

## IMPACT OF COVID-19 ON PREMIUMS OF LIFE INSURANCE COMPANIES IN INDIA

S. M. Muradbi Mazgaonkar<sup>1</sup> and P. O. Sawant<sup>2</sup>

<sup>1,2</sup>Department of Accountancy, M. L. Dahanukar College of Commerce

<sup>1</sup>sahifa0402@gmail.com, <sup>2</sup>pallaviphonde19@gmail.com

### ABSTRACT

*Covid-19 has engulfed the entire globe in a viscous circle by spreading its fatal fangs and therefore has been declared a world-health threat by World Health Organisation (WHO). India got to taste this pandemic not sooner than 30<sup>th</sup> January 2020 when the first-ever case of Covid-19 was found in India. The study is aimed at analysing the impact of Covid-19 on premiums of Life Insurance Companies in India. The study also attempts to understand the reasons for an increase in the premium of Life Insurance Companies in the Covid-19 period. For the sample of the study, secondary data was retrieved from the Insurance Regulatory Development Authority of India (IRDAI) website on the status of the monthly premium of Life Insurance Companies of India ranging between the Pre Covid-19 Period and the Covid-19 Period. Both, descriptive as well as inferential analysis researches were undertaken by the researchers to comprehend and analyse the data. Lastly, after applying paired sample t-test, the findings of the study disclosed that, on average, in the Covid-19 Period, insurance premiums are significantly higher than the Pre Covid-19 Period.*

**Keywords:** Covid-19, Insurance Premium, Life Insurance Companies

### Introduction

COVID-19 was declared as a world-health threat by the World Health Organization in the last week of March 2020. Soon after that, it was labelled as a 'pandemic' across the globe. This disease was first traced in China in December 2019 and thereafter everything seems to be history. The entire world has been engulfed by this fatal virus. The first case of Covid-19 in India was reported on 30<sup>th</sup> January 2020.<sup>1</sup>

Covid-19 has taken the global economy at a toss. Soon after the demonetization in 2016, the Indian economy has been swirling around in an oscillatory motion to find some sort of balance and to which Covid-19 has just added some fuel to the fire. The emergence of Covid-19 has been stated by the people as a double hit to the Indian economy.<sup>2</sup>

Covid-19 has not only affected economically but also psychologically which has broken the nerves of normality. One of the psychological consequences caused by Covid-19 is the 'fear for life' that has evolved within individuals worldwide.<sup>3</sup> This 'fear for life' has generated the need to have insurances among the people. Lately, a sudden spike in acquiring health insurance and term life insurance policies has been observed. PricewaterhouseCoopers Private Limited (PwCPL) report had already estimated this boost in the demand for life insurance policies way back, before June 2020.<sup>4</sup> It was expected from the life insurance sector of India to boom at a Compound Annual

Growth Rate (CAGR) of 5.3% between 2019 and 2023. For the Financial Year (FY) 2020, India's insurance insertion was observed to be 3.76% with life insurance penetration being 2.82%. It was also observed that the market share of private sector companies of general and health insurance got agitated from 47.97% in FY 2019 to 48.03% in FY 2020. In FY 2021, which is up till March 2021, the premium from the new business of life insurance companies in India stood at US\$ 3.19 million.<sup>5</sup> Further, to talk about the Indian Insurance Industry, it comprises of 57 insurance companies out of which 24 are streamlined for the life insurance segment. From these 24 life insurance companies, Life Insurance Corporation of India (LIC) is the sole public sector company, hailing high with maximum hold in this market.

Moreover, undoubtedly, COVID-19 has affected almost every pocket. Right from business houses to individuals, almost everyone has suffered financially during this pandemic period. Loss of jobs and reduced income has affected the savings and investments of people at large and at the same time increased health expenditures, fear of diseases, and death of loved ones have triggered the demand of having Insurance Policies. Thus, the objective of the study is to evaluate the impact of COVID-19 on the premiums of life insurance companies in India.

### Research Question

This research has been undertaken to find out the answer to the following question:

- What is the impact of Covid-19 on the premiums of Life Insurance Companies in India?
- What are the reasons for an increase in the premiums of Life Insurance Companies of India?

### Objectives of the Study

The study was undertaken with the following objectives:

- To study the overview of the Life Insurance Industry in the Covid-19 Period.
- To analyse the impact of Covid-19 on the premium of Life Insurance Companies in India.
- To comprehend the reasons for the increase in the revenue of Life Insurance Companies.

### Hypothesis of the Study

**Null hypothesis (Ho):** There is no significant difference between the average insurance premium of Life Insurance Companies in the Covid-19 Period and in the Pre Covid-19 Period.

**Alternative hypothesis (H1):** Average insurance premium of Life Insurance Companies in the Covid-19 Period has significantly increased as compared to the Pre Covid-19 Period.

### Review of Literature

**Dr. Yadav, B. & Dr. Suryavanshi, P. (2021)** have attempted to study the effects of the Covid-19 pandemic on the business of the Indian Life Insurance Sector. The paper has covered various aspects of policies issued like sum insured, first-year premium, number of lives covered for group schemes, etc., and thereby evaluated the overall performance of the insurance companies in FY 2020 as against the previous FY 2019. It can be inferred from the findings of the study that especially from March 2020 to August 2020, Covid-19 severely affected the business of life insurance companies in India. This may be mainly because of the period of the study which covers only six months ranging from March 2019 to August 2019 (pre-covid) and six months from

March 2020 to August 2020 (post-covid) period in which Covid-19 had just rooted.<sup>6</sup>

**Dr. Ramasamy, K. (2020)** has discussed the various factors like lockdown approach, moratorium, and different impacts in Banking, Services and Insurance Industry (BSFI) sector. The paper shares that out of the BSFI sector, Insurance is the only sector that has been positively affected by Covid-19. The paper further states that, insurance companies are attracting more customers during this Covid-19 situation as people are scared of this pandemic and want to be prevented from the financial crisis in case if they get affected by the deadly Coronavirus.<sup>7</sup>

**Dr. Parvathi, V. and Dr. Lalitha, C. (2021)** have managed to highlight the challenges and opportunities for the Indian Insurance Sector amidst the pandemic. The paper talks about how the outbreak of Covid-19 has created a unique opportunity for insurance providers to rethink innovation, work on improved customer experiences, and upskill and reskill of the workforce. Further, the paper also talks about the major challenges that the insurance companies have come across in this pandemic and that is claim-management processes. The paper suggests that the insurers should carefully evaluate and simplify the claim processing, virtually by upgrading interactive voice-over calls or records.<sup>8</sup>

**Shekhar, R. & Pandey, S. (2020)** in their book, have attempted to assess the impact of Covid-19 on all major stakeholders including Insurers. While penning down the major impacts of Covid-19 on the Insurers, the paper holds the change in risk outlook, increased uncertainty, and reduction in investment income to be the reasons for higher premium rates, higher intake of retail insurance, etc.<sup>9</sup>

**RiyazahmedK. (2021)** in his paper has conducted an empirical study to analyze the investment motives and preferences of people during Covid-19. A total of 753 respondent's views were analyzed to study the impact of investor motives and awareness on investor preferences and positively to analyze the new investment trends in shares, mutual funds, and life insurance in the Covid-19 period. The result of the study reveals that the awareness of life insurance as an independent variable had a

moderate correlation with the preference of investors in the Covid-19 period.<sup>10</sup>

### Appraisal

As it can be seen and observed, Covid-19 has impacted almost every sector. Businesses, jobs, education, etc. have been affected in this wave of Covid-19. Thus, it has ignited a fear-for-life amongst the people. This has made the people reach out for some aid to be received through a security of life insurance policy. Though many literature pieces are communicating the impact of Covid-19 on different sectors, very few are visibly done on Life Insurance Companies of India, and from the ones which are done, a major chunk is on the opportunities and challenges that have come in the way of Life Insurance Companies of India during Covid-19. Also, the kinds of literature written range from six months before and after the Covid-19 period which affects the perception and the results of their study. Therefore, the researchers have deliberated to conduct a study to analyze the impact of Covid-19 on the premiums of Life Insurance Companies of India, taking into consideration a decent reference period of 15 months of Pre Covid-19 period and 15 months of the Covid-19 period.

### Research Design

Research design is a logical and systematic plan which provides the direction to research study. Research design is a detailed analysis of how an investigation took place. A research design typically includes how data is to be collected, what instruments will be employed and how the information will be organized. For the present study, the researchers have used descriptive and analytical research. It is descriptive as it describes by giving an overview of the insurance industry in India and its status during the pandemic period. It is analytical as inferential analysis is carried to analyze the impact of Covid-19 on the premium of the Life Insurance Companies of India. The two related groups in the study are average monthly premium of 15 months before 30<sup>th</sup>

January 2020 and an average monthly premium of 15 months after 30<sup>th</sup> January 2020. The present study relies on secondary data to evaluate the impact of Covid-19 on the Premium of Life Insurance companies in India. The data sources are monthly business reports published on the IRDAI's website.<sup>11</sup>

The secondary data of insurance premium was collected for two different periods of 15 months each. The Pre-Covid-19 period ranges from November 2018 to January 2020 and the Covid-19 period ranges from February 2020 to April 2021. 30<sup>th</sup> January 2020 is considered as the cut-off date to divide data into two different periods for analysis through paired sample t-test. The Indian Insurance Industry comprises of 24 life insurance companies, out of which 23 are operating, and one of them M/s Sahara India Life Insurance Co. Ltd. has been not considered for the study as its 'life insurance portfolio' was given away to ICICI Prudential Life Insurance Company Ltd. in the interest of its policyholders as it was found to be at stake. There were many allegations laid down on the governance system of M/s Sahara India Life Insurance Co. Ltd as per Section 52B of the Insurance Act, 1938.<sup>12</sup>

### Data Analysis Tools and Techniques

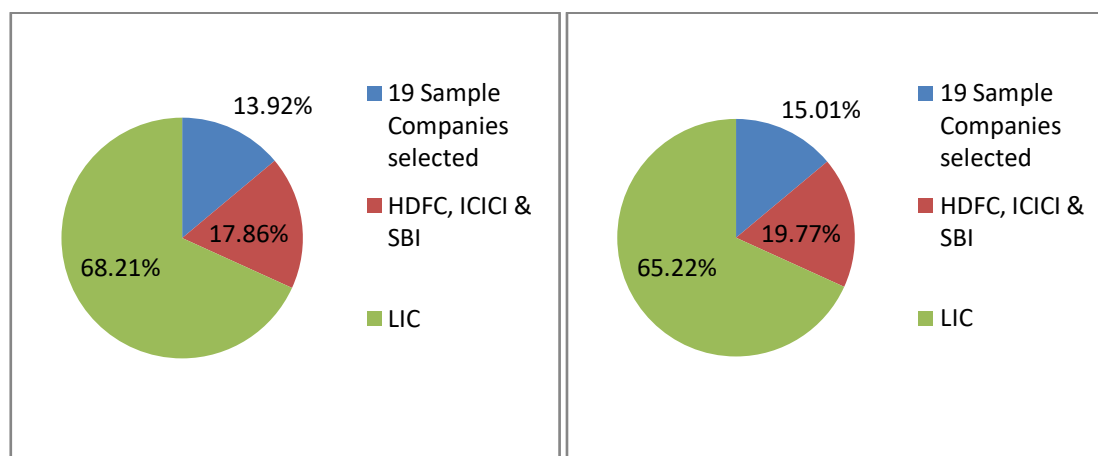
Tukey's Fences method was used to identify outliers. Normality of the data was tested applying Shapiro Wilk Test and Paired Sample t-Test was used to test the significance of the hypothesis. Bar diagrams, percentages, and pie charts were used for descriptive analysis.

### Analysis and Interpretation:

For hypothesis testing, 19 life insurance companies as listed in Table 1.1 were considered for inferential analysis while four companies, being outliers, were kept out of inferential analysis for hypothesis testing.

### Figure 1.1

Average Premium share of Life Insurance Companies in India Group Wise in the Pre Covid-19 Period and in the Covid-19 Period



It can be seen from the above figure 1.1 that, the share of premium of 19 selected sample companies has increased from 13.92% from the Pre Covid-19 period to 15.01% in the Covid-19 Period. HDFC Standard Life, ICICI Prudential Life, SBI Life, and LIC of India's share of premium has increased by 1.91% between these two periods but LIC of India's share in total life insurance premium has decreased from 68.21% in the Pre Covid-19 Period to 65.22% in the Covid-19 Period. Despite this fall in the share

of LIC of India's premium, it has still managed to remain as the dominant player in the market with more than 65% share in the total premium of life insurance companies during these two periods.

Further, to analyse the average monthly premium of life insurance companies, the under-mentioned data addresses the increase and decrease of the average monthly premium of the respective life insurance company in the Pre Covid-19 Period and Covid-19 Period.

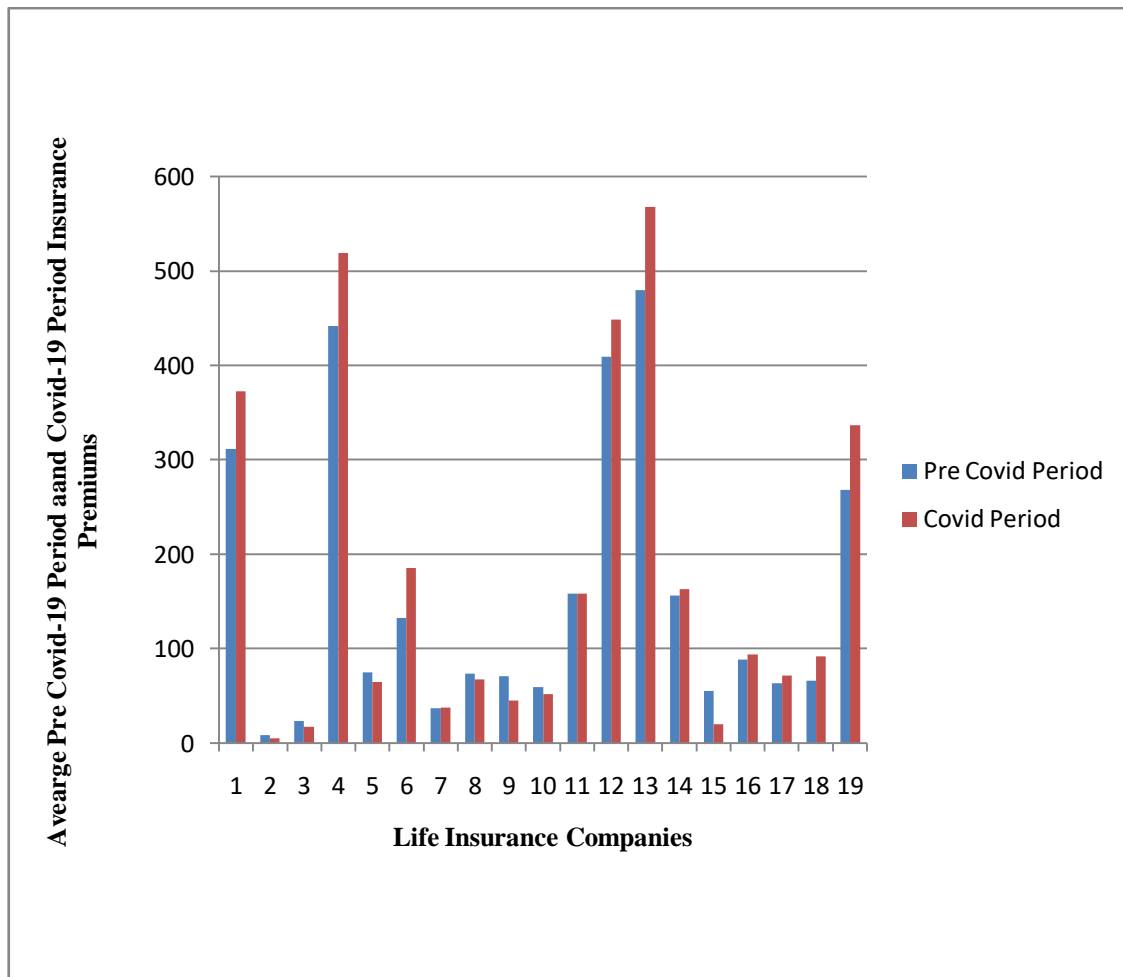
**Table 1.1**

Average monthly premiums of 19 selected life insurance companies

Sr. No	Companies	Covid-19 Period	Pre Covid-19 Period	Difference
1	Aditya Birla Sun Life	372.39	311.54	60.85
2	Aegon Life	5.47	8.75	-3.28
3	Aviva Life	17.86	23.67	-5.81
4	Bajaj Allianz Life	518.93	441.77	77.16
5	Bharti Axa Life	64.77	75.01	-10.24
6	Canara HSBC OBC Life	185.78	132.69	53.09
7	Edelweiss Tokio Life	37.85	36.98	0.87
8	Exide Life	67.69	73.75	-6.06
9	Future Generali Life	45.11	70.86	-25.75
10	Aegas Federal Life	51.93	59.63	-7.7
11	India First Life	158.77	158.25	0.52
12	Kotak Mahindra Life	448.59	409.26	39.33
13	Max Life	567.31	479.58	87.73
14	PNB Met Life	163.38	156.31	7.07
15	Pramerica Life	20.45	55.38	-34.93
16	Reliance Nippon Life	93.85	88.69	5.16
17	Shriram Life	71.73	63.96	7.77
18	Star Union Dai-ichi Life	92.39	66.68	25.71
19	Tata AIA Life	336.67	268.32	68.35

**Figure 1.2**

Average Pre Covid-19 Period and Covid-19 Period Insurance premiums of Group-one Companies in India



Out of 19 selected life insurance companies, for 12 companies, the average premium has increased in the period of the pandemic. Seven companies have witnessed a decrease in their average premium in the Covid-19 period as compared to Pre- Covid-19 period. The overall average monthly premium is increased by Rs. 17.89 Crores. Among the gainers, Max Life recorded the highest increase in the average life

insurance premium by Rs. 87.73 Crores followed by Bajaj Allianz Life with an increase by Rs. 77.16 Crore in the Covid-19 period. Two major companies that experienced a decline in the average premium are Pramerica Life with a decrease in average monthly premium of Rs. 34.93 Crores followed by Future General Life with a decrease in average monthly premium of Rs. 25.75 Crores.

