployment to a great extent was also affected by the governments demonetisation program. The rate of unemployment was slowly decreasing in the initial period of 2016. The demonetization program was introduced in the month of November, 2016 and which led to changes in money market. The direct impact of the


demonetization program in the economy was in the form of cash crunch for first six months . The large part of economy works on cash and as result of demonetisation Indian informal sector was badly affected which in turn had a repercussion on employment. It is testified from the small V shape unemployment curve where bottom of the curve is formed between 17th to 19th months of the study period in Figure 2 .The second structural change was the introduction of Goods and Service Tax (GST). The purpose of introduction of GST was to avoid multiple taxation on the same product. The multiple slabs of GST and time period for GST filling did not go very well with the business community in its initial period. Thus, first demonetisation and second introduction of GST played a vital role in slow growth of employment generation..

CONCLUSION

There is direct link between economic growth & employment. The aggregate demand depends on consumption expenditure which in turn depends on income and thereby on decent employment condition in the country. Generation of quality employment is a major challenge for the policy makers. The LFPR continued to decline for the rural and urban female in both CMIE and PLFS studies. The growth rate of GDP continued to increase till the fourth quarter of 2017-18 and thereafter witnessed a sharp decline due to couple of factors. The structural changes of demonetisation and introduction of GST in the economy played an important role for short run slowdown in GDP. Further, the corporate debt crisis of IL&FS, PMC and PNB added to the woes of credit crunch in the economy. On the other hand, public sector bank mergers and loss making public sector companies reduced the prospect of already scare public sector employment. However, the long run economic growth is linked with slowdown in the world economy. The automobile sector slowdown in the world economy was reflected in India as well. The unemployment rate increased in the recent past. The urban female from better off families can afford to remain unemployed but for poor remaining unemployed is not an option. The lower LFPR, increasing unemployment along with sluggish economic growth can turn demographic dividend of India into demographic disaster.

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A Study on Water Quality Index of Gauripada pond, Kalyan, Maharashtra

***Tushar A. Pawar**

Email- pawartushara@gmail.com (Contact Number- 8097631237)

**** Madhuri K. Pejaver**

(B.N. Bhandodkar College of Science, Thane)

Abstract:-

The present paper deals with the seasonal study of physico-chemical parameters of Gauripada pond, Kalyan, Maharashtra and to calculate water quality index (WQI) which will help to understand quality of water. Water Quality Index, represents water quality in terms of index number, which is useful representation of overall quality of water for public as well as government authority to understand status of water body for their management. In the present study water quality index was calculated on the basis of seasonal study of physico-chemical parameters like pH, electrical conductivity, total dissolved solids, suspended solids, alkalinity, hardness, chloride, nitrate, dissolved oxygen and biological oxygen demand.

Key words:-*Gauripada pond, physico-chemical parameters, Water quality, WQI, hydrology*

Introduction:-

Water is one of the important and abundant natural resource present on earth and useful for every life on the earth. Around 70% of earth surface is covered with water resources. Due to increased human population, industrialization, agricultural runoff and anthropogenic activities creating pressure on water resource and are main reasons for degradation of water resources.

Ponds are one of the important water resources used in this area. On the other hand, they also provide a habitat for invertebrates, fishes and aquatic birds (Kumar et al 2006). During recent years there has been increasingly greater concern for inland fresh water resources, which are affected in different ways by all kinds of anthropogenic activities. Therefore scientific study needs to review strategies for conservation and better utilization of ponds.

Gauripada ponds namely located in Kalyan Taluka (19°15'07.1"N and 73°08'57.0" E) of Thane District, Maharashtra, India. The total area of this taluka is 710 Km². The Kalyan taluka is cubular in form, and in its western part a rich open plain. In the south and east ranges of hills running parallel with the boundary line, throw out spurs into the heart of plain. The climate is not very hot. The temperature ranges between 21.93°C to 31.72°C. It receives average rain fall 2355.2 mm.

Water quality index provide single to understand status of water. Hence water quality index help us to convert complex water quality data into understandable information for public. This WQI of any water body will help us

to plan strategies to manage and conserve this natural resource. Hence attempt is made to study physico-chemical parameters of Gauripada pond to analyze WQI to understand quality status of this pond.