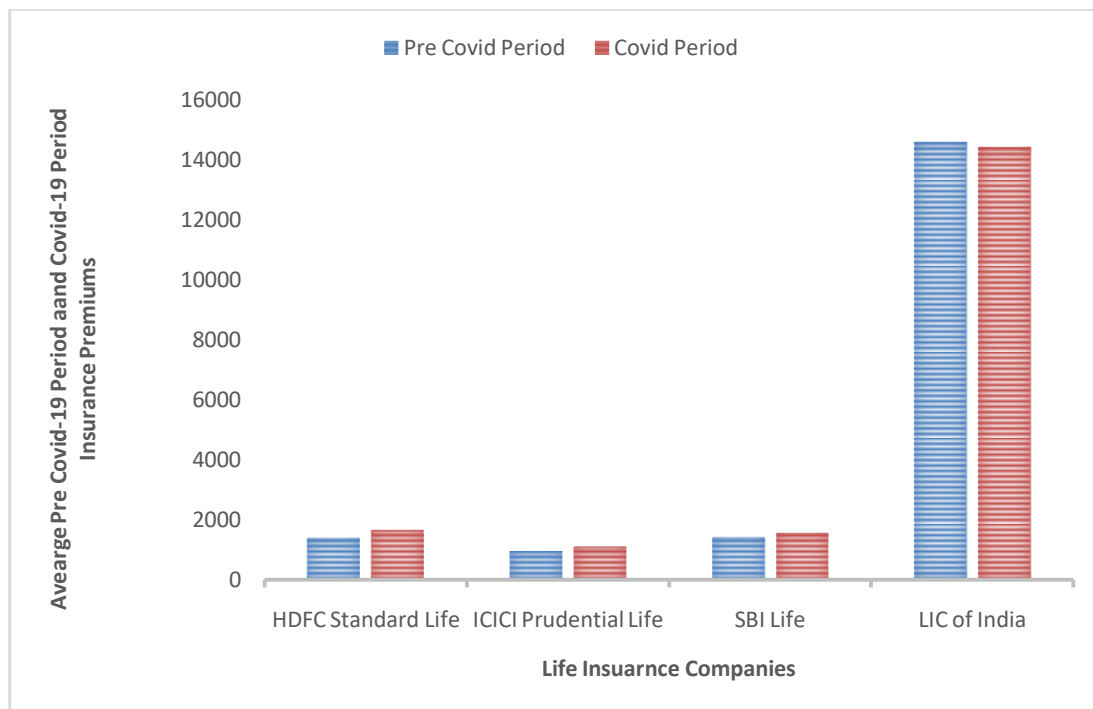
**Table 1.2**

Average monthly premiums of four outlier companies

Sr. No	Companies	Covid-19 Period	Pre Covid-19 Period	Difference
1	HDFC Standard Life	1671.8	1418.42	253.38
2	ICICI Prudential Life	1120.17	968.01	152.16
3	SBI Life	1584.21	1437.72	146.49
4	LIC of India	14433.51	14603.99	-170.48

**Figure 1.3**

Average Pre Covid-19 Period and Covid-19 Period insurance premiums of four outlier companies



It can be seen from the above figure 1.3 that the average monthly premium of HDFC Standard Life, ICICI Prudential Life, and SBI Life has increased during the Covid-19 period as compared to the Pre Covid-19 Period. For these three companies, the total average premium increased by Rs. 184.01 Crores. LIC of India has witnessed a decline in average monthly

premium during Covid Period by Rs. 170.49 Crores over Pre Covid Period.

**Inferential Analysis**

Inferential Analysis is used to draw conclusion from data. This analysis is exclusively designed to test the hypothesis.

**Table 1.3**

Normality Test

Difference	Statistic	Shapiro-Wilk	
		df	Sig.
	.908	19	.068

The difference between the Covid-19 Period and Pre Covid-19 Period average premium was tested for normality based on the Shapiro-Wilk Test. ( $\alpha=0.05$ ) and it was witnessed that the

difference is normally distributed (p-value is 0.068).

After satisfying the condition of normality, data were further processed for hypothesis testing.

**Table 1.4**

Descriptive Statistics

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Covid-19	174.79	19	180.82	41.48
	Pre-Covid-19	156.90	19	149.48	34.29

**Table 1.5**  
Paired Samples T-Test

Pair	Covid-19 - Pre-Covid-19	Paired Differences					t	Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			df	One-Sided p	Two-Sided p	Effect Size
					Lower	Upper					
1		17.90	35.93	8.24	.568	35.21	2.17108	.022	.044	.498	

A dependent t-test was conducted to explore the difference between the Covid-19 Period and Pre-Covid-19 Period insurance premiums of selected insurance companies. An alpha level of .05 was utilized. Descriptive statistics are given in Table 1.4 and Paired Sample t-Test results are given in Table 1.5. On average, the Covid-19 Period insurance premiums ( $M = 174.79$ ,  $SE = 41.48$ ) is significantly higher than the Pre Covid-19 Period's Insurance premium ( $M = 156.90$ ,  $SE = 34.29$ ),  $t(18) = 2.17$ ,  $p < .05$ ,  $r = 0.49$

### Interpretation & Discussion

It can be inferred from the above graphs and tables that the average monthly insurance premium of Life Insurance Companies has significantly increased in the Covid-19 Period than compared to Pre Covid-19 Period. The average monthly insurance premium in the Pre Covid-19 period was Rs 157 crore which got significantly increased to Rs 175 crore in the Covid-19 Period. From Table 1.1, it is clear that out of 19, 12 Life Insurance Companies observed a growth in the average monthly premium in context with the Covid-19 Period over Pre Covid-19 Period and from Table 1.2, out of four, three life insurance companies observed the same growth for the same period. This spike can be justified because of the inclination of the buyers towards online insurance. Such a behavioral change helped the insurance business to grow noticeably from 40% around.<sup>13</sup> Also, with an increase in life uncertainty; more and more people started

buying pure term plans and health insurance policies. The fear of Covid-19 has made the people realize the importance of life over anything. In all of this, the insurers have also played a decent role in drawing the inclination of the people towards insurance. Many insurance companies started adopting more customer-centric solutions. They started developing their products which offered Covid-19 risk cover as well.

### Conclusion

Covid-19 is a disease that is caused by SARS-CoV-2, the Coronavirus that got first erupted in China, in December 2019. Covid-19 can be severe and has caused millions of deaths around the world. Likewise, it has affected different sectors. Some have faced losses whereas some could earn profits. Life Insurance Companies falls in the latter part, for which Covid-19 has built some favorable situations. As people started fearing for life in the Covid-19 Period, their hunt to make their life secure made them opt for life insurance policies. This rise in demand was anyway speculated by PwCPL in their report dated before June 2020. The finding of the study revealed that out of 23 life insurance companies, 15 companies witnessed an increase in their share of premium whereas a nominal decline in the share of the premium for the remaining eight companies was noticed. However, to consider the overall share of the premium, it increased in the Covid-19 period for the life insurance industry in India.

### References

1. Tiwari, A. (2020). Modelling and analysis of COVID-19 epidemic in India. *Journal of Safety Science and Resilience*, 1 (2), 135-140; <https://doi.org/10.1016/j.jnlssr.2020.11.005>
2. PAKPOUR, A. &. (2020). The fear of COVID-19 and its role in preventive

- behaviors. *Journal of Concurrent Disorders*, 2 (1), 58-63;
3. Singh, K. &. (2020). Contagion effect of COVID-19 outbreak: Another recipe for disaster on Indian economy. *Journal of Public Affairs- Wiley Online Library* , DOI: 10.1002/pa.2171.
  4. "PwCPL" - PricewaterhouseCoopers Private Limited, (2020), Impact on the Indian Insurance Industry. <https://www.pwc.in/assets/pdfs/services/crisis-management/Covid-19/Covid-19-impact-on-the-indian-insurance-industry.pdf>
  5. Indian Insurance Industry Report (May 2021), Retrieved June 10, 2021, from [www.ibef.org](http://www.ibef.org): <https://www.ibef.org/industry/insurance-sector-india.aspx>
  6. Dr. Yadav, B. &Dr. Suryavanshi, P. (2021). Study on the After Effect of Covid-19 Pandemic in Life Insurance Sector in India. *Journal of Interdisciplinary Cycle Research*, XIII (III), 504-510.
  7. Dr.Ramasamy, K. (2020). Impact Analysis in Banking, Insurance and Financial services industry due to COVID-19 Pandemic. *services industry due to COVID-19 Pandemic*, 10 (8), 19-29.
  8. Dr. Parvathi, V. &Dr. Lalitha, C. (2021). IMPACT OF COVID-19 PANDEMIC ON THE INDIAN INSURANCE SECTOR. *Perspectives on Business Management & Economics*, IV, 60-65; <http://www.pbme.in/papers/115.pdf>.
  9. Shekhar, R. & Pandey, S. (2020). "Adjusting to the new normal" Impact of Covid-19 in Insurance Industry, DOI - 10.13140/RG.2.2.20492.33922.
  10. Riyazahmed, K. (2021). "Investment motives and preferences – An empirical inquiry during COVID-19". *"Investment Management and Financial Innovations"*, 18 (2), 1-11; doi:10.21511/imfi.18(2).2021.01.
  11. Statement of Life Insurance Premium, Retrieved July 25, 2021, from [www.irdai.gov.in](http://www.irdai.gov.in): [https://www.irdai.gov.in/ADMINCMS/cms/frmGeneral\\_List.aspx?DF=MBFL&mid=3.1.8](https://www.irdai.gov.in/ADMINCMS/cms/frmGeneral_List.aspx?DF=MBFL&mid=3.1.8)
  12. ORDER in the matter of M/s Sahara India Life Insurance Co. Ltd.Retrieved July 29, 2021, from [www.irdai.gov.in](http://www.irdai.gov.in): [https://www.irdai.gov.in/ADMINCMS/cms/frmOrders\\_Layout.aspx?page=PageNo4317](https://www.irdai.gov.in/ADMINCMS/cms/frmOrders_Layout.aspx?page=PageNo4317)
  13. 40% jump in online insurance sales on Covid-19 lockdown (2020, March 27). Retrieved July 29, 2021, from [www.businesstoday.in](http://www.businesstoday.in): <https://www.businesstoday.in/personal-finance/insurance/story/40-jump-in-online-insurance-sales-on-Covid-19-lockdown-253155-2020-03-27>



## A STUDY ON PERCEPTION OF YOUTH TOWARDS THE USAGE OF EMOJIS AS A MODE OF COMMUNICATION WITH REFERENCE TO WHATSAPP APPLICATION

P. Tiwari,

M. L. Dahanukar of Commerce, Mumbai, India  
priyat@mldc.edu.in

### ABSTRACT

Nonverbal communication in humans is dominated by facial expressions and gestures and these important cues are missing in written communication. Emoticons and Emojis were introduced to overcome this communication barrier. The world is rapidly transitioning to a digital communication future. The youth is glued to their mobile phones, communicating with different people across the globe using different modes of communication like WhatsApp, Instagram, Facebook, etc. The researcher felt there was a pressing need to learn more about how youth interpret and perceive the usage of emoji on the widely used instant messaging application. For this study, a specific Instant messaging application called Whatsapp is used to study the same. The objective of this research is to provide a critical assessment of existing knowledge as well as the responses received while conducting the research on the use of emojis.

**Keywords:**Emoji, WhatsApp, Youth, Communication, Perception.

**“One Picture is Worth a Thousand Words”**  
- Fred R. Barnard

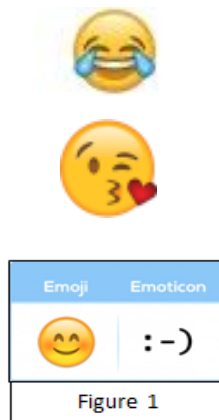
### Introduction

The above quote by Fred R. Barnard is surprisingly correct because images express or communicate way better than what words do. In Today's era, be thy communicating with friend, families or even workforce; people use Emojis. Emojis are ubiquitous, regardless of where you're from or what language you speak. As a result, the usage of emoji is constantly increasing.

Despite the fact that emojis have been present since the late 1990s, they didn't really gain traction on the internet until 2012, when Apple released iOS 6 and later it was released in all other android devices. Every day, billions of messages are sent, with people of all ages embracing the potential to include emotions and imagery in their written interactions. As of September 2021, there are 3,633 emojis in the Unicode Standard. Emoji14.0. All across the emoji mania became so popular that Oxford Dictionaries added it as an actual word in August 2013. Oxford Dictionaries' 2015 Word of the Year was the emoji "Face with Tears of Joy." The nature of the platforms also affects ranking. Facebook and Instagram being a public platform has Face with Tears of Joy as number 1, and Whatsapp being a private chatting service has Face Blowing a Kiss as number 1.

Emojis differ from emoticons as the emoticons were the first, having been introduced in 1982. Emoticons are text-based, and users make them

with ASCII characters, thus the possibilities are endless whereas Emoji is graphical representations of feelings.



Instant messaging, or IM, is a form of internet communication. It allows you to send text in real time via the Internet. Over the years, a slew of instant messaging apps have been developed. WhatsApp, Facebook Messenger, WeChat, Google Hangouts, and Snap Chat are a few prominent IM apps.

WhatsApp is a messaging app that allows you to transmit pictures, videos, and audio files. This instant messaging programme is continuously attempting to bridge the gap between distances and make virtual communication as realistic as possible.

### Objective

1. To study youth perception towards effectiveness of emojis in communication
2. To understand whether youth prefer emojis over emoticon.

3. To examine whether youth agree that the can there can be difference in interpretation of emojis by different people.
4. To understand whether emojis are entering in profession world.
5. To study whether emojis are breaking the language barrier that exists.

### Literature Review

- (Guibon, Ochs and Bellot, 2017)The majority of users agreed that a complex feeling or thought could be conveyed by creating a shared emoji with a unique and specific meaning that is difficult to express quickly in a text could be conveyed by creating a shared emoji with a unique and specific meaning that is difficult to express quickly in a text.
- (blog.whatsapp.com) WhatsApp is a smart phone instant messaging service that works across platforms. Brian Acton and Jan Koum, both former Yahoo workers, created it in 2009. It has a huge following among smartphone users all around the world.
- As per the National Youth Policy (2014), Youth is defined those of age group 15 to 29. This age group consist of 27.5% of India's population. The study of dissertation is on youth as they are innovative, dynamic and enthusiastic and so is the most important section of society.
- (Shreyasee Das, MadhaviJha, Shourya Sarkar, Keerthana Sundaram and Dr.N.Gayathri,2017) Emojis are a new form of communication that competes with the norms that govern written communication. However, much as nonverbal gestures are used for spoken communication, an emoji is used for written communication.It complements the textual style by filling in the communication gap left by a smile, sneer, or any other emotion. As a result, we may conclude that the use of emojis is here to stay for a long time. But it has to be seen whether they will affect the rigidity of written, formal language or merge with it to create a new kind of communication.

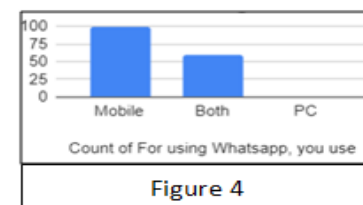
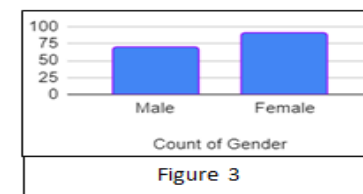
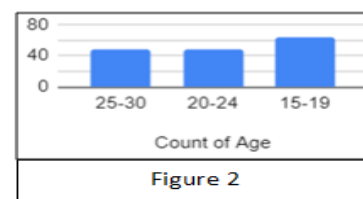
### Research Methodology

The Researcher in order to achieve the objectives of this study and to analyse and

understand the use of emojis by WhatsApp users conducted a quantitative research. The researcher expects that by applying quantitative data, the findings will produce unbiased conclusions that can be applied to a wider segment of the population.Primary and secondary data is used to conduct the research. Secondary Data Collection: Various websites, journals and articles were used to collect Secondary data.

Primary Data Collection:The online questionnaire survey was created using Google forms and used to acquire primary data in this study.

### Data Analysis:

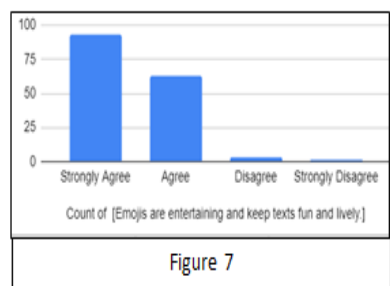
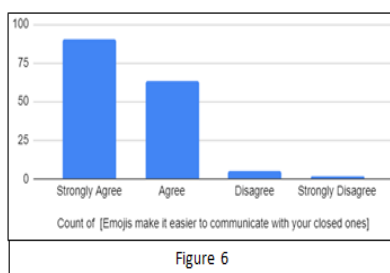
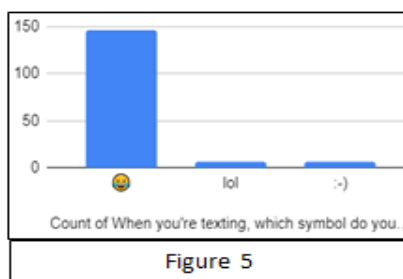


The questions were sent to Youth and WhatsApp users only. The purpose of the survey was to find out how WhatsApp users uses emojis and what is their perception and interpretation of the same.

The youth age group adopted for the research was above 15 and below 31 years of age, which was well within the range of the research, comprised the research universe. Between 150 to 200 respondents was planned tentative sample size. After interacting with academics and specialists from allied fields, this range was chosen. The online questionnaire survey was created using Google forms and used to acquire primary data in this study. A structured questionnaire was created and distributed and the researcher was able to collect the responses from 160 youths during

September 2021. 90 respondents were female and 70 respondents were male of different age groups ranging from 15 to 30. Majority of the respondents were undergraduate's students, unmarried and income of 0 to 2 lacs of Rupees. All the respondents were Whatsapp users. 100 respondents said that they use Mobile phone to use Whatsapp, 1 respondent said that he/she use PC and 59 respondents that they use both the devices for the same.

The respondents were asked in the questionnaire from how long have been they using the Whatsapp, to which 109 out of 160 i.e. 68% of the respondents were using WhatsApp now for more than 5 years. The researcher interprets that the respondents selected for the research purpose was apt as they an Avid Whatsapp user can be beneficial for the survey as they are well versed and unbiased responses can be generated. Majority of 31% of the respondents spends more than 2 hours on WhatsApp daily.



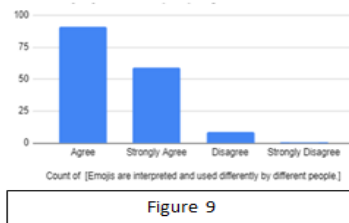
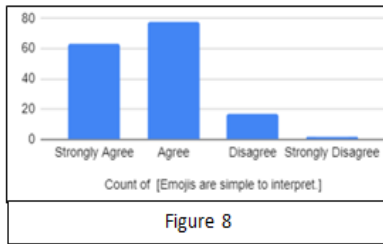
The respondents were asked to express laughing in WhatsApp Chatting what you prefer using, to which majority of 146 (91% approx) people said that they use emojis, 7

people said they use verbal language and the remaining 7 respondents said that they use emoticons. From this, the researcher interprets that majority of the youth prefer emojis over emoticons or verbal language to express. Emojis make conversations more dynamic, increase online message transmission, and achieve the desired 4 point Likert Scale (Strongly Agree, Agree, Disagree and Strongly Disagree) was used in the survey with a list of questions which helps to analyse what is Youth Perceptions towards the usage of Emojis. The perception of majority of 85 youth respondents strongly agreed that emojis helps to communicate effective. 90 respondents said that it is easier to communicate with you loved ones through the usage of emojis. The perception of majority of 93 youth respondents again strongly agreed that the emojis helps to keep the conversation on WhatsApp lively, fun and entertaining which otherwise would have been dull and boring.

The perception of majority of 78 youth respondents said that they agree that emojis are simple to interpret. 77 people agreed that emojis helped in understanding the message that they would misinterpreted otherwise. Majority of 78 youth believe and agree that one of the major barriers of communication i.e. the linguistic barrier can be overcome using emojis. Emojis can be considered the universal .language which anybody who views it will understand so emojis are helping to bridge the gaps of language barriers.

According to the study, the majority of 91 individuals think emojis the way emojis are used, as well as how they are seen and received, varies from one individual to the next. It is important to understand the possibilities of interpretation the receiver can make regarding an emoji in order to avoid misinterpretations and misunderstandings in communication.

The researcher at the last of the survey wanted to know from the youth respondents as to do they feel the emojis are entering the professional communication like emails. To which 83 individuals agree that yes, emojis are making their way to the professional world. This Perception of the youth respondents opens the gate to further scope of various studies.



### Limits and Future Scope of Study

The results of the research conducted have certain limits. It was only based on perception of youth. According to the researcher, as we studied that emojis are one of the easiest form of digital communication and youth has widely accepted it and is enjoying the usage of emojis. Following can be the future research areas:

- Perception of other generations regarding the usage of emojis.
- Millennial entering the workforce and changing the way of formal communication.
- How marketers can benefit and use emojis to attract the customers.
- The different possible interpretation of Emojis.

Above research areas can be used by researchers to get more insights for this topic, marketers to understand and attract customers, psychologists to understand human behaviours.

### Conclusion

Researcher concludes that the internet has drastically altered how we communicate. We've devised alternate techniques to transmit nuanced meaning because intonation and body language could not translate in e-mails and text messages. Written form of communication can be enriched with emojis. The study also concludes that emoticons have a crucial role in textual communication, making textual communication via WhatsApp more dynamic, meaningful, and enhancing the message being sent, based on the data collected, analysed, and interpreted. The researcher adds that it could be a debatable topic as whether or not the rise of usage of emojis. According to the researcher if the emojis are easy to communicate, understand and interpret, why not use these benefits of emoji even at workplace. Emojis can be used in order to boost the morale of your employees, colleagues or intern. Giving thumbs up, a smile or stars will definitely help to boost their morale. The research anticipates that the emojis have more future scopes and it's there is long way to go with getting more and more user friendly.

### Reference

1. Kannan, S., & N, S. (2017). Understanding Emoticons: Perception and Usage of Emoticons in WhatsApp. *Artha - Journal Of Social Sciences*, 16(3), 49-68. doi: 10.12724/ajss.42.4
2. Analysis of The Use of Interpersonal Communication Emoji on Whatsapp Use Among Students. (2018). *Advances In Social Science, Education And Humanities Research*, volume 241.
3. Sarkar, S., Gayathri, D., Sundaram, K., Jha, M., & Das, S. (2017). • Emojis: The Language of the future? – A Literature Review. *International Journal Of Humanities And Social Sciences*, 7.
4. Chawla, V. (2020). World Emoji Day: Data Trends On Most Widely Used Emojis On Social Media. Retrieved 19 September 2021, from <https://analyticsindiamag.com/world-emoji-day-2020-conversation-data-trends-by-bobble-ai/>
5. Gesselman, A., Ta, V., & Garcia, J. (2019). Worth a thousand interpersonal words: Emoji as affective signals for relationship-oriented digital communication. Retrieved 29 September 2021, from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0221297>
6. Gesselman, A., Ta, V., & Garcia, J. (2019). Worth a thousand interpersonal words: Emoji as affective signals for relationship-oriented digital communication. Retrieved 29 September 2021, from <https://journals>

- .plos.org/plosone/article?id=10.1371/journal.pone.0221297
7. Emojis: The Language of the future? – A Literature Review
  8. Grannan, C. (Invalid Date). What's the Difference Between the Deep Web and the Dark Web?.Encyclopedia Britannica. Retrieved 29 September 2021, from <https://www.britannica.com/story/whats-the-difference-between-the-deep-web-and-the-dark-web>
  9. Definition of picture is worth a thousand words, one | Dictionary.com. Retrieved 24 September 2021, from <https://www.dictionary.com/browse/picture-is-worth-a-thousand-words--one>
  10. Full Emoji List, v14.0. (2021). Retrieved 29 September 2021, from <http://unicode.org/emoji/charts/full-emoji-list.html>

## A STUDY ON THE IMPACT OF COVID-19 PANDEMIC ON HR PRACTICES OF THE BANKING SECTOR IN INDIA

D. D'souza

M.L. Dahanukar College of Commerce, Vile Parle, Mumbai, India  
delishad@mldc.edu.in

### ABSTRACT

*The Banking sector plays an important role in the development of a nation. It mobilizes the savings of the public which further leads to capital formation. The Indian Banking Sector has realized the need for an effective and efficient workforce in order to deal with the ever-changing environment. Banking sector has seen tremendous changes like technological advancement and other innovations. Banks have started becoming more customer-centric in order to gain a competitive advantage over other banks, which in turn requires banks to manage and retain employees who are skilled, hardworking, dedicated and also emotionally intelligent to deal with various challenging situations. The recent COVID-19 pandemic has brought about a significant transformation in the life of people all around the world. The subsequent lockdown and other restrictions have also brought changes to the way we work and connect with people, in all types of organizations. People today are encouraged to work from home in order to stay safe from the harmful effects of this pandemic by following social distancing and other guidelines as safety measures. Banks also have faced similar challenges and are now focusing on implementing better HRM practices to cope with the situation. Like other organizations, banks too have felt the need for introducing new strategies and operating models to manage their workforce in such challenging times. They are looking for new ways of working, communicating through virtual meetings, coordinating, evaluating performance of employees, training and development, motivation and other important aspects of human resource management. This paper seeks to understand the impact of COVID-19 and the new normal of work on the HR practices in the banking sector specifically.*

**Keywords:** banking sector; workforce; COVID-19; HRM practices

### 1. Introduction

Banks have been performing numerous functions ranging from accepting deposits and providing loans to public, to financing agriculture and other industries alike. They have been acting as 'financial supermarkets' and have also generated employment to many. Employees are rightly called as 'internal customers' of an organization. This is because these employees contribute their talents, skills and efforts significantly towards the growth of any organization, so is the case with banks. Especially when it comes to service sector, people play an important role in the delivery of services. Banks are service organizations and hence their services are people-based by nature. In order to carry out effective banking business and to keep customers satisfied, it is very important to manage and motivate the internal customers (human resources) of the bank first, so that further these employees fulfil the goals and objectives of the bank. Hence, Human Resource Management (HRM) as a process becomes an integral part in this regard. Due to the COVID-19 pandemic, several changes have taken place in the banking sector in India and they have been accompanied by many challenges too. In order to protect the

people from the virus and its effects, social distancing is needed. Banks gradually started to bring about changes in the workplace. The Reserve Bank of India, which is the Central Bank of the country, allowed majority of its staff to work from home so that there could be continuity of business. Some banks continued their operations from the branch. Also, banks were advised to increase the usage of IT in operations as much as possible. This led to numerous changes in the workplace and has gradually become the new normal of work. The pandemic has placed an emphasis on the role of HRM in managing employees and looking after their wellbeing and motivation.

### 2. Literature Review

Kalogiannidis (2021) examined that most of the organizations faced challenges to adapt to the 'new normal' as remote working is a major shift from traditional working. The study recommended organizations to look forward and capitalize on the new opportunities and adapt to the changing times.

Chidambaram (2020) identified that the wellbeing of employees is of utmost importance and suggested the use of technology in various

HR functions for managing the workforce challenges in banks.

Crux (2021) found that COVID has changed the hiring process to a great extent as some candidates preferred face-to-face meetings while some were able to adapt to online interviews. The article also highlighted about a shift in the mindset of managers about the efficiency of a remote workforce and also the flexibility in the working style that the younger generation prefer.

Jones (2021) suggested that strong leadership and management of employees in banks can help to respond to the pandemic effectively and adjust to the new normal. Also, there is a need for banks to focus on automation and digitization to improve productivity and become resilient.

### 3. Theoretical Background

#### 3.1. The Covid-19 Pandemic: An Overview

The Covid-19 pandemic is a global pandemic which was caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and was first identified in Wuhan, China in December, 2019. It is an ongoing and life-threatening pandemic which can spread when an infected person coughs or sneezes, thus transmitting the virus through the droplets expelled. This novel virus quickly spread to other parts of the world including India, and many people have been affected due the same. Many people lost their lives due to this pandemic, some lost their jobs, some companies closed down and the world has seen a drastic change in the way we live and work. The pandemic affected the global economy which further led to other negative consequences. In March 2020, the Government of India announced a complete lockdown in the country in order to control the spread of the pandemic. Restrictions relating to gathering of people, face-to-face interactions, travelling to public places and other countries, etc. were introduced in order to protect people from the virus and to control its spread. Social distancing became a norm and hence many sectors of our economy have adapted to this change gradually in their daily operations. Workplaces have seen a transformation, some have reduced their operations, while some have also reduced their number of staff members.

The concept of 'work from home' has become popular today, however, some sectors find it difficult to operate with this method.

#### 3.2. Banking Industry In India

The banking industry in India is a combination of different types of banks including public sector banks, private sector banks, foreign banks, regional rural banks, urban cooperative banks and rural cooperative banks. In 1949, the Banking Regulation Act was enacted and it empowered the Reserve Bank of India (RBI) to regulate, control and inspect the banks in India. The Reserve Bank of India (RBI) is the Central banking authority in India and was established in April, 1935. It was nationalized on 1<sup>st</sup> January, 1949.

After the economic liberalization and globalization, many new banks started. These banks started becoming customer-centric, thus convincing customers to choose them over the other banks. A number of innovations have also been witnessed throughout these years which has helped in the growth of this sector. Today, banks offer a number of services ranging from creating a savings account to providing insurance cover. They also provide online banking facilities which has made transactions easier and quicker too. The banking sector employs a number of people each year.

#### 3.3. Human Resource Management

Human Resource Management (HRM) is a function that focuses on utilizing the people at work for achieving the objectives of the organization and also developing them. It is all about motivating people at the workplace and not just attaining the right people, but also managing and retaining them.

#### 4. Objectives Of The Study

- To explore the impact of COVID-19 on HRM in the banking sector
- To find out the challenges faced by bank employees due to the pandemic
- To explore the new normal of work in the banking sector post COVID
- To suggest measures for improving the HR practices in banks in response to the pandemic.

## 5. Research Methodology

This paper is based on extensive and systematic use of secondary data collected from research papers, websites, newspapers and related articles.

## 6. Results And Discussion

### 6.1. Impact Of Covid-19 Pandemic On Bank Employees

Since the beginning of the pandemic, banks have been badly affected. Banks are considered among the essential services. Many banks have been operating fully even during the lockdown period, so that customers do not face any problems in their financial transactions. Some banks exempted employees who had medical conditions or were above a certain age from coming to work. Some branches were temporarily closed down due to the rise in coronavirus cases. Some employees were asked to work from home, while some branches considered working on alternate days or work in-branch on rotational basis. Many bank employees lost their lives due to the coronavirus infection. It was also seen that customers did not follow the COVID-19 safety norms which made it even more challenging for the employees to continue working in the branch. To add to it, transportation was a major problem for many employees due to the lockdown restrictions. Overall, the pandemic had an adverse effect on the mental health and wellbeing of all bank employees.

Hence, many banks encouraged and appealed to their customers to use mobile banking apps or online banking, ATMs, etc. at least for the routine transactions that did not require the assistance of bank employees.

### 6.2. Major Challenges Of HRM Amid The Covid-19 Crisis

In this pandemic situation of COVID-19, the Human Resource division has a key role to play in managing all the HR functions. They have to manage the business as well the staff of the organization. Many organizations including banks went an extra mile in order to help employees to work effectively and efficiently during the COVID crisis. Some of the challenges faced by HR managers are as follows:

- **Employee Safety** – Banks faced a major challenge in observing the new safety regulations regarding social distancing, hygiene practices, communication about guidelines, emergency numbers, maintaining a list of hospitals, isolation and quarantine guidelines, sanitization of premises, procuring masks and sanitizers, etc.
- **Learning and Development** – Activities relating to training and development of employees were conducted in online mode.
- **Allowing ‘work-from-home’ option** – In case of certain activities, it is difficult to operate remotely and also many banks are not digitally-equipped for the same.
- **Ensuring the well-being of employees** – Another HR challenge is to look after the needs of different employees, helping them to cope with mental health issues, stress, work-life balance, boosting their morale, counselling, etc.
- **Managing workforce scarcity** – If employees with specialized skills cannot work for some reason, then managing the gap is a real challenge in this pandemic situation.
- **Administration challenges** – These included retaining employees, avoiding dismissals, announcing layoffs, performance management, conducting training sessions, compensation management, etc.

## 7. Recommendations

- Banks should encourage customers to use online channels for completing their transactions for at least the routine transactions that do not require the assistance of bank employees.
- Banks also need to focus on digitization and the use of IT in their operations as much as possible.
- Digital interaction with customers on a regular basis can help to maintain customer relationship. It can also provide customers with the support they require and handle grievances in a better manner.
- Physical interaction to be encouraged with customers only when necessary or in case of complex transactions.



- Banks need to do an analysis of training needs of their employees in order to find out the gaps and accordingly provide training to them.
- The HR should focus on acquiring the right talent, framing new HR policies, engaging a remote workforce and providing a flexible work environment to them.
- Safety norms like social distancing, hygiene measures, etc. need to be implemented in an effective manner in banks as it is majorly a people-facing job.
- Banks can introduce wellness programs relating to stress management, time management and work-life balance in order to take care of the mental health and well-being of their employees.

## 6. Conclusion

Human Resource is considered as the most valuable asset of any organization as it is one of the major contributing elements to the success of any company. The COVID-19 pandemic has shed light on the important role of HRM in the banking sector.

The Indian banking sector has undergone several changes over the years and has realized the need for an effective and efficient workforce in order to deal with the ever-changing environment. Although there are various challenges, bank employees need to respond immediately and adjust to the new normal of work. The HR division in banks are required to redefine their role and along with strong leadership skills make the workplace culture conducive for all its employees.

## References

1. Dr.Thakur C. P., (2020). A Study on Impact of Covid-19 on Banking Sector:An Indian Perspective. Indian Journal of Research, Volume – 9 Issue -6.
2. Gigauri I., (2020). Influence of Covid-19 Crisis on Human Resource Management and Companies' Response: The Expert Study, International Journal of Management Science and Business Administration, Volume 6, Issue 6.
3. Kalogiannidis S., (2021). The Impact of COVID-19 on Human Resource Management Practices and Future Marketing, International Journal of Industrial Marketing ISSN 2162-3066, Vol. 6, No. 1
4. Sharma P.& Dr. Mathur N., (2021). COVID-19: Impact of Banking Sector.
5. Article: "What Impact has COVID had on HR Practices...and what can we learn from it?" – by Richard Crux
6. Article: "How COVID-19 is impacting the Banking Workforce" – by Alexander Jones
7. Article: "Managing Workforce Challenges in Banks amid the COVID-19 Crisis" - M. Chidambaram
8. <https://www.ft.lk/columns/The-impact-of-COVID-19-on-human-resource-management-and-the-way-forward/4-708803>
9. <https://www.hrmorning.com/articles/covid-will-transform-hr/>
10. <https://www.cxotoday.com/news-analysis/covid-19-and-its-impact-on-indias-banking-sector/>
11. [https://www.business-standard.com/article/current-affairs/covid-19-kill-over-1-000-bank-employees-in-india-as-cases-surge-121051600056\\_1.html](https://www.business-standard.com/article/current-affairs/covid-19-kill-over-1-000-bank-employees-in-india-as-cases-surge-121051600056_1.html)
12. <https://spast.org/techrep/article/view/463>
13. <https://psychcentral.com/coronavirus/background-history-of-the-coronavirus-covid-19#2>
14. <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/bank-employers.html>
15. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7147210/>
16. <https://www.rolandberger.com/en/Insights/Publications/The-new-normal-in-banking-Covid-19-as-a-catalyst-for-existing-trends.html>
17. <https://hr.economictimes.indiatimes.com/news/industry/impact-of-covid-19-on-hr-practices-and-future-workforce/75653859>
18. <https://www.thehrdirector.com/features/covid/what-impact-has-covid-had-on-hr-practicesand-what-can-we-learn-from-it/>
19. <https://internationalbanker.com/banking/how-covid-19-is-impacting-the-banking-workforce/>

20. <https://www.tcs.com/blogs/managing-workforce-challenges-in-banks-amid-covid-19-crisis>

21. <https://www.accenture.com/cn-en/insights/banking/coronavirus-banking-rapid-response>

## EMERGING TRENDS IN ACCOUNTING: AN ANALYSIS OF BENEFITS AND ISSUES IN APPLICATION OF ROBOTIC ACCOUNTING IN BUSINESSES

R.R. Pitkar

M L Dahanukar College of Commerce, Vile Parle, Mumbai, India

### ABSTRACT

*Technology has become integral part of human life. It provides skills, knowledge, reduces human efforts, it also helps to achieve desired result with minimum time and greater efficiency. Accounting has also started using advanced technology like every other sector because it saves time, energy and processes the accounting work fast with expected result. Robotic Accounting being advance technology have enhanced the accountant's ability to interpret data efficiently and effectively. It has potential to disrupt the traditional accounting system. The present paper seeks to explain the application of Robotic Accounting, its benefits and issues in actual practice.*

**Keywords :** Accounting, Robotic Accounting

### Introduction

The success of any business depends on financial performance of the business. The financial performance of any business can be judged / evaluated with the profitability, cash flow position and also current value of assets and liabilities. This can be made known only when all business transactions are analysed, recorded and summarised properly. So Accounting is an important function in any business. It is a process of collecting, summarizing, analysing and recording information of the state of affairs of the business. Financial stability of any business cannot be stated without accounting. Traditional Accounting system is not suitable for large business, when transactions are voluminous. Use of computer, internet and latest technology has made possible to accountants to perform accounting tasks from any location as well as the ability to deliver financial information and reports in time. It finds new ways for development in accounting.

Robotic Accounting is an Artificial Intelligence which helps to analyse large volumes of data at high speed, increase the productivity and also generate more accurate data at a reduced cost. It is gaining importance in accounting as it optimises administrative tasks. Its importance in accounting is growing as it optimizes administrative tasks and processes the accounting work efficiently. It provides vast opportunities for accountants and makes them efficient to work for new challenging work.

**Statement of the Problem :** Use of technology in every sector is inevitable. Due to application

of computerised system and internet in accounting, it has made possible to shift traditional accounting system to modern accounting system. Application of robotics in accounting has made possible to Accountant / Managers to provide timely and required information with reasonable accuracy. The present study is aimed at analysing the benefits and issues in application of robotics in accounting.

**Objectives of the Study:** 1) To study the various benefits of application of robotics in accounting and auditing.

2) To examine the issues in application of robotics in accounting and auditing.

**Research Methodology:** Research is descriptive in nature. Data is collected from secondary sources such as various articles and internet sites.