Plate-1 Gauripada Pond



Plate- 2 Map Showing Gauripada Pond- Kalyan

Materials and Methods:-

For the present study water samples from Gauripada pond were collected seasonally from Summer 2015 to winter 2016 (February 2015 to January 2016). Water samples were collected from different sites, at the boundaries of pond and not from central region of pond as to reach in center of pond, boat facility was not available.

The water samples were collected seasonally, in early morning hours. Clean plastic 2 litre carboys were used to collect water samples. Ten physicochemical parameters were analyzed. pH and electrical conductivity were recorded on the spot and sample for DO also collected in BOD bottle and fixed immediately and analyzed on the spot. Water analysis was performed as per the methods described in standard methods (APHA, 1992); Trivedi and Goel (1984) and Kodarkar (1992).

In this study, for the calculation of water quality index, some important parameters were selected. The WQI has been calculated by using the standard of drinking water quality recommended by the Bureau of Indian Standards (BSI), Indian Council for Medical Research (ICMR) and World Health Organization (WHO). The weighted arithmetic index method has been used for the calculation of WQI of water body. Further, quality rating or sub index (q_n) was calculated by using following expression (Jena *et. al.*, 2013).

$$q_n = 100 \times [V_n - V_o] / [S_n - V_o]$$

Here, q_n = Quality rating for the n^{th} water quality parameter.

V_n = Estimated value of the n^{th} parameter at a given sampling station.

S_n = Standard permissible value of the n^{th} parameter.

V_o = Ideal value of n^{th} parameter in a pure water. (Ideal value for all parameters = 0.0 except pH and DO i.e. 7 and 14.6 respectively)

Unit weight was calculated by a value inversely proportional to the recommended standard values S_n of the corresponding parameters.

$$W_n = K/S_n$$

Where, W_n = Unit weight for the n^{th} parameter.

S_n = Standard value for n^{th} parameter.

K = Constant for proportionality

The overall Water Quality Index (W.Q.I) was calculated by aggregating the quality rating with the unit weight linearly.

$$WQI = \sum q_n W_n / \sum W_n$$

Table 1- Water Quality Index (WQI) and status of water quality (Chatterji and Raziuddin, 2002)

Water Quality Index	Water Quality Status
0-25	Excellent water quality
26-50	Good water quality
51-75	Poor water quality
76-100	Very poor water quality
>100	Unsuitable for drinking

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Table 2 - Drinking Water Standard recommending agencies and unit weights. (All values except pH and electrical conductivity are in mg/L)

Sr. No.	Parameters	Standards	Recommended Agency	Unit Weight
1	pH	6.5-8.5	ICMR/BIS	0.2190
2	Electrical Conductivity	300	ICMR	0.371
3	Total Dissolved Solids	500	ICMR/BIS	0.0037
4	Total Suspended Solids	500	WHO	0.0037
5	Total Alkalinity	120	ICMR	0.0155
6	Total Hardness	300	ICMR/BIS	0.0062
7	Chloride	250	ICMR	0.0074
8	Nitrate	45	ICMR/BIS	0.0412
9	Dissolved Oxygen	5	ICMR/BIS	0.3723
10	Biological Oxygen Demand	5	ICMR	0.3723

Result and Discussion:-

Table-3 Seasonal variation of the physicochemical parameters of the Gauripada pond for the year 2015-16

Parameters	Summer-15	Monsoon-15	Winter-16
pH	7.98	7.94	7.88
E. Conductivity (us)	430.00	397.50	500.00
TDS (mg/l)	237.50	193.75	325.00
SS (mg/l)	60.00	145.00	155.00
Alkalinity (mg/l)	225.00	100.00	281.25
Hardness (mg/l)	342.50	168.75	166.25
Chlorides (mg/l)	226.05	101.95	212.75
Nitrates (mg/l)	0.43	0.27	0.79
DO	5.72	7.03	5.62
BOD (mg/l)	6.05	7.05	3.53

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Table-4 Calculation of Water Quality Index