**Robotics in Accounting :** It is robotic process automation in accounting field which makes use of robots to reduce human work essential to do accounting work. It is advance technology which uses the software to process high-volume and repetitive tasks easily at shortest possible time. It not only saves the time, energy, cost but also reduces human efforts. Traditional Accounting system suffers from many limitations. In traditional accounting system, due to large volume of transactions, there is great possibility of human error in recording transactions. Lack of management integrity, failure to adopt new accounting rules and regulations to prevent errors and frauds, more time required to record and maintain the accounts, accounting information was not upto date unless at the

close of the year. Infact traditional accounting was unsuitable for new business models, costly to maintain the data base and of course advent of technology are responsible to shift the traditional accounting to automated accounting. Robotics performs following functions in various areas of accounting such as :

- **Accounts Receivable:** Sales order entry, Customer data set up, Customer data management, Billing/invoicing, Collection activities etc.
- **Accounts Payable:** Purchase order entry and delivery, Vendor verification and setup Vendor master-data management, Vendor queries, Invoice receipt, Invoice data entry, Vendor statement reconciliation, Accounts payable accrual journal entry and Payment processing.
- **General Accounting:** Maintenance of Journal book, Maintenance of expenses, incomes , assets and liabilities ledgers, Bank reconciliations, Inter-company reconciliations and settlements, Fixed asset accounting, Finalisation at the close of the year.
- **Tax, treasury and compliance:** Data collection for computation of tax liability, Maintenance of Tax return workbooks, Prepare tax returns ,Payments and Filing tax returns .
- **Financial planning, analysis and reporting:** Data aggregation for reports, Report preparation of Trial balance, Profit and Loss A/c, Balance Sheet, Cashflow Statement, Variance analysis, Management reports and also Statutory/Regulatory reports.

#### **Benefits of Application of Robotics in accounting of business :**

- 1) **Cost Effective :** Robots can operate 24/7 without any interruption compared to human, reduces the operational costs of the organisation.
- 2) **Increases the productivity:** Robots can perform multiple accounting tasks without human intervention. Accounting staff and managers can focus on important areas of the accounting and finance. It also increases their satisfaction and boosts morale.
- 3) **Saves time :**Robots work faster with great speed that saves the time of the accounting staff.
- 4) **Supports decision making:** Since robots will handle all repetitive tasks, time of the accounting staff will be saved to considerable extent. This will help them to study in detail and to provide correct information to management for preparing strategies for the business.
- 5) **Accuracy maintained :** human being is bound to mistake but Robots are reliable and consistent. It provides 100% accuracy in processing the accounting work.
- 6) **Consistency :** Robotic accounting processes the transactions with zero errors that helps to provide perfect consistency in performing and obtaining accounting information of the business every time.
- 7) **Better IT Support and Management :**Since Robots monitors the network and improves the operational quality of the business. Recruitment and training cost of the business is saved to considerable extent.
- 8) **Hassle free implementation :**Implementing Robotics does not require API setup and also requires little technical expertise.

#### **Issues in application of Artificial Intelligence in Accounting**

- 1) **Employee Resistance :**Accounting staff may not support to adopt new technology as they are used to with traditional system of accounting. For the successful implementation of robotics, there is need to guide , train them to welcome and accept innovative technology.
- 2) **Completely dependency on Robotics is difficult :** Robotics can not replace human for all the task. The tasks which are high in volume, repetitive , does not require human involvement will be performed by robotics without any interruption. However to interact with the bankers, suppliers ,customers, there is a need to have accounting staff. Company can not completely remain dependent on robotics.
- 3) **Costly affair :**Installation and maintenance cost of robotics is high. For small organisation with limited resources not

affordable to implement robotic automation in the workplace.

- 4) **Enhanced Risk of Data Breach and Other Cybersecurity Issues** : New technology exposed to risk of data breach unless there are security measures.
- 5) **Reduces flexibility**: Robotics are the software based equipment has limited scope for use. Accounting staff can adjust themselves without any issue to changing circumstances or new developments. Robotics can not do so quickly, therefore it reduces flexibility.

### Conclusion

Application of robotics in the area of accounting is one of the important developments in the business environment. Every system has its pro and cons. Introduction of Robotics may create the feeling

of insecurity amongst the employees, fearing for their job. However they should be counselled, guided and motivated to upgrade their skills for future benefit. For successful implementation of Robotic Process Automation in accounting proper training must be given to accounting personnel who will be handling it.

Definitely application of Robotic makes easy for the Accountant and Managers as it helps to process accounting work with the greater accuracy, speed and efficient manner and it also enables the organisation to get the required information on time for proper decision-making. For long term adoption of this technology proves to be cost beneficial. An organization which is constantly looking for opportunities to improve its processes, should welcome it in its business.

### References

1. Accountancy Futures Academy, Technology trends: their impact on the global accountancy profession, URL : [www.accaglobal.com/futures](http://www.accaglobal.com/futures)
2. Anderson, J. C., Moreno, K. K., & Mueller, J. M. (2003). The effect of client vs. decision aid as a source of explanations upon auditors' sufficiency judgments: a research note. *Behavioural Research in Accounting*, 15(1), 1–11.
3. Baldwin, A. A., Brown, C. E., & Trinkle, B. S. (2006). Opportunities for artificial intelligence development in the accounting domain: The case for auditing. *Intelligent Systems in Accounting, Finance & Management: International Journal*, 14(3), 77–86.
4. O'Leary, D. E., & O'Keefe, R. M. (1997). The impact of artificial intelligence in accounting work: Expert systems use in auditing and tax. *Ai & Society*, 11(1–2), 36–47.
5. Odoh, L. C., Echefu, S. C., Ugwuanyi, U. B., & Chukwuani, N. V. (2018). Effect of artificial intelligence on the performance of accounting operations among accounting firms in South-East Nigeria. *Asian Journal of Economics, Business and Accounting*, 7(2), 1–11

## TO EXAMINE THE IMPACT OF DIGITAL MEDIA APPS ON CONSUMERS PURCHASING HABITS IN MUMBAI

F. Mathews<sup>1</sup> and P. Vankiani<sup>2</sup>

<sup>1</sup>JJT University & B.Com (Financial Markets), SIES College of Commerce & Economics

2BAMMC, Ramniranjan Jhunjhunwala College of Arts, Science & Commerce

<sup>1</sup>falgunimathews1@gmail.com, <sup>2</sup>pvaniani14@gmail.com

### ABSTRACT

*The increasing use of the internet in India fuels the growth of online shopping. Consumers are increasingly using electronic channels to purchase their daily necessities. To stay ahead in today's highly competitive market, most businesses have begun to use the Internet with the goal of reducing marketing costs and, as a result, lowering the price of their products and services in the market. Companies are also using the Internet to convey, communicate, and disseminate information, sell products, solicit feedback, and conduct customer satisfaction surveys. Consumers see the advantages of online shopping not only in terms of purchasing a product, but also in terms of comparing costs, product characteristics, and after-sales care that they will receive if they purchase a product from a specific website. Consumers can shop on the internet using various digital media apps, this is possible due to modern communication technology. Cashless transaction methods have made users of all ages increasingly turning to digital apps since they are more appealing and flexible to use. The impact of social media has diverse effects on consumers' decision making process due to their high engagement on apps for shopping online. The influence of social media has led to repeat purchases online. To study this survey was conducted among 100 respondents. The study was focused on understanding the consumer's preference of making purchases through digital media apps, factors influencing their decisions and the impact of digital media apps on consumers purchasing habits in Mumbai.*

**Keywords:** Digital Media Apps, Customer Satisfaction, Cashless Transactions, Online Shopping, Consumers Purchase Habits, Mumbai

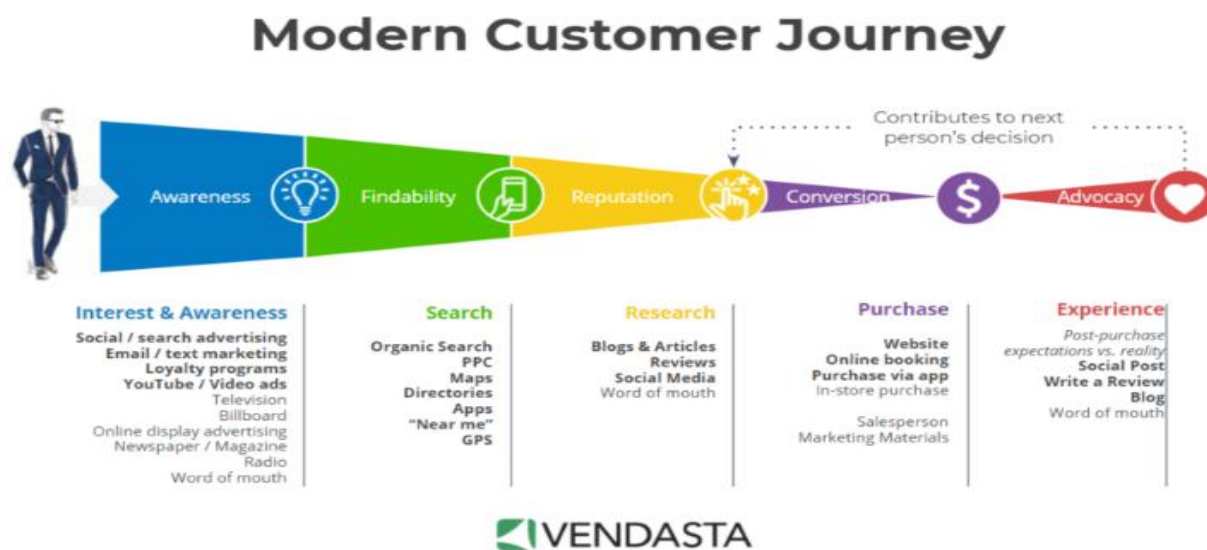
### Introduction

With the advent of the internet and the simple accessibility of Internet use, the trend of e-commerce has expanded quickly in recent years. Easy Internet access has led to online shopping by consumers. Electronic commerce, generally known as e-commerce, refers to the sales or purchases of electronic systems, such as Internet and other computer networks of items or services. In the last decade the Internet has become the fastest growing media. Online shopping is in particular a rapidly increasing field for e-commerce. Online shops are generally open 24 hours a day, with Internet connection both at work and at home for many consumers. A successful web store is no longer just a good looking website with dynamic technical features, listed in many search engines but it also looks forward for consumer satisfaction. The Internet has been transformed into a global phenomenon by consumer shopping and buying goods and services. In order to lower marketing costs and consequently reduce the prices for their products and services, numerous corporations have started using the Internet to remain ahead of them on increasingly competitive markets. Companies also utilise the Internet to

communicate, disclose, sell the product, provide feedback and run customer satisfaction surveys. There are numerous reasons why people shop online. Consumers, for example, can buy anything at any time without going to the store; they can find the same product at a lower price by comparing different websites at the same time; they sometimes want to avoid pressure when having a face-to-face interaction with salespeople; they can avoid in-store traffic jams, and so on. Online shopping provides the customer with a diverse range of products and services, allowing him to compare the prices quoted by various suppliers and select the best deal. Today, the fastest growing segment of online commerce is business internet marketing. The primary distinction between traditional and online selling is the level of interaction between the consumer and the seller. There is much more electronic interactivity with the consumer in the form of emails and FAQs. Consumers' queries about shipments, payments, products, policies, and other customer concerns can be efficiently answered via FAQs. While traditional shopping has its benefits, online shopping is advantageous because it is convenient, hassle-free, and available at all times. The following

are some of the numerous benefits of shopping online: reduces the need for travel, as well as the amount of time and energy used. Internet marketers, provide products/services at a lower cost and with a more friendly customer service, customers can window shop a variety of products from the comfort of their own homes; prices and benefits offered by various product/service providers can be easily compared; product quality can be analyzed in detail with the help of customer recommendations and ratings; product information can be easily obtained from online catalogues; product descriptions can be easily obtained from online catalogues; and product quality can be analyzed in detail with the help of customer recommendations and ratings. A consumer has many choices and the fact is that

a consumer of one company is likely to be the consumer of its competitor as well. Loyalty exists based on the service or support provided by the company rather than the product. Customer loyalty is a psychological predisposition that influences the customer to make repeat purchases from a specific product or service provider. Reduced customer complaints, cheaper products, live tracker, quick delivery, efficient after sales service, increased customer loyalty are some key driving factors of increased customer satisfaction. This research contributes to a theoretical knowledge of the current state of online purchasing as well as insights into customers' online shopping habits and preferences.



### Review of Literature

Diyana Ahmed Ghazie Et al. (2017) has stated in her research paper that everyone on the internet—in fact, everyone is online today. These days, the Internet has proven to be the most important tool in their marketing cycle for selling items and services, especially for digital marketing. This is because it tries to save a significant amount of time, money, and other resources. The purpose of this study is to learn about Malaysian customers' attitudes on digital sales. A broad written examination was conducted in order to identify the magnitude, awareness, and substance of customer adequacy of digital marketing. It allows researchers to distinguish between how to establish a good brand understanding of

customer behaviour by utilising crucial knowledge (studies) and auxiliary knowledge tactics.

Simran Kaur et al. (2018) in her research explained that due to fierce competition and lack of innovation associated in the traditional industry, there is a shift to digital marketing tactics. Digital marketing engulfs a large area and necessitates the evaluation of a strategy based on rising technologies that reduce prices and increase sales throughout the globe in a bleak business. Consumers are significantly more satisfied with buying digitally since they believe digital marketing to be far more efficient than traditional marketing. As a result, online marketing today has a higher degree of commercial success later on. Consumers

should be able to analyse the material about the item given by the company and should be equipped to conduct an accurate analysis, so that they understand the freedom to make a decision and can submit a request at any time, 24 hours a day, seven days a week. Customers' interconnectivity is slowly rising as a result of new advances and improvements in network dedication, as a result of which customer behaviour has changed and associations can consider consumer behaviour. The impact of digital media on customer purchasing habits is examined in depth in this study.

Khumar Sharma et al. (2018) stated that social networking began as a kind of leisure and evolved into a form of communication as a result of its numerous advantages in the business world. In this article, we'll look at the concept of social networking, social network marketing, and the social media approach, as well as the advantages and disadvantages of using social media marketing, the definition of customer purchasing intent, and the impact of social media marketing on customer purchasing intentions. With the advancement of internet technologies and the expansion of the e-commerce industry, online shopping has emerged as a brand-new consumer purchasing trend that has piqued the public's interest.

Harshini C S (2019) in her paper examines the existing theoretical contributions on social media advertisements and consumer purchasing intentions. Previous research explored the impact of adverts provided through websites on customer shopping behaviour. This study emphasises the fact of Social Media Advertisements and their impact on intention to buy. This study presents a cluster of consumer responses to Social Media Ads in relation to customer purchasing intent.

D. Anthony Miles (2020) study's goal was to analyse and determine the level of influence a website has on consumers and their decisions. The impact of social media on client behaviour is also investigated in this study. With a sample of 383 college students, this study used a survey method. On the acquired data, statistical approaches such as factor analysis and structural equation modelling were used to examine the factor structures and psychological components. The results show that social media has an impact on consumer behaviour. .

### Objective of the Research

1. To study the consumers preference of digital media apps to make a purchase
2. To comprehend the factors that influence consumers' decisions to use digital media apps.
3. To analyze the impact of digital media apps on consumers purchase patterns in Mumbai

### Scope of the Study

The scope of the study is confined to the impact of the use of digital media apps such as social media, websites, emails and advertisements among consumers in Mumbai. The study was conducted among consumers whose age ranged from 18 years to 57 years. Students, employees, businessmen and housewives were a part of the survey. The study takes into consideration consumers' purchasing habits, purchasing frequency, use of digital payment options, the products purchased and what attracts them to be loyal to a particular digital media for the products they purchased.

### Research Methodology

The impact of digital media apps on consumers purchasing habits is investigated on several parameters using a structured questionnaire for the study of primary data. A total of 100 respondents were surveyed and all were from Maharashtra's Mumbai region. The secondary data has been collected from journals, newspapers, websites, blogs, published articles on the subject related to the topic. The sample size for this study is 100.

### Limitations

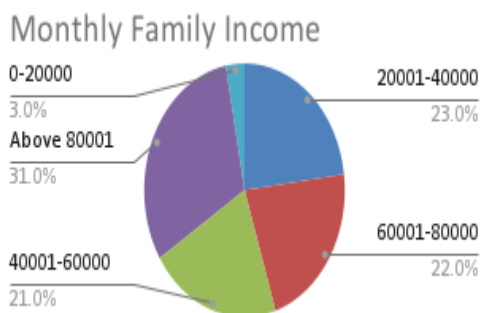
1. The validity of the main data is the basis for this investigation. The samples were chosen from a broad group of people who shared multiple characteristics.
2. Due to shortage of time and financial resources, the researchers limited the scope of the study to Mumbai.
3. The study is based on the respondent's opinion through questionnaire, which can be influenced or bias.
4. The samples chosen are on a random basis.



5. Sample size of 100 respondents is adequate, but a bigger sample size would provide a more accurate picture.

**Data Analysis and Interpretation**

The primary data collected shows that 55% respondents were women and 45% were male from Mumbai City. The respondents were from the age group of 18 to 57 years. The questions asked to the respondents were as follows:

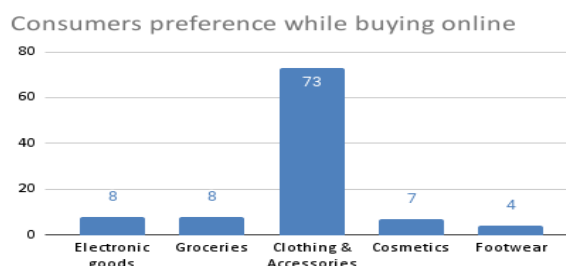


From the above chart it can be inferred that the respondents having a monthly income of Rs 80,001 and above were 31%, the respondents in this income bracket did the maximum online shopping as per the survey conducted. 23% of respondents were belonging to the income of Rs 20,001 to 40,000, these were mostly the respondents who had just started earning. 22% of respondents were in the income bracket of Rs 60,001 to 80,000, 21% were from the income bracket of Rs 40,001 to 60,000. The remaining 3% were from below Rs 20,000.

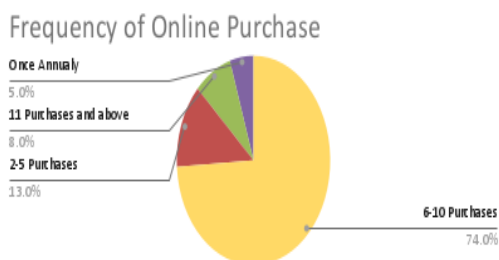


The reasons for respondents to shop online are shown in the above chart, 29% of the respondents preferred shopping online because of low prices of products. Discounts, offers, cashback, coupons made the price very competitive. The same is not available when the respondents shopped offline. 25% of the respondents were shopping online because they found the buying procedure effortless. The

websites were easy to understand and the formalities relating to purchase were uncomplicated and manageable. Also the guarantees, warranties and the returns policies were an advantage. 23 % of respondents said that they had a wide variety to choose from. In fact some websites had pops and suggestions for the product to be purchased. Respondents found that very helpful. 17% of respondents liked the various modes of payments available while shopping online. Debit cards, Credit cards, UPI/Bhim, Cash on delivery, Wallets etc. were some options that encouraged respondents to purchase online.

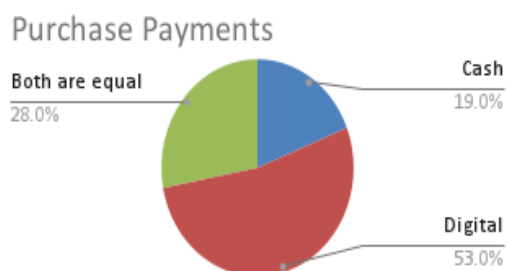


The consumer's preferences have changed over the years. The chart shows that 73% of respondents prefer making purchases of clothing and accessories through online mode. Respondents have clearly become comfortable with the ease and simplicity of shopping online. Many respondents have compared the product in physical stores and then made the purchase online. Respondents also visited many online websites, even kept the product in the cart but later abandoned it, and purchased it from the place where they got maximum discounts. Respondents are fashion conscious and want to follow the latest trends. 8% of respondents purchased electronic goods and groceries, 7% respondents purchased cosmetics and 4% respondents purchased footwear online.

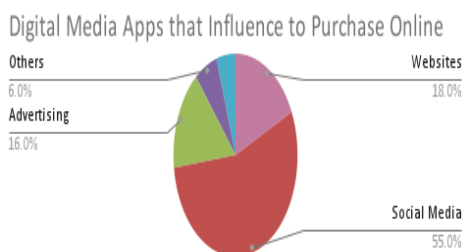


The above chart shows the frequency of purchases made annually. 74% of respondents

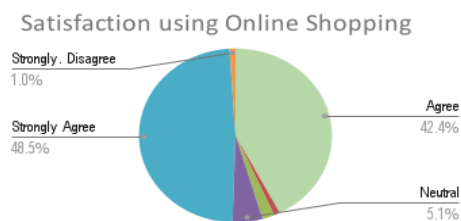
made 6 to 10 purchases annually. 13% respondents made 2 to 5 purchases annually. 8% respondents made 11 or more purchases annually. And the remaining made purchases once annually.



Nearly 53% respondents made payments digitally, using various payment options like debit card, credit card, internet banking, mobile banking, UPI/Bhim, payment wallets like Google Pay, Phonepe, Paytm etc. 19% preferred making payments in cash, since they were not well versed with digital payments or did not have smartphones. 28% used both digital and cash payments equally as per their preference at that particular moment.



The chart above shows the digital media apps that influenced the respondents to purchase online. Social Media apps such as Facebook, Instagram, Snapchat, Twitter, You Tube, Whatsapp etc played a big role in influencing the respondents to shop online. Respondents could connect with these apps and were an important source of communication for them. Product reviews, information of the product, tips on how to use the product, which brand to purchase etc, helped respondents to make choices. 18% of respondents used companies' websites and based on that made their purchases. 16% of respondents were influenced by TV, radio, and billboard advertisements. The remaining 6% made purchases through word of mouth publicity, they found the product attractive or simply because they had no other option available.

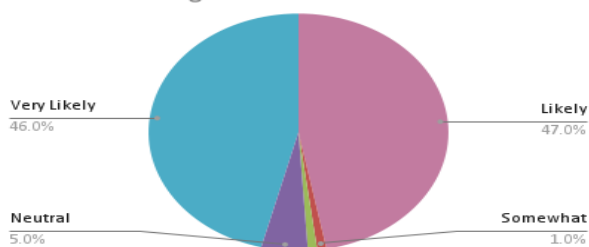


The above chart shows that 48.5% strongly agree and 42.4% agree that they were satisfied shopping online. Customer satisfaction is the feeling of pleasure or disappointment from the use of a product. 92.9% of respondents were satisfied and delighted shopping online. There could be a variety of reasons for customers to go online and shop, such as product reviews before made purchases, mode of payments, live tracker to see where the product has reached, quick delivery, 24/7 shopping, cheaper products, good after sales service, more choices are factors that have led to increased satisfaction. Higher customer satisfaction has led to customer loyalty. 5.1% of respondents were neutral and only 1% were not satisfied with making online purchases.



The chart above shows the reasons leading to repeat purchase. 47% of respondents were attracted to the coupons and discounts offered while shopping online, they felt special and incentivized to make another purchase. 16% respondents made a repeat purchase because of the variety of products that they can choose from. 14% respondents were comfortable using online payment gateways, 18% respondents made the repeat purchase because of the feedback and grievances that were resolved by the companies. And 5% of respondents liked the live tracker and so made repeat online purchases. Repeat purchase also shows the loyalty of the customers. Such loyal customers with repeat purchase are valuable to companies.

Recommending Others to Use



The above chart shows that 46% of respondents and 47% of respondents were very likely and likely respectively to recommend others to use digital media apps for making online purchases. Respondents have had positive experiences and so they would recommend and influence others in making their purchase decisions. Only 5% and 1% respondents were neutral and may or may not recommend making purchases respectively.

### Suggestions & Conclusion

The Internet shows that digital media apps and services provided to consumers for their ease in shopping influences purchase decisions. The impact of social media on consumers' habits and purchase decisions is explained by many factors: preferences, frequency to purchase, variety of options to choose from and providing the consumers with loyalty offers to retain them back for repeat purchase. The ease of not having to travel to a store, as well as the time saved in bargains, are two additional benefits and trends in online shopping. Because almost all portals have a simple return policy, buyers are less concerned about being stuck with the wrong size or fit of clothing. Today, online shopping has become a trend and the major reason behind it is attractive online websites, user-friendly interface, online stores with new fashion, easy digital gateway, cash on delivery option, no limit on quantity and quality and the ability to choose items based on preferences like size, color, price, brand,

categories, etc. Online stores do not have sales personnel and trial rooms, but they recommend products based on customers' preferences, style choices, and interests, using data. The development of e-commerce has transformed not only the way customers shop, but also their expectations of how digital platforms provide customers with a variety of choices, help them solve their grievances and give them better customer service. Now that consumers have access, their expectations have also increased, to different things that have rarely been purchased online. One of the ways e-commerce firms can become more personal for customers is by keeping track of customers' preferences and tailoring their ecommerce experience based on the things they like and are interested in. Online stores have lower operating costs, so ecommerce businesses can use that money in other aspects of the business, the result of which will be a greatly improved shopping experience for the consumers. Ecommerce will have a huge impact on consumers buying behaviour in the years to come. Advantages like safe Internet transactions, 24-hour online stores, finding the right product in a shorter amount of time, and many others. The future of e-commerce will reach its peak as it is said drones will be able to replace order clerks by delivering orders to customers. This technology is definitely faster than human delivery service and will fasten the delivery process for the buyers. The costs will be much lower for companies and people will get what they need without waiting longer. New technologies are constantly being developed to provide consumers with a better online shopping experience and to keep them informed about the changes that will likely shape the ecommerce industry's future.

### Bibliography

1. <https://online.maryville.edu/blog/future-of-online-shopping/>
2. [https://link.springer.com/chapter/10.1007/978-3-319-50008-9\\_35](https://link.springer.com/chapter/10.1007/978-3-319-50008-9_35)
3. [https://www.researchgate.net/publication/324694092\\_EFFECTS\\_OF\\_ONLINE\\_SHOPPING\\_ON\\_CONSUMER\\_BUYING\\_BEHAVIOUR#:~:text=This%20study%20inve](https://www.researchgate.net/publication/324694092_EFFECTS_OF_ONLINE_SHOPPING_ON_CONSUMER_BUYING_BEHAVIOUR#:~:text=This%20study%20inve)
4. [https://www.researchgate.net/publication/324277805\\_Impact\\_of\\_Digital\\_Market\\_on\\_Consumer\\_Buying\\_Behaviour](https://www.researchgate.net/publication/324277805_Impact_of_Digital_Market_on_Consumer_Buying_Behaviour)

5. [https://www.researchgate.net/publication/343634125\\_Exploring\\_Consumer\\_Behaviour\\_towards\\_Online\\_Retailing\\_in\\_Emerging\\_Markets\\_of\\_India](https://www.researchgate.net/publication/343634125_Exploring_Consumer_Behaviour_towards_Online_Retailing_in_Emerging_Markets_of_India)
6. <https://indjst.org/articles/website-attributes-and-its-impact-on-online-consumer-buying-behaviour-an-empirical-study-of-online-consumers-in-mumbai-region>
7. [https://www.dnyanasadhanacollege.org/docs/research/Vinodchandwani\\_thesis.pdf](https://www.dnyanasadhanacollege.org/docs/research/Vinodchandwani_thesis.pdf)
8. <https://silo.tips/download/an-analysis-of-the-social-media-influence-on-the-online-buying-behavior-of-india>

## CONTEMPORARY ISSUES IN MARKETING

Kritika<sup>1</sup> and S. Devi<sup>2</sup>

<sup>1,2</sup>Department of Commerce, CBLU, Bhiwani

<sup>1</sup>kritikasanjay2@gmail.com, <sup>2</sup>sunitavijayarania123@gmail.com

### Introduction

The present study throws its light on the contemporary issues and innovations in digital marketing to cover the mass market area and to access consumers' reach at large. The dynamic changes in marketing made the business organizations cope up with dynamic marketing ideas with the help of environment scanning. This study offers an integrated strategy and vital insights into marketing issues and marketing management. In today's modern and digitized business environment, everyone is involved directly or indirectly in such marketing activities. They obtain what they need and want by creating, offering, and exchanging products and services of value with others. Achieving the major objectives of any organization or business purely depends upon the tactics and innovative strategies of marketing done by the business organization. Marketing management is a customer-centric approach as a customer is the king of the market. Firms adopting marketing strategies typically engage in extensive market research to assess consumer desires, Product Research, Innovation, and Development and then utilize promotion techniques to ensure consumers are aware of the product's benefits.

### The Problem Of The Study

The dilemma of the study was to find out the contemporary issues in marketing management in the Indian context.

### Literature Review

A literature review is related to the contemporary issues in marketing management

#### Faith-based marketing:

**Product:** A pragmatic value-based product strategy, focus on the solution more than the product (viana, 2011) RHEMA church selling its own branded water to thirsty congregants.

**Price:** A psychological pricing strategy, RHEMA water costs Rs. 99 per 500 ml and Rs. 99 per 1lt bottle (olotewo 2016)

**Promotion:** An endorsement promotion strategy, art of switching positions, founder of RHEMA church, pastor Ray Mc Cauley constantly taking a sip from the branded water bottle (place on the pulpit for everyone to see) as he preaches (olotewo, 2016)

\* **Event Tourism management:** Getz (2008) defines event-tourism marketing as a systematic plan to develop and market events at a specific destination for those traveling in pursuit of SIT (Special Interest Tourism).

\* **Fourth Industrial Revolution Marketing:** Robotics and other related devices are beginning to play a key role in a variety of marketing-related fields, from FMCG products to mining /exploration communication and health advancement. (Iraki 2018) .

Today's technology will be old and less useful by 4IR standards. The top of the range computers currently in use are already obsolete the second it goes into production (Schwab 2016)

\* **Adwords Marketing:** As per the definition of the plaza (2009), Google Ads is an online marketplace where advertising agencies and marketers purchase digital advertising space, but there is much more to this contemporary marketing issue than just purchasing advertising space.

\* **Near- Field Communication:** An introduction to Near - Field Communication and the Contactless Communication API, by C.Enrique Ortiz, June 2008: NFC is characterized as a very short-range radio communication technology with high potential, essentially when connected to mobile handsets. It enables handsets are being introduced into the market and deployment and pilots around the world are occurring.

### Research Methodology

This study is purely based on secondary data collection. The data has been collected with the help of different published research papers and articles and from various websites. This study helps to analyze the central theoretical and practice contemporary issues in marketing

management. And also to identify the opportunities in marketing to concrete marketing actions, tactics, and strategies.

**Limitations of the study:** This study is based on secondary data collection.

### Observation And Analysis

According to the American Marketing Association, "Marketing Management is a process of planning and executing the conception, pricing promotion, and distribution of ideas goods and services to create exchanges that satisfy individual and organizational objectives."

This definition explains the marketing concepts and tools to help marketers with effective decision-making. According to the Social Marketing definition, marketing is a social process by which individuals and groups obtain what they need and want by creating, offering, and exchanging products and services. Strategic Marketing helps a firm to make a competitive position in the market by considering challenges and grabbing the opportunity proposed by the competitive and dynamic business environment.

### Contemporary issues in marketing management

There is a rising number of contemporary marketing issues in the business, and central to the contemporary issues in marketing are the concepts of technology, social media, and brand management. Accordingly, the major five contemporary marketing issues that are nowadays affecting managerial and innovative processes in affecting managerial and innovative processes in the business environment are as follows.

- Faith-based / Religious Marketing
- Event-tourism Marketing
- Marketing for 4<sup>th</sup> Industrial Revolution
- Google Adwords Marketing
- Near-field Communication /NFC Marketing

#### 1. Faith-Based Marketing

Faith-based or gospel-centered marketing is the most sustainable and meaningful way to engage consumers as people. Here is why a marketer or company, should consider using faith-based marketing strategies:

- It provides information that engages all demographics of a nation.
- It provides the resources to questions customers ultimately have.
- It improves the culture of society and maintains it.
- It is the right thing to do because it aims to ultimately meet the deepest longings that may be temporarily addressed by products and services.

Kosher goods and Christian movies are well-known examples of Faith-based marketing, companies continue to overlook opportunities for growing faith-based segments.

#### Incorporating the marketing mix in faith-based marketing

Consumers look for a product that fulfills their faith, traditions, and beliefs. A company ensures the success factor of each core in the marketing mix i.e Product, Price, Place, Promotion, Physical evidence, and People.

There are various ways in which an organization can respond to the faith-based market. Some business organizations incorporate faith-based ideas in their operations, mission statement, or even in their packaging of the product. Some companies integrate religion and faith into entertainment and business.

**Dangal,** An Indian Hindi film directed by Nitesh Tiwari and released in 2016 to a tune of Rs. 340 million worldwide.

#### 2. Event –Tourism Marketing

Event-tourism marketing is a systematic plan to expand and market events at a specific destination for those traveling in pursuit of SIT (Special Interest Tourism).

Event-tourism expanded or more popular in developing countries.

Event-tourism programs are clearly defined by the modern tourism descriptive prefixes such as eco-tourism, adventure-tourism, cultural-tourism, etc.

**Challenges** faced by the event –tourism business is a risk of imports flood, an unpredicted crisis such as Covid-19 pandemic and political instability and Social confits experienced by the countries.

These are different ways and means to strategically incorporate event tourism into a destination marketing strategy.

1. It attracts tourists whose spending generates economic and monetary benefits to our nation.
2. It builds a positive image for the destination and helps to brand it.
3. It provides to place marketing by making cities more liveable and attractive to various investors.
4. They do animate cities, resorts, and venues making them more attractive.
5. Act as catalysts for urban renewal, infrastructure development, and improved marketing capability of a organization.

### **3. Fourth Industrial Revolution Marketing(4IR)**

The industrial revolution makes global changes in the economic landscape, dramatic technological expansions, age of science and mass production, digital revolution and advances and social changes.

The globe moves towards a new era called "The Fourth Revolution / TIR, a massive overhaul of industry standards and goods production using advanced technological inventions like 3D printing, robotics, nanotechnology.

Challenges faced by marketers are difficulty in patenting when it comes to communication, processing, and visualization of data.

Companies must have to start developing nanotechnologies compliant products and artificial intelligence for effective growth of their companies. Developing machinery and robotics compatible with automation technology the millennials and Generation Z consumers of the 4IR era are looking forward-looking, not backward. Companies should refresh their business and appeal to 4IR consumers and this competitive era.

### **4. Adwords Marketing**

As per the definition of the plaza (2009), Google Ads is an online marketplace where advertising agencies and marketers purchase digital advertising space, but there is much more to this contemporary marketing issue than just purchasing advertising space.

From social media to Google Ads, new innovative and inexpensive marketing methods are now readily available to companies as well as small and medium business owners.

A few most common online strategies are content marketing- videos, blog posts, infographics, etc, Display Advertising, Email marketing, paid search advertising, search engine optimization, and social media marketing. It would benefit businesses to adequately distribute their level of intensity over the promotional strategies.

Although Google Ads is a contemporary 'easy to use' marketing issue, it is still important that businesses have some level of creativity, technology, innovations, and budget optimization for their marketing content to be more effective and efficient. If a business aims to run a successful marketing campaign through digital mode, they must conduct 'Keyword Research' to gain insight on which words consumers use to search on the internet.

### **5. Near Field Communication (NFC) Marketing**

NFC is a short-range wireless RFID communication technology. It means that two devices equipped with NFC technology can communicate with each other and share information as soon as they are close to one another.

#### **(Rfid- Radiofrequency Identification )**

Data acquired from NFC interactions provides deep insights into a customer's offline behavior, enabling marketers to open a direct channel for delivering dynamic experiences to customers who have opted in.

Issue of short-range communication, through NFC technology, communicating devices must be in close range or should have a distance of 4 cm or less between them for information sharing. This is a major issue of NFC technology. NFC provides unreliable security against privacy protection for a device, which becomes vulnerable to the inadvertent reception of malicious software or data. The NFC protocol has few safeguards against data sniffing and data modification.

Some companies choose to focus on proximity marketing, some on search engine optimization, a common marketing component

in all strategies, that element is NFC. For effective and strategically incorporating marketing, a marketer should affix tags on the advertisement so that a consumer access more in-depth product information, about the brand with just a tap.

Companies should link NFC customers to a loyalty program, Keep a tap on renews and ratings for ensuring the effectiveness of NFC marketing.

### Conclusion

Contemporary marketing issues are the consequence of dynamic worldwide economies. Companies nowadays need to discover ways for associating all potential and

their existing stakeholders. And for an effective marketing strategy, a marketer has to keep eye on marketing issues, opportunities, dynamic business environment, and technology and accordingly manage their business. The contemporary approaches of marketing followed by leading organizations are relationship marketing, Industrial & Social marketing. The business organization can successfully achieve its goals by developing effective strategies and focusing on existing problems and issues in today's society and ensure the sustainable and optimum utilization of the resources.

### References

- Shashidhare D. et al, International Journal of Research in Management, Economics & Commerce Issue 2 Feb. 2018.
- Google Search:
  - <https://en.wikipedia.org/wiki/marketing...>
  - <https://oracle.com/technetwork/articles>
  - <https://profitworks.ca/small-business-sales-marketing-resources/blog>
  - <https://www.unitag.io/nfc>
  - <https://blog.adobe.com>
  - <https://journals.sagepub.com>
- <https://studydriver.com/marketing-strategies-at-primark-pic/>
- <https://profitworks.ca/small-business-sale...>
- <https://www.igi.global.com/chapter/contemporary-issues...>
- <https://blog.hubspot.com>
- <https://www.researchgate.net>



## A STUDY ON ROLE OF AUGMENTED REALITY UNDER INDUSTRY 4.0 FOR ENGINEERING TECHNOLOGY SECTOR

S. Shukla<sup>1</sup> and H. J. Bhasin<sup>2</sup>

Lala Lajpatrai Institute of Management, Mumbai

<sup>1</sup>shukshail@gmail.com, <sup>2</sup>bhasinharvind@yahoo.co.in

### ABSTRACT

*“I’m excited about Augmented Reality (AR) because... AR allows individuals to be present in the world but hopefully allows an improvement on what’s happening presently. Most people don’t want to lock themselves out from the world...”*  
— Tim Cook, Apple Inc. Augmented reality (AR) as a key component of Industry 4.0, has quickly emerged as a technology that can solve key operational problems, product development and customer interface challenges in the Engineering Technology Sector. Augmented Reality in Engineering Technology Sector shows that this technology is helpful in providing reliable solutions to crucial problems. A disruptive potential of this technology allows the industry to become more responsive, efficient and customer centric. Certain processes and practices of Physical World of the Engineering Technology Sector has digital options due to Augmented Reality (AR). In certain applications Augmented Reality (AR) is considered as alternative to Physical World and in certain areas they are co-existing. The paper studies the application of Augmented Reality on Engineering Technology Sector and examines user experience for various applications of Augmented Reality (AR). The paper also helps to understand various benefits of its application and acceptance and takes users view on the future adoption of Augmented Reality (AR) in their Industry.