Parameters	Unit Weight (W _n)	Summer-2015		Monsoon-2015		Winter-2016	
		Quality Raring (q _n)	Wnq _n	Quality Raring (q _n)	Wnq _n	Quality Raring (q _n)	Wnq _n
pH	0.22	65.33	14.31	62.67	13.72	58.67	12.85
E.Conductivity (us)	0.37	143.33	53.18	132.5	49.16	166.67	61.83
TDS (mg/l)	0	47.5	0.18	38.75	0.14	65	0.24
SS (mg/l)	0	12	0.04	29	0.11	31	0.11
Alkalinity (mg/l)	0.02	187.5	2.91	83.33	1.29	234.37	3.63
Hardness (mg/l)	0.01	114.17	0.71	56.25	0.35	55.42	0.34
Chlorides (mg/l)	0.01	90.42	0.67	40.78	0.3	85.1	0.63
Nitrates (mg/l)	0.04	0.95	0.04	0.6	0.02	1.75	0.07
DO	0.37	92.5	34.44	78.12	29.08	93.54	34.82
BOD (mg/l)	0.37	121	45.05	141	52.49	70.6	26.28
	ΣW _n =1.41	Σq _n =874.70	ΣWnq _n =151.51	Σq _n =663.00	ΣWnq _n =146.68	Σq _n =862.12	ΣWnq _n =140.83
		WQI=107.45		WQI=104		WQI=99.87	

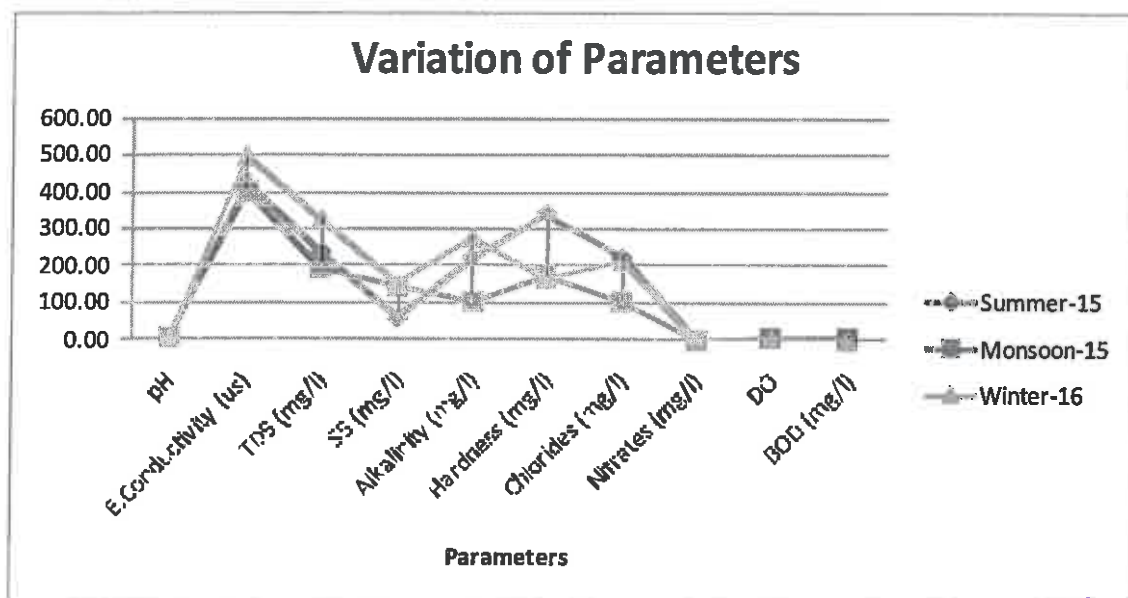


Fig-1 Season wise variation of physicochemical parameters

pH:-

During the present study values of pH recorded in the range of 7.88 to 7.98 (Table-3). Higher value of pH recorded in summer whereas lower value recorded in winter. Saxena and Chauhan (1993) also reported higher

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pH values in summer at Yamuna river in Agra. According to ICMR standard pH of water body within permissible limit i.e. 6.5 to 8.5 (Table-2) but slightly alkaline in nature.

Electrical Conductivity:-

Electrical conductivity of Gauripada pond recorded in the range of 397.5 to 500 μ s (Table-3). Higher value recorded in winter and lower value recorded in monsoon. The lowest value of electrical conductivity recorded in the monsoon season may be due to surface flow as flow is not constant during monsoon and hence variation in the electrical conductivity value observed in monsoon. During winter discharge of surface water not possible but may be due to deposition of ions during monsoon and inlet of drainage system contribute to higher value of electrical conductivity in this season. Values of electrical conductivity for all seasons were beyond permissible limit according to ICMR limit i.e. 300 μ s (Table-2).