**Keywords** -Augmented Reality (AR), Industry 4.0, Engineering Technology Sector, Physical World, Virtual World

### 1. Introduction

#### Augmented Reality & Industry 4.0

“The Fourth Industrial Revolution is not about new Apps or new technologies. It is about a new era, new ways of thinking and new ways of doing business.”— Nicky Verd.

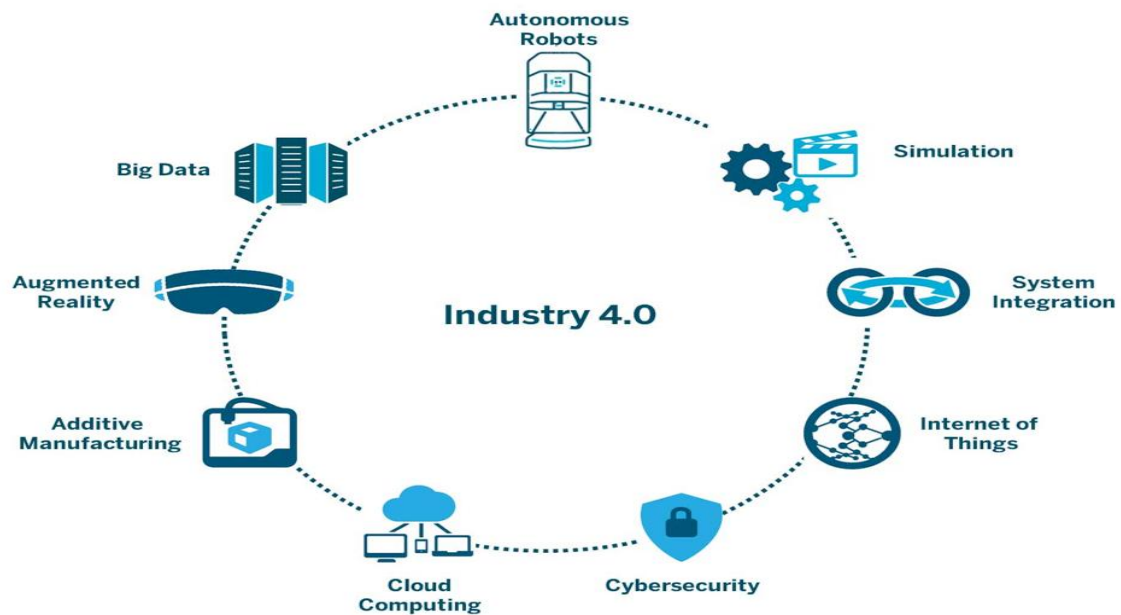
Industrialization and mechanization have gone through continuous improvement as our pursuit for improved efficiency, improved quality and higher profitability.

What started from mechanization to mass production technology to automation is now powered by the Industrial Internet of Things (IIoT) and cyber-physical systems – smart, autonomous systems that use computer-based algorithms to monitor and control physical things like machinery, robots, and vehicles is known as Industry 4.0.

Industry 4.0 has highly intelligent connected systems that create a fully digital value chain.

It is particularly based on cyber physical production systems that integrate communications, IT, data and physical elements, wherein these systems transform the traditional plants into smart factories. Here the objective is that machines talk to other machines and products and information is processed and distributed in real time resulting in profound changes to the entire industrial ecosystem.

There are some key elements (*as shown in Figure 1*) those constitute the cornerstones of Industry 4.0 (Vaidya et al. 2018) which includes Augmented Reality (AR), Big Data Analytics (Bigdata), Autonomous Robots & Artificial Intelligence (AI), Digital Simulation (Simulation), System Integration, Industrial Internet of Things (IIOT), Cyber Physical Systems (CPS), Cybersecurity, Cloud computing (Cloud) and Additive Manufacturing (AM).

**Figure 1: Some of the Components of Industry 4.0**

**\*\*Source: Internet (smequest.com)**

**Augmented Reality (AR)** is integral part of Industry 4.0 and it enables users to access digital information and overlay that information with the physical world which is basically interactive experience of the real-world environment (eg. Touchscreen, Speech Recognition, 3D Models) This technology can bring huge support for maintenance works in business due to reduced time needed for maintenance works and reduction of potential errors in maintenance works. It can also help effectively for 3D modelling & prototyping, Training, Customer demonstration and simulations.

AR gives user an interactive experience of real-world environment using computer-generated knowledge. AR is a platform which connects both physical and virtual world and enhances the user experience. The terms "mixed reality" and "computer-mediated reality" are almost interchangeable when it comes to augmented reality.

**Engineering Technology Sector** includes companies which are into heavy engineering, light engineering, chemical, electrical, construction equipment, computer hardware manufacturing, pharmaceutical and other manufacturing. This sector has been making effective use of Augmented Reality (AR) for

business-to-business (B2B) and business-to-consumer (B2C) application.

## 2. Literature Review

According to **A.Y.C. Nee & S.K. Ong (2013)**, AR application in manufacturing operations is relatively new compared to social and entertainment applications. This is due to the more stringent requirements in tracking and registration accuracy, and a good alignment with traditional practices. Unlike playing an AR game where one can quit any time and restart at will, the engineering users are likely to spend a considerable amount of time using the system in their jobs, and this is where ergonomics, human factors and cognitive strain on the users must be well recognized and taken care of. This paper presents some of the applications of AR which are relevant to the manufacturing community. The study does not cover benefits like Time savings, Business continuity, cost optimization and Travel elimination.

**Fründ, J., Gausemeier, J., Matysczok, C., and R. Radkowski (2005)**, studied some examples about how the technology of Augmented reality (AR) can be used to support the automobile development process. It highlighted the use Augmented reality (AR) for the completion of rudimentary prototypes

where the technology of augmented reality can be used for the completion of the prototype. The developed applications complete real automobile prototypes by virtual components to show design variants or to support design reviews. The study has not focused on other applications like maintenance, training, factory virtual tour and customer demonstration. It also does not take user experience on the benefits of Augmented reality (AR)

According to **Mehdi Mekni and Andre Lemieux (2014)**, AR system has to deal with vast amount of information in reality. They also surveyed the current state-of-the-art in augmented reality. It describes work performed in different application domains and explains the exiting issues encountered when building augmented reality applications considering the ergonomic and technical limitations of mobile devices. Future directions and areas requiring further research are introduced and discussed. The paper does not cover benefits and user experience in field of Engineering Technology Sector According to **Satish Kumar (2018)**, Manufacturing companies are implementing Augmented reality (AR) not only on the shopfloor rather also as an important tool to bridge the skill gap of their employees. Case-studies from few companies are being covered with respect to application of AR for training, design, quality, and maintenance. It does cover the experience of users and related perceived benefits and on what would industry adopt in future.

**Hung-LinChi, Shih-ChungKang, Xiangyu Wang (2013)**, studied on Research trends and opportunities of augmented reality applications in architecture, engineering and construction. This paper discusses trends in Augmented Reality (AR) applications for architecture, engineering, construction, and facility management. Their paper specifically focuses on four technologies—localization, natural user interface (NUI), cloud computing, and mobile devices—which have the potential to influence the development of AR applications. The paper covers on what would help to increase the adoption of Augmented reality. The paper does not cover the applications and benefits of AR for Engineering Technology Sector.

Additionally **Juan Manuel Davila Delgado, Lukumon Oyedelea, Peter Demianc , Thomas Beach (2020)**, studied on the usage landscape of augmented reality (AR) and virtual reality (VR) in the architecture, engineering and construction sectors. Three main research categories for a future research agenda have been proposed, i.e.: (i) engineering-grade devices, which encompasses research that enables robust devices that can be used in practice, e.g. the rough and complex conditions of construction sites; (ii) workflow and data management; to effectively manage data and processes required by AR and VR technologies; and (iii) new capabilities. This study shows that AR and VR can be used in various ways throughout the entire life cycle of a built asset, which have been categorized in six use-cases: stakeholder engagement, design support, design review, construction support, operations and maintenance support, and training. The overall adoption in industry remains low as per the study. The study does not include technology and manufacturing sector and does not examine user experience and preference for future. It also does not include areas like business continuity, cost advantage, travel elimination, time savings.

**Charvi Agarwal and Narina Thakur (2014)**, evaluated practices and research being done in the field of augmented reality, reviewed best practices and suggested new ways of incorporating this technology in our everyday lives. This paper describes various fields in which AR is already being used (such as medical, military, entertainment, manufacturing, education etc.) and also presents new areas of applications. The paper also highlights certain challenges for AR like latency and tracking accuracy. The paper does not cover various applications of AR in Engineering Technology sector and also does not cover related benefits.

### Summary of Literature Review

From the literature studied, it is found that there are fewer studies on Role of Augmented Reality (AR) for Engineering Technology Sector and little study has been done to measure the user experience on the various applications of Augmented Reality (AR) and its related benefit. There is also need to check

the user opinion on adoption of Augmented reality (AR) in their industry therefore this study has relevance.

### 3. Objectives of the Study

1. To study the application of AUGMENTED REALITY under Industry 4.0 in Engineering Technology Sector.
2. To study the advantages & user experience with AR application.
3. To suggest measures for future reference.

#### Hypotheses

##### Hypothesis 1:

**Null Hypothesis (H1<sub>O</sub>):** There is no significant impact of Augmented Reality (AR) on overall efficiency in Engineering Technology Sector.

**Alternative Hypothesis(H1<sub>A</sub>):** There is significant impact of Augmented Reality (AR) on overall efficiency in Engineering Technology Sector.

##### Hypothesis 2:

**Null Hypothesis (H2<sub>O</sub>):** Augmented Realty (AR) does not have significant benefits for Engineering Technology Sector

**Alternative Hypothesis (H2<sub>A</sub>):** Augmented Realty (AR) has significant benefits for Engineering Technology Sector

##### Hypothesis 3:

**Null Hypothesis (H3<sub>O</sub>):** In future, Engineering Technology Sector will not adopt Hybrid (Physical World + Augmented Reality (AR)) for its business applications.

**Alternative Hypothesis (H3<sub>A</sub>):** In future, Engineering Technology Sector will adopt Hybrid (Physical World + Augmented Reality (AR)) for its business applications

### 5.Limitations of the Study

The study is limited to Engineering Technology Sector in India and validity of secondary data and information collected for analysis was assumed to be genuine. Pre-designed Google Form's link were mailed to the respondents, to collect primary data. As a result, inferences were made solely on the basis of feedback obtained from respondents, hence there is possibility of biased opinion. Every effort is made, however, to make the study useful for future research.

## 6. Research Methodology

### a. Data collection

Both Primary data and secondary data were collected. Questionnaire is used to gather primary data by mailing Google Form to the respondents. Secondary data is gathered from books, personal sources, journals, newspapers, websites.

### b. Research Design

A cross-sectional analysis was conducted to determine the existence and magnitude of causal effects of independent variables on dependent variables of interest at a specific time point.

**Independent Variable:** Augmented Reality (AR)

### Dependent Variables

The dependent variables are

- **Benefits:** Time, Travel Elimination, Cost optimization, Process efficiency, Multiple Stakeholders, simulation & Tailored Solution, Quick Turnaround, Business Continuity
- **Future Adoption:** Acceptance, Nature of Adoption

### Intervening Variables

Company Sector, Company Size, User Role

### c. Sample Design

Sample is limited to 60 respondents from Engineering and Technology companies. The Sample is confined to India and Non-Probability Purposive Sampling is used.

Respondents are users, influencers, decision makers or opinion makers.

### d. Statistical tools

For data interpretation and analysis, one way analysis. In order to analyse the results SPSS was used.

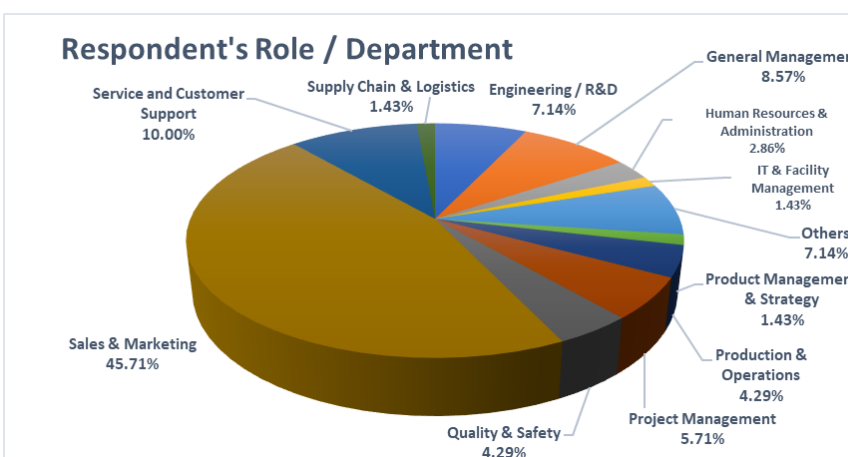
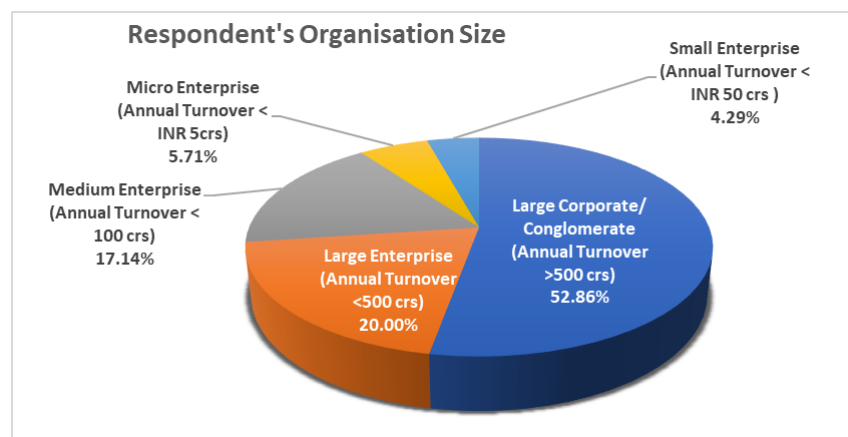
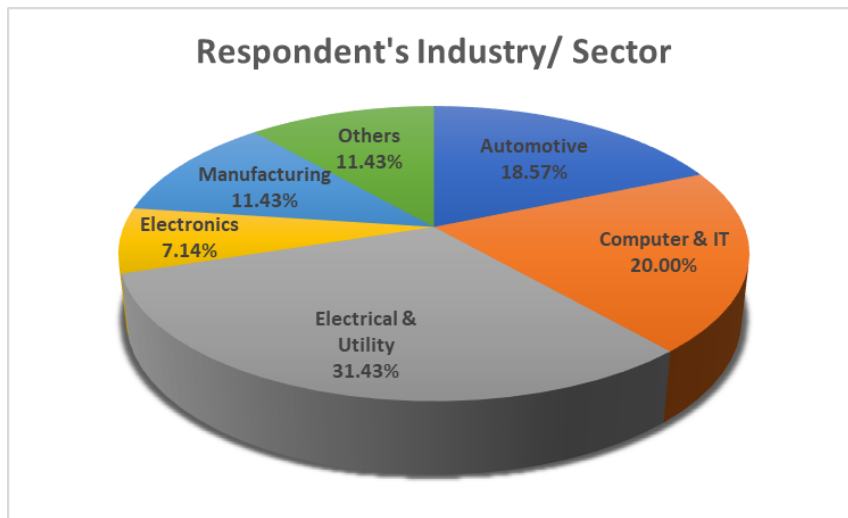
## 7.Result and Inference

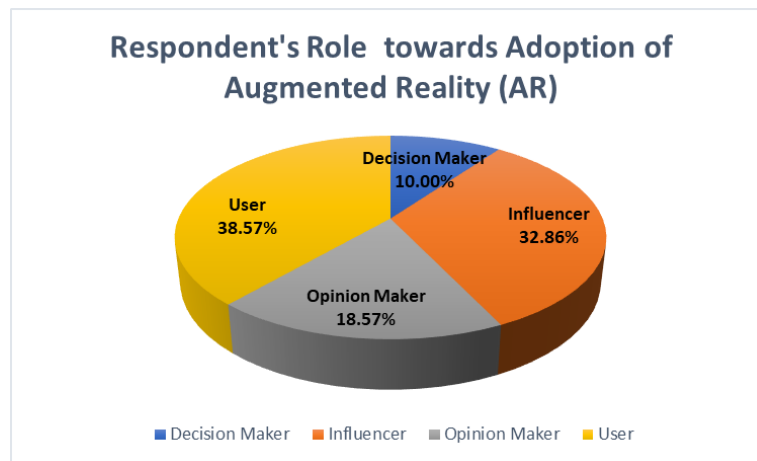
Participants in this study belong to working groups in Engineering Technology sector and Industry experts. They were contacted via judgmental sampling through industry bodies and professional network, who were required to have basic knowledge on application of the Augmented Reality (AR) to respond.

The survey received 70 responses which were in line with the research design and exceeded the required sample size of 60.

### Characteristics of respondents

70 Responses



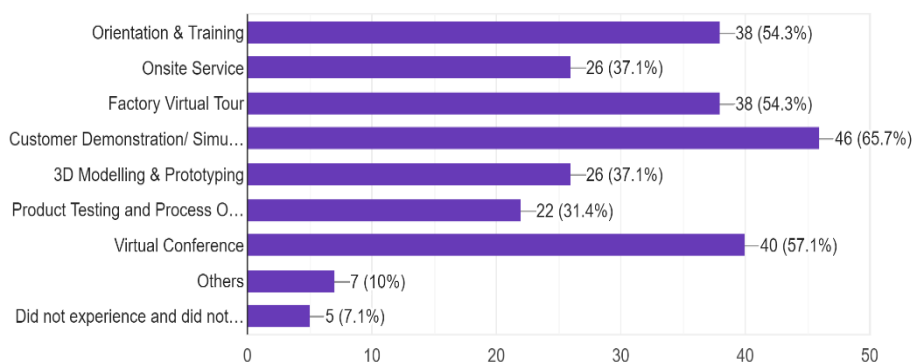


- Amongst the 70 respondents, the key sectors of respondents were from Electrical & Utility (31.43%), Automotive (18.57%), Computer & IT (20%), Manufacturing (11.43%)
- From total 70 respondents, there were 51 respondents from large corporates (<500 crs) and large conglomerates (>500crs) and their percentage was 72.86%.
- Similarly, 42.86% respondents were either Decision Makers or Influencers.
- 38.57% of the respondents were user group while 18.57% respondents were Opinion makers.
- The role of respondents was varied; Sales & Marketing formed 45.71% of the respondents while 8.57% were from General Management.
- The other roles of respondents were Production & Operations (4.29%), Quality (4.29%), Project Management (5.71%), Engineering & R&D (7.14%).

**Result of Descriptive statistics**

Please select the areas where Augmented Reality has been applied / experienced (multiple choices welcomed)

70 responses



- 46 respondents have either experienced or applied Demonstration & simulation 40 respondents have either experienced or applied Augmented Reality (AR) for Virtual Conference.
- 38 respondents have experienced or applied Augmented Reality (AR) for Orientation and Training.
- Similarly, 38 respondents have experienced or applied AR for Factory Virtual Tour.
- 26 respondents have experienced/ applied it for onsite service and similar 26 respondents have experienced/ applied for 3D modelling and prototyping.

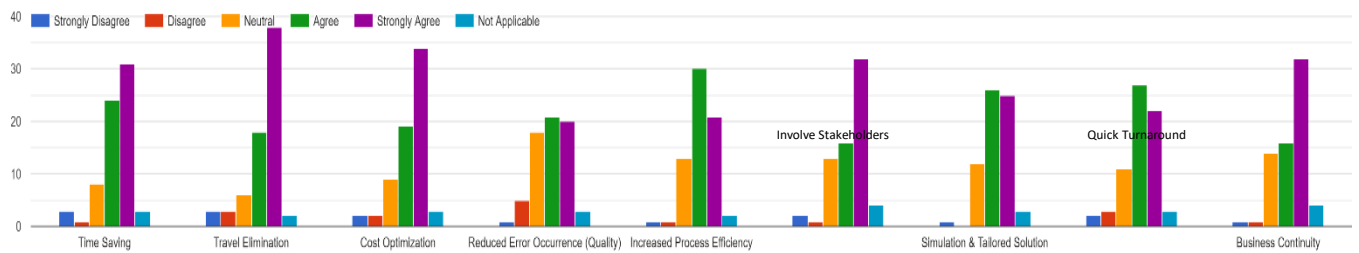
- Finally, 22 respondents have applied/ experienced it for product testing & process orientation.

Based on your usage /experience of Augmented Reality (AR) in the following areas, please rate them.



Majority of the respondents were either satisfied or Highly satisfied based on their usage/ experience of Augmented Reality (AR).

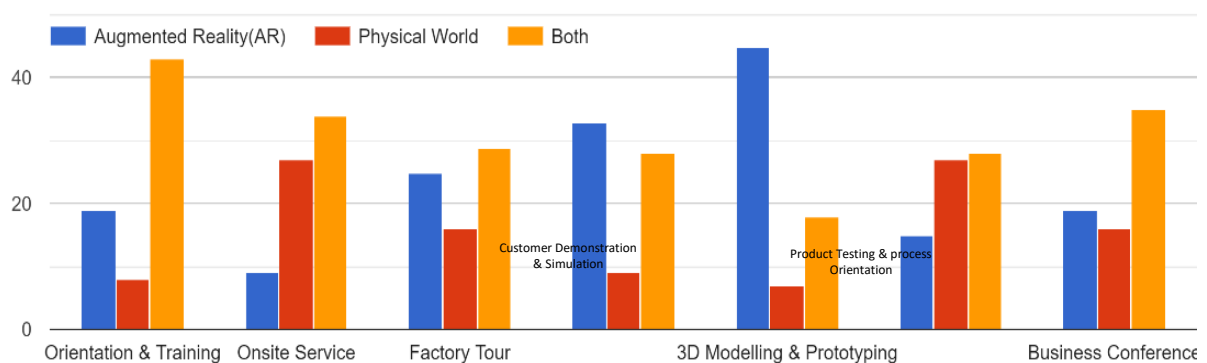
Please rate the advantages / benefits of Augmented Reality (AR) for Engineering and Technology Segment, based on your usage/experience.



Some Key benefits which resonated with Respondents includes Business Continuity,

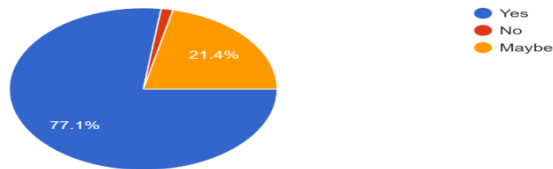
Time Saving, Travel Elimination, Cost Optimization.

"Augmented Reality (AR) replaces Physical World." Select your preference for each activity between the two.



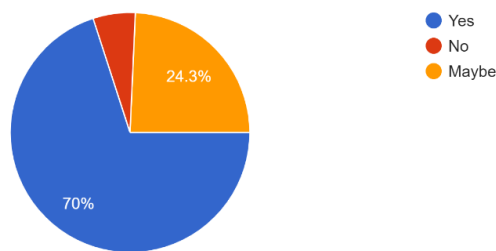
- People prefer Augmented Reality (AR) for Customer Demonstration & 3D Modelling.
- People prefer mix of Augmented Reality (AR) & Physical World for Orientation & Training, Onsite service, Factory Tour, Product Testing & Business Conference.

By applying Augmented Reality (AR) did you experience a positive outcome.  
70 responses



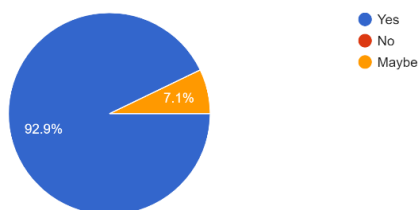
- 77.1% respondents experienced Positive Outcome by application/ usage of Augmented Reality (AR).
- 21.4% respondents were not sure if AR got them positive outcome.

In your view, application of Augmented Reality (AR) resulted in fast decision making.  
70 responses



- 70% respondents experienced fast decision making due to application of Augmented Reality (AR).
- 24.3% respondents were not sure if AR resulted in fast decision making.

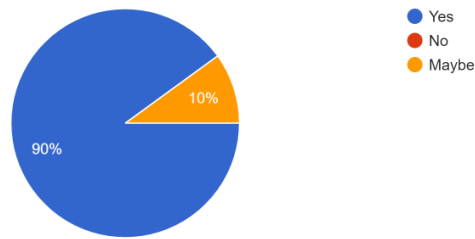
Based on your usage / experience of Augmented Realty (AR) would you continue applying it.  
70 responses



- 92.9% respondents will continue to apply Augmented Reality (AR)
- 7.1% respondents may consider applying AR.

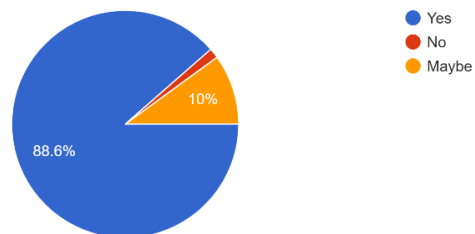


Based on your usage/ experience, will you recommend Augmented Reality (AR) to others.  
70 responses



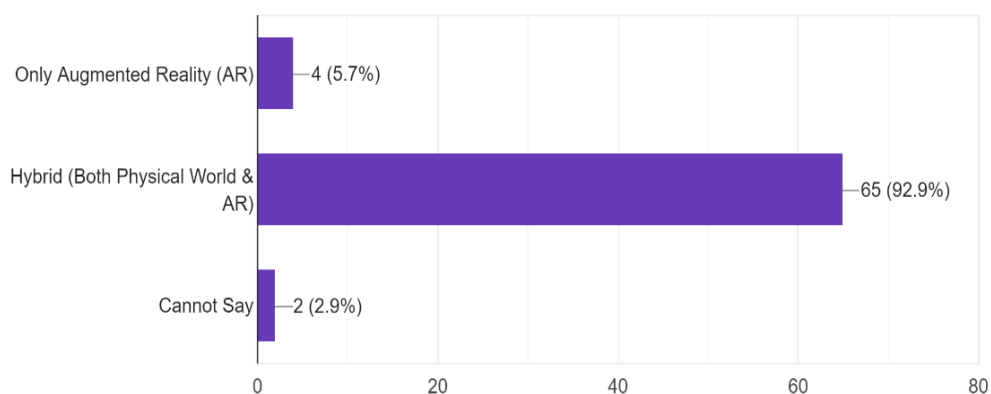
- 90% of the respondents will recommend Augmented Reality (AR) to others.
- 10% of the respondents may consider recommending AR to others.

In your opinion, will Augmented Reality (AR) have higher acceptance and growth in your Industry in the next 5 years.  
70 responses



- 88.6% respondents believe that Augmented Reality (AR) will have higher acceptance in their Industry in the next 5 years.
- 10% respondents were not sure that Augmented Reality (AR) will have higher acceptance in their Industry in the next 5 years.

In continuation to the previous question, what shall be its nature of adoption in the future.  
70 responses



- 92.9% Respondents believe that future adoption would be Hybrid (Both Physical World & Augmented Reality (AR)).
- 5.7% of respondents believe that future adoption will be only Augmented Reality (AR).

**Hypothesis Testing**

The following hypothesis is tested by using One way Analysis of Variance [ANOVA].

**Hypothesis 1:**

**Null Hypothesis (H1<sub>0</sub>):** There is no significant impact of Augmented Reality (AR) on overall efficiency in Engineering Technology Sector. (Orientation & Training, Onsite Service, Factory Virtual Tour, Customer Demonstration, 3D Modelling & Prototyping,

Product Testing & Process Orientation, Virtual Business Conference)

**Alternative Hypothesis(H1<sub>A</sub>):** There is significant impact of Augmented Reality (AR) on overall efficiency in Engineering Technology Sector.(Orientation & Training, Onsite Service, Factory Virtual Tour, Customer Demonstration, 3D Modelling & Prototyping, Product Testing & Process Orientation, Virtual Business Conference)

**Table 1: Augmented Realty (AR) Overall Efficiency**

Overall Efficiency Augmented Reality (AR) – ANOVA						
		Sum of Squares	df	Mean Square	F	Sig
<b>Orientation &amp; Training</b>	Between Groups	37.312	5	7.462	6.408	0
	Within Groups	74.531	64	1.165		
	Total	111.843	69			
<b>Onsite Service</b>	Between Groups	61.719	5	12.344	8.834	0
	Within Groups	89.424	64	1.397		
	Total	151.143	69			
<b>Factory Virtual Tour</b>	Between Groups	24.831	5	4.966	3.739	0.005
	Within Groups	85.012	64	1.328		
	Total	109.843	69			
<b>Customer Demonstration/ Simulation</b>	Between Groups	45.645	5	9.129	15.098	0
	Within Groups	38.698	64	0.605		
	Total	84.343	69			
<b>3D Modelling &amp; Prototyping</b>	Between Groups	48.736	5	9.747	11.274	0
	Within Groups	55.335	64	0.865		
	Total	104.071	69			
<b>Product Testing and Process Orientation</b>	Between Groups	57.215	5	11.443	9.417	0
	Within Groups	77.771	64	1.215		
	Total	134.986	69			
<b>Virtual Conference</b>	Between Groups	47.445	5	9.677	13.992	0.
	Within Groups	63.881	64	0.788		
	Total	103.271	69			

**Inference:** The significance level is less than 5% for each hence null hypothesis can be rejected and Alternate hypothesis is accepted. It can be further inferred that there is significant impact of Augmented Reality (AR) on overall efficiency in Engineering Technology Sector.

The following hypothesis is tested by using One way Analysis of Variance [ANOVA].

**Hypothesis 2:**

**Null Hypothesis (H2<sub>0</sub>):** Augmented Realty (AR) does not have significant benefits for Engineering Technology Sector(Time Saving, Travel Elimination, Cost Optimization, Reduced Error Occurrence (Quality), Process Efficiency, Involve multiple stakeholders, Simulation and Tailored Solution, Quick Turn

Around of Prototype & Service, Business Continuity)

**Alternative Hypothesis (H<sub>2A</sub>):** Augmented Realty (AR) has significant benefits for Engineering Technology Sector (Time Saving, Travel Elimination, Cost Optimization,

Reduced Error Occurrence (Quality), Process Efficiency, Involve multiple stakeholders, Simulation and Tailored Solution, Quick Turn Around of Prototype & Service, Business Continuity)

**Table 2: Augmented Realty (AR) Significant Benefits**

Benefits of Augmented Reality (AR) - ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Time Saving	Between Groups	26.578	4	6.644	8.503	0
	Within Groups	50.794	65	0.781		
	Total	77.371	69			
Travel Elimination	Between Groups	25.693	4	6.423	7.076	0
	Within Groups	59.007	65	0.908		
	Total	84.7	69			
Cost Optimization	Between Groups	19.73	4	4.933	5.669	0.001
	Within Groups	56.555	65	0.87		
	Total	76.286	69			
Reduced Error Occurrence (Quality)	Between Groups	24.553	4	6.138	7.157	0
	Within Groups	55.747	65	0.858		
	Total	80.3	69			
Increased Process Efficiency	Between Groups	20.762	4	5.191	9.403	0
	Within Groups	35.881	65	0.552		
	Total	56.643	69			
Involve Multiple Stakeholders and Decision Makers	Between Groups	31.306	4	7.827	10.264	0
	Within Groups	49.565	65	0.763		
	Total	80.871	69			
Simulation & Tailored Solution	Between Groups	58.586	4	14.646	10.894	0.
	Within Groups	0	65	0		
	Total	58.586	69			
Quick Turnaround of Prototype or Service	Between Groups	37.937	4	9.484	15.833	0
	Within Groups	38.935	65	0.599		
	Total	76.871	69			
Business Continuity	Between Groups	26.857	4	6.714	9.701	0
	Within Groups	44.986	65	0.692		
	Total	71.843	69			

**Inference:** The significance level is less than 5% for each hence null hypothesis can be rejected and Alternate hypothesis is accepted. It can be further inferred that Augmented Realty (AR) has significant benefits for Engineering Technology Sector.

**The following hypothesis is tested by taking direct input from the Respondents**

### Hypothesis 3:

**Null Hypothesis (H<sub>3O</sub>):** In future, Engineering Technology Sector will not adopt Hybrid (Physical World + Augmented Reality (AR)) for its business applications. (Acceptance in Industry, Nature of Adoption)

**Alternative Hypothesis (H<sub>3A</sub>):** In future, Engineering Technology Sector will adopt Hybrid (Physical World + Augmented Reality

(AR)) for its business applications(Acceptance in Industry, Nature of Adoption)

**Table 3: Augmented Realty (AR) Future Adoption**

Nature of Adoption	Response	Percentage
Hybrid (Both Physical World & AR)	65	92.86%
Only Augmented Reality (AR)	3	4.29%
Cannot Say	2	2.86%
Total Respondents	70	

**Inference:** 92.86% of the Respondents agree that Hybrid (Both Physical & Augmented Reality) would be Future adoption and thus it can be inferred that in future, Engineering Technology Sector will adopt Hybrid (Physical World + Augmented Reality (AR)) for its business applications

### 8. Discussion

Earlier studies have highlighted various fields in which AR has been adopted (Charvi Agarwal and Narina Thakur,2014)) and applications of AR which are relevant to the manufacturing community (A.Y.C. Nee & S.K. Ong ,2013).

We have also seen examples about how the technology of Augmented reality (AR), supports the automobile development process (Fründ, J., Gausemeier, J., Matysczok, C., and R. Radkowski ,2005) and Augmented Reality (AR) and Virtual Reality (VR) can be used in various ways throughout the life cycle of asset building, for purpose of stakeholder engagement, design support, design review, construction support, operations and maintenance support, and training. (Juan Manuel Davila Delgadoa, Lukumon Oyedelea, Peter Demianc , Thomas Beach 2020).

This Research Paper was able to prove the impact of Augmented Reality (AR) on overall efficiency in Engineering Technology Sector, benefits of AR for Engineering Technology Sector and concentrated on future adoption of Augmented Reality (AR) in Engineering Technology Sector.

Through the study it emerged that Augmented Reality (AR) has significant impact and benefits for Engineering Technology Sector while the future adoption in the studies sector is most likely to be Hybrid (Physical World + Augmented Reality (AR)) for its business applications.

### 9. Conclusion

Augmented Reality (AR) contributes towards overall efficiency for Engineering Technology sector and has significant benefits for the sector. Some of the key benefits includes time saving, travel elimination, cost optimization, Quality, Process Efficiency, involving multiple stakeholders, Simulation, Tailored Solution, and most importantly Business Continuity. Augmented Reality (AR) is helping towards effective customer engagement and is finding higher acceptance in the Engineering Technology Sector by efficiently enabling customer demonstration, virtual factory tour, business conference and onsite service. The sector is also using AR for skill development by using it for Orientation & Training. The sector will also deploy design and product development using AR. As we move ahead, we will see adoption of Hybrid (Physical World + Augmented Reality (AR)) for the sectors business applications. There will be additional potential of Augmented Reality (AR) which can explored towards enhancing the efficiency of the sector. Further research across sectors should be carried out on this area and also understand its cross-sector application and relevance.