Total Dissolve Solids:-

Total dissolved solids recorded in between the range of 193.75 to 325 mg/L (Table-3). Higher value of TDS recorded during winter season while lower value recorded in monsoon season. The concentration is high which may be due to addition of solids from runoff water, sewage, municipal effluents and other domestic effluents directly to the pond (Jain *et al.* 1996). Total dissolved solids recorded within permissible limit of ICMR i.e. 500 mg/L (Table-2).

Suspended Solid:-

During present investigation suspended solids recorded in the range of 60 to 155 mg/L (Table-3). Maximum suspended solids were recorded in the winter season whereas minimum value of suspended solid recorded in the summer season. According to WHO standard suspended solids recorded in this pond were within permissible i.e. 500mg/L (Table-2).

Total Alkalinity:

Total alkalinity recorded in the range of 100 to 281.25 mg/L (Table-3). Maximum value recorded during winter season and minimum value recorded during monsoon. Highest value of alkalinity observed during winter season may be due to decomposition of organic matter and liberation of CO₂ during decomposition process. Value of alkalinity recorded during present study found to be beyond permissible limit in summer and winter season i.e. 120 mg/L (Table-2).

Total Hardness:-

During this present investigation total hardness was recorded in the range of 166.25 to 342.5 mg/L (Table-3). Highest value total hardness was recorded during summer season while lowest value was recorded in winter season. Koshy and Nayar (2000) reported higher values in post monsoon and pre monsoon period at Pambariver. During summer season water from water bodies gets evaporated which may increase concentration of chemical constituents and also degradation of sediments during summer due to wind action may contribute to calcium and magnesium ions into water bodies which may lead to increase in concentration of total hardness of water. Values of total hardness during summer seasons were beyond permissible limit according to ICMR limit i.e. 300mg/L (Table-2).

Chloride:-

Concentration of chloride recorded in the range of 101.95 to 226.05 mg/L (Table-3). Minimum concentration of chloride observed during monsoon whereas maximum was recorded during summer season. In present study chlorides did not exceed the permissible limit as per ICMR i.e. 250 mg/L (Table-2) standard indicating water body was unpolluted by organic waste.

Nitrate:-

The values of nitrates in present study fluctuated from 0.25 to 0.79 mg/L (Table-3). highest value of nitrate recorded during winter season while lowest value recorded during monsoon season. Korgaonkar *et.al.* (2014) observed similar observation in Osargaon-Ghonsari pond, Kankavli, Maharashtra. In present study all the eight stations shows concentration of nitrate within desirable limit according to ICMR standard i.e. 45 mg/L (Table-2).

Dissolved Oxygen:-

In the present study dissolved oxygen recorded in the range of 5.62 to 7.03 mg/L (Table-3). maximum value recorded during monsoon season whereas minimum value recorded during winter season.

Action of rain water during monsoon may be helps to increase concentration of oxygen. As water falling from height in the water bodies may contribute high amount of oxygen. According to ICMR standard dissolved oxygen found beyond permissible limit i.e. 5mg/L (Table-2).

Biological Oxygen Demand:-

Biological oxygen demand recorded during present study in the range of 3.53 to 7.05 mg/L (Table-3). Higher value of BOD observed during monsoon season whereas lower value recorded during winter season. Maximum value of BOD recorded during monsoon may due to surface runoff water carries debris and other organic matters which may require higher amount of oxygen for their degradation. As per ICMR standard amount of BOD recorded during present study was beyond permissible limit during summer and monsoon season i.e. 5mg/L (Table-2).

Conclusion:-

From the above results its indicate that maximum physicochemical parameters were found beyond permissible limit according to ICMR, BIS and WHO standard. The Water Quality index obtained for the water body in different seasons during study period i.e. summer season- 107.45, monsoon season- 104 and winter season – 99.87, which indicates the poor quality of water (Table-1 and Table-4). According to WQI analysis, it shows that Gauripada pond is eutrophic and water of this pond is not suitable for human consumption. It is also observed that pollution load is higher during summer as it compare with monsoon and winter. Hence it is require planning some strategies to enhance quality of water for drinking purpose and management of pond.

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