### 10.References

1. **Aulbur, W. and H.V. Singh (2014)**,“Next Generation Manufacturing: Industry 4.0: A Look at the Changing Landscapes in Manufacturing”, CII and Roland Berger, New Delhi,
2. **A.Y.C. Nee & S.K. Ong, 2013** , “Virtual and Augmented Reality Applications in Manufacturing”, Research Paper, 7th IFAC Conference on Manufacturing Modelling,

- Management, and Control International Federation of Automatic Control
3. **Charvi Agarwal and Narina Thakur (2014)**, “The Evolution and Future Scope of Augmented Reality”, Research Paper, IJCSI International Journal of Computer Science Issues, Volume 11, Issue 6, No 1, November 2014
  4. **Confederation of Indian Industry (2014)**, Next Generation of Manufacturing: Industry4.0.
  5. **Depender Kumar, Navin Kumar, Punit Chaudhary and Jatinder Singh (2018)**, “Industry 4.0: Transforming The Manufacturing Landscape”, Industry Report, Grant Thornton
  6. **Fründ J., Gausemeier J., Matysczok C., Radkowski R. (2005)** “Using Augmented Reality Technology to Support the Automobile Development”. In: Shen W., Lin Z., Barthès JP.A., Li T. (eds) Computer Supported Cooperative Work in Design I. CSCWD 2004. Lecture Notes in Computer Science, vol 3168. Springer, Berlin, Heidelberg. [https://doi.org/10.1007/11568421\\_29](https://doi.org/10.1007/11568421_29)
  7. **Hung-LinChi, Shih-ChungKang, Xiangyu Wang (2013)**, “Research trends and opportunities of augmented reality applications in architecture, engineering and construction”, Research Paper, Automation in Construction, Volume 33, August 2013, Pages 116-122
  8. **Juan Manuel Davila Delgado, Lukumon Oyedele, Peter Demianc , Thomas Beach (2020)**, “A research agenda for augmented and virtual reality in architecture, engineering and construction”, Research Paper, Elsevier, Volume 45, August 2020, 101122
  9. **Mehdi Mekni , Andre Lemieux (2014)** , “Augmented Reality: Applications, Challenges and Future Trends” Research Paper, University of Minnesota
  10. **Robert H. Brown and Prasad Satyavolu (2017)**, ‘The work ahead Designing Manufacturing’s Digital Future’, White Paper, Cognizant
  11. **Satish Kumar, 2018**, “5 Ways Augmented Reality Revolutionize The Manufacturing”, Blog, Augrealitypedia, 5 Ways Augmented Reality Revolutionize The Manufacturing | ARP (augrealitypedia.com)

## “AN EMPIRICAL STUDY ON IMPACT OF COVID – 19 ON INVESTMENT PATTERN OF THE INVESTOR WITH REFERENCE TO MUMBAI REGION”

**B.B. Kamble<sup>1</sup> and C. Panchal<sup>2</sup>**

<sup>1,2</sup>Shri Chinai College of Commerce & Economics, Andheri (E) Mumbai

<sup>1</sup>bbkamble73@gmail.com, <sup>2</sup>chetanpanchal188@gmail.com

### ABSTRACT

*COVID- 19 or Novel Corona virus has adversely affected worldwide. The COVID - 19 pandemic has not only introduces new health issues but also enhances health crisis and has changed individual's financial conditions, which adversely influenced on individual's saving and investment pattern. To have control over the pandemic situation, government has taken certain corrective measures such as lockdown, wearing the mask, and social distancing etc. Because of such kind of restrictions on free movement of economic activity the entire economy got blocked and people or individuals losses their jobs. It automatically leads to reduction in income of the people, which has drastically affected on two main important economic pillars of the economy i.e saving and investment. The study is undertaken to understand how the COVID – 19 pandemic has impacted investment pattern of investors especially in Mumbai region because Mumbai is a metropolitan city and economic capital of the country. To know and understand investment pattern during COVID 19 a survey has been conducted with random sampling of 50 investors in Mumbai region. The investigation has done with different review of literature in Investment areas, all primary random sample data collected from Mumbai region and using parametric and non – parametric statistical methods, and secondary data collected from different journals, books and government records. The findings of the study will helpful to identify the investor's preference during COVID – 19 pandemic situation and also understand their investment pattern.*

**Key Word:** COVID -19, Investment Pattern, Saving, Lockdown

#### Introduction:

On February 11, 2020 World Health Organisation officially declared COVID 19 or Novel coronavirus is a deadly virus. On 11<sup>th</sup> March 2020 the World Health Organization (WHO) declared COVID -19 a global pandemic. It also confirmed that a COVID -19 or Novel coronavirus was the cause of a respiratory illness in a cluster of people in Wuhan, China.

In India first case of COVID -19 was confirmed on 30 January 2020 in Thrissur, Kerala, Which was infected by many peoples. To manage such severely emerging condition, on 25<sup>th</sup> march 2020, the government of India declared a three week country wide lockdown. During this period, all educational institutions, private offices, public and tourist places, public utility, non-essential activities, religious places etc. were shut down.

To control infectious of COVID -19 the government took some corrective measures such as lockdown, wearing the mask, and social distancing etc. Because of the lockdown Majority economic activities got blocked and unemployment drastically increases, people's saving reduced and has adversely affected on people's standard of living, and investment pattern.

Mumbai is a densely populated city in India and is financial capital of the country besides that most of the company's headquarters are located in and around plus important stock exchange like Bombay Stock Exchange is existing in the city. Therefore millions of people migrated in search of employment. But due to pandemic situation people became unemployed during the lockdown and they left the Mumbai city. The main reason of leaving the city was unemployment this adversely influence on people's investment pattern.

Though the Mumbai is financial capital of the country and having good atmosphere to invest yet due to COVID-19's situation people doesn't have that capacity to invest however in a given situation with available resources whenever they invest that time they do consider the following points

#### **Factors Influencing or affecting investment pattern of investors are as follows**

**Return on Investment:** The main purpose of investor is to earn sufficient return on investment. Therefore investors always analyse investment avenues that which avenues gives more rate of return on investment and accordingly allocate their resources in optimum manner.

**Inflation:** Inflation is one of the important factor for investment because every investor wants to beat the inflation rate and want reap good earning in future. He will receive positive return only after analysing inflation rate consideration and if it is less than the return on the investment.

**Liquidity:** In any prudent investment decision liquidity plays very significant role. Because market provide many opportunities so investors wants to exploit and should have enough scope to liquid at appropriate time.

**Risk in Investment:** generally risk is an anticipated parameter with which one can calculate the earnings on investment. If it's more the returns will be more and vice versa. Therefore every investor always concedes the risk involved in investment. Those investors who take more risk invest in a high risky avenues and low risk investors try to invest in a low risk investment avenues.

**Safety in Investment:** Safety is the most significant factors in investment decision. It will be conceded by those investors who are not ready to take any kind of risk and they wanted to how safety in investment. Generally fixed rate of returns investment avenues will be considered by the Investors. No doubt the returns are comparatively low in this case.

### Review of Literature

Arpita Gurbaxani, Rajani Gupte 2021 in this paper entitled A Study on the impact of COVID – 19 on investor Behaviour of individuals in a Small Town in the State of Madhya Pradesh, India observe that the outbreak of COVID -19 infectious virus adversely affected human life. For prevention of deadly virus government took some corrective measures like lockdown. Due to lockdown economic activity slowdown further they also compared COVID -19 outbreak with financial crisis of 2008, based on some literature review. They also analysed the different factors influencing in investment decision such as demographic factor affecting mutual fund investment decisions, Factors influencing individual investors behaviour, Individual investor perception during the financial crisis, Impact of COVID -19 on household income and impact of COVID -19 on financial market. Author use 100

respondents in tier 3 town in Madhya Pradesh to analysis investor to prefer investment in different channel like mutual fund and stock market area and also tested the hypothesis. They conclude that due COVID -19 outbreak has significantly impact the economy especially in financial sector. There is negative impact seen especially retail investors and investors are diversify their portfolio they select safe investment pattern like gold ETF.

Dr. S. Saravanan<sup>1</sup>, Dr. S. N. Sukumar<sup>2</sup>, Ms. Suvarna Raagavendaran<sup>3</sup>, Ms. T. Shamma<sup>4</sup> 2021 in this study Impact of Covid-19 on Foreign Direct Investment in India observe that India is the second main destination of investment after china. Government of India and reserve bank of India taking some corrective measure to enhance the foreign investment activity. Author also measure relationship between foreign direct investment and economic growth and also analyse FDI approval and actual inflow, sector wise and state wise FDI inflow. The finding of the investigation that foreign direct investment has not been build up as a huge deciding element for the monetary development of India. Country should develop more attractive norms to enhance FDI in different sectors.

Monika Chaudhary<sup>1</sup>, P. R. Sodani<sup>1</sup> and Shankar Das<sup>2</sup> 2020 studied that Effect of COVID-19 on Economy in India: Some Reflections for Policy and Programme in this study author examine impact of COVID – 19 in different sector. Further they investigate that due to unprecedented situation has caused a great damage to the economy especially aviation industry, tourism industry, retail industry, capital market and MSMEs sector. The finding of the research that every crisis provide unique opportunity to rethink on the path for development of a human being, and society. This unprecedented crisis gave clear message for the Indian economy to adopt sustainable development models, which are based on self – reliance, inclusive frameworks and are environment friendly. By going through the above literatures be found that during the respective era whatever crisis where arisen that time the economy has a different setback and in tune of that the corrective measures were taken to reforms or redesign the economy. But in this particular crises the

industry does not have any scope to rebuilt or redevelop as lockdown has taken away the opportunity. So this was definitely some think different compare to the earlier crises.

### Scope of the Study

This study would be undertaken to analyse the Impact of COVID – 19 on investment pattern of the investor.it would also helpful to us to understand the situation during such financial crisis and accordingly investors can take investment decision. Thus present study's main aims is to analysed impact of COVID -19 and how it influences on investment pattern of investors especially in Mumbai region.

### Research Methodology

It's a specific procedure adopted by the researcher to identify, select, process or analysed the information used in the research paper. It also helps to the researcher to evaluate overall reliability and validity of the research paper.in short the systematic way or method of doing the research it's called research methodology. Here the researcher has adopted following methods.

**Problems of the study:** the study is on the impact of COVID 19 on investment pattern of investors and what are the problems face by the investors in this unprecedented situation.

### Research objective:

- 1) To study the investment pattern before COVID then
- 2) To study the pattern of investment during the COVID
- 3) To understand different investment opportunity during COVID -19

### Hypotheses

In Light of the discussion in preceding sections, the following hypotheses are proposed:

H0: There is no significance in amount of investment before and during the COVID 19 outbreak

H1: There is significance in amount of invested in equity market before and during the COVID 19 outbreak

### Research Design

The research design guidelines about the data element. The study is based on both primary data and secondary data. The primary data was collected through structured questionnaire for which samples of 50 respondents (Investors) were selected from different areas of the city. . The collected samples using convenient sampling method are validated and taken it for further analysis. Secondary data is also collected and used from different database sites, journals and articles. The collected data is analysed with parametric and non-parametric statistical methods.

### Area of the Study

The study is undertaken in and around the Mumbai city and its suburban areas.

### Research Approach

The questionnaire methods survey is used for collecting primary data from investors in Mumbai region. We requested all respondents to fill in the questionnaire, by self-explaining the various aspects mentioned in it. It contained both open and closed ended questions in the structured form which are very easy to understand at a glance.

### Sample Technique

1A convenient sample (Probability sampling method) of 50 investors in Mumbai region was shared their information to the study was request to complete the questionnaire on voluntary basis. The study was done in August and September 2021

### Data usage

The analyses and interpretation is done on the basis of primary data. However for conclusion and recommendation both primary and secondary data is used along with the verbal knowledge and information obtained from respondents. The outside parameters which are out of questionnaires are also considered. The data collected from these source were analysed using various tools like correlation and t -test methods



**Table – 1 : Age, Gender, occupation and Income wise Demographic Pattern of individual investors**

Demographic Category of investor	Parameters	Number of Representatives	
		Total (50)	Percentage
Gender	Male	28	56%
	Female	22	44%
Age	up to 25 years	18	36%
	26 to 35 years	12	24%
	36 to 45 years	10	20%
	46 to 60 years	7	14%
	61 years and above	3	6%
Occupations (Employment)	Self-employed Professional	31	62%
	Entrepreneurs	5	10%
	Salaried employees	14	28%
Annual Income	Up to 3 Lakhs P.A	30	60%
	Rs. 3 Lakhs to 5 Lakhs P.A.	10	20%
	Rs 6 Lakhs to 8 Lakhs P.A	6	12%
	More than 8 Lakhs P.A	4	8%

**Table. 2**  
**Showing the ranks given by investors on various investment options**

Investment options	Investment Percentage	Rank
1. Equity Shares	23%	1st Rank
2. Fixed Deposits	21%	2nd Rank
3. Mutual funds / ULIP / ELSS	15%	3rd Rank
4. LIC Policies	10%	4th Rank
5. Postal savings schemes	8%	5th Rank
6. Public Provident fund / EPF / Pension schemes	7%	6th Rank
7. Bullion (gold, silver, ornaments)	6%	7th Rank
8. Bonds / Debentures	5%	8th Rank
9. Real Estate	4%	9th Rank
10. Others	1%	10th Rank

The above table shows that around 23% of population invests in equity market and they prefer to have moderate risk in investment with high returns. Therefore they secured 1<sup>st</sup> rank and around 21% population invested in secured investment with good returns and they secured 2<sup>nd</sup> rank in our research category. Rank 3<sup>rd</sup> secured by Mutual funds / ULIP / ELSS and Rank 4<sup>th</sup> LIC Policies. In our investigation we

found that around 8% of population invest in Postal savings schemes and they secured Rank 5<sup>th</sup> and Rank 6<sup>th</sup> manage by Public Provident fund / EPF / Pension schemes. Rank 7<sup>th</sup> fixed by Bullion (gold, silver, ornaments) and around 5% population invested bound and debenture and obtain Rank 8<sup>th</sup>, Rank 9<sup>th</sup> and Rank 10<sup>th</sup> manage by Real estate and other investment

**Table Number. 3: Hypothesis testing**

t-Test: Two-Sample Assuming Unequal Variances		
	Before COVID investment	During COVID investment
Mean	20530	12898
Variance	457596020.4	203710404.1
Observations	50	50
Hypothesized Mean Difference	0	
Df	85	
t Stat	2.09856291	
P(T<=t) one-tail	0.019411494	
t Critical one-tail	1.6629785	
P(T<=t) two-tail	0.038822989	
t Critical two-tail	1.988267907	

The p value for investment before and during the COVID 19 outbreak were less than 0.05 there for our null hypothesis rejected and alternative hypothesis accepted. It may be said that there is significance in amount of invested in equity market before and during the COVID 19 outbreak

**Conclusion:** The COVID 19 outbreak has significantly impacted in financial sectors. Due

to control COVID 19 infection government took some corrective measures like lockdown, wearing mask and maintain social distance. Due to this corrective measures economy move set back and their adverse side effects seen such as stock market crash, individual reduces their return on investment. In the study we found the major impact our investment pattern of the investor during COVID 19.

### References

- Chakraborty, I & Maity, P, 2020, 'COVID - 19 outbreak: Migration, effects on society, global environment and prevention', *Science of the Total Environment*, 138882.
- Dev, SM & Sengupta R, 2020, COVID-19: Impact on the Indian economy', Indira Gandhi Institute of Development Research, Mumbai April
- Garde, S, Bhadada P & Gupta, M, 2020, April 28, 'Indian SMBs – On Road To Recovery From COVID -19',
- Krishnudu C, Reddy, BK & Reddy, GR, 2009, 'Investment Behaviour and Risk Management', Global Research Publication
- Arpita Gurbaxani, Rajani Gupte 2021 'A Study on the impact of COVID – 19 on investor Behaviour of individuals in a Small Town in the State of Madhya Pradesh, India'
- Dr. S. Saravanan<sup>1</sup>, Dr. S. N. Sukumar<sup>2</sup>, Ms. Suvarna Raagavendaran<sup>3</sup>, Ms. T. Shammy<sup>4</sup> 2021 'Impact of Covid-19 on Foreign Direct Investment in India'
- Monika Chaudhary<sup>1</sup>, P. R. Sodani<sup>1</sup> and Shankar Das<sup>2</sup> 2020 'Effect of COVID-19 on Economy in India: Some Reflections for Policy and Programme'
- Borensztein, E., De Gregorio, J and Jee, J.W (1998) How Does foreign Direct Investment Affect Growth? *Journal of International Economics*, Vol.45, pp.115-135
- Ducharme, J (2020) World Health Organization Declares COVID-19 a 'Pandemic.' Here's What That Means. *Time Online Newspaper*, Retrieved April 20, 2020, from <https://time.com/5791661/who-coronavirus-pandemic-declaration/March 11>. Foster, L. (2012). Does the US Presidential Election Impact the Stock Market? CFA Institute Web.
- Tomar, A & Gupta, N, 2020, 'Prediction for the spread of COVID-19 in India and effectiveness of preventive measures', *Science of The Total Environment*, 138762.
- Ram, A, 2020, April 21, COVID -19 Impact on stock market', outlook money.

## STUDY SHOWING INFLUENCE OF ONLINE ADVERTISING THROUGH INSTAGRAM ON E-FASHION COMPANIES.

P. Malgaonkar<sup>1</sup> and R. Vishwakarma<sup>2</sup>

<sup>1,2</sup>M.L. Dahanukar of Commerce, Mumbai

### ABSTRACT

Since 2020, Digital Marketing had been changed drastically. In March 2020, there was 60% upsurge in Instagram live views on weekly basis. So, the communication with the consumers in innovative way by using social media and keeping in view every penny spent for such advertisement is need of an hour. The main objective of this research paper is to assess the influence of Instagram advertising on Indian Fashion E-commerce company. For the purpose of this study, information will be collected from 150 customers from different age groups who came across such Instagram advertising of fashion products and their reaction to such advertising with the help of questionnaire. Also, secondary data will be collected from journal, research publications and newspaper articles. Nowadays, social media is successfully governing the behavior of consumers especially the youngsters. The research paper will show the consumer behavior and the impression of the particular fashion advertisement in the mind of consumer.

**Keywords** Digital Marketing, Social media, E- Commerce, Viewership, Fashion.

Social media is today's generations guiding tools mostly related to knowledge, fashion attires, influence and sharing many things, etc. And through this social media, marketing is being done for various purposes like for business promotion, social welfare, influencing, etc. Nowadays, Social media marketing is becoming a trend for all people to promote the business. E-commerce companies are gaining more profits through this since the march 2020 where most of the time people started viewing social media, they were coming across various advertise through social media like Instagram.

Fashion E Marketing companies' uses digital marketing companies where they advertise their products through various media and gain viewership and then provide companies with the customers. Today's Fashion e marketing companies instead of putting big hoardings uses social media as promoting tools for business gains and fame. Since there are lots of social media users nowadays people tend to order online instead of visiting nearby shop, to get things at their door step.

Fashion E-marketing companies like Amazon, flipkart, Myntra etc. promote their products digitally and earn lots of profits. Mostly companies' target youth for their promotions and gain lots of profits.

### Review of literature

1. "Assomul, S." (2020) in his article "In India, fashion retailers focus on e-commerce for post-pandemic sales." From

"Vogue Business Magazine" explains about the retail situation in india during the time of ongoing pandemic and new marketing strategies especially e-commerce and social media advertising which can augment their sale during pandemic and post pandemic era.

2. "Bhushan, S." (2020). in his paper titled "Instagram is trying to spur interaction between creators and brands." presented in "Exchange 4 Media Conference." discuss about Instagram's strategy to bring together businesses and customers on one social media platform to improve their interaction. This strategy will help business to target their desired audiences and instagram can earn additional revenue in the form of promotion charges and marketing commision.
3. "Orendorf, A." (2021). in his write-up "10 Trends Styling 2021's Ecommerce Fashion Industry: Growth + Data in Online Apparel & Accessories Market." in "Common Thread" describes how the fashion industry grew in the span of past 10 years, which are the latest fashion trends in industry and comparision of online apparel and accessories market with physical one.
4. "Shah, V." (2018).in his publication "Fashion Brands Dominating eCommerce Industry in India." Analysed the market share of all operational fashion brand in india, their market share with reference to online as well as offline market, their action plan to survive and progress in

future and their command on social media marketing.

5. "Tiwari, S." (2019).in his magazine column "Influencers drive fashion buying" published in "Mint India" explained about psychology of customer when making an online buying decision, the factors which influence his decisions and how fashion industry tries to manipulate customers decision.

### Objectives

1. To study the influence of the social media on marketing of products
2. To know about Instagram's strategy in marketing various products
3. To find- out strategy of e-commerce fashion companies to sell their product.
4. To analyse how Instagram is used e-commerce fashion industry to boost its sale.
5. To suggest how e-commerce fashion industry can improve its sale with the use of Instagram as well as over social media platform.

### Hypothesis

**H1** – Customer's choice is influenced by the use of social media

**H0** – Customer's choice is not influenced by the use of social media

**H1**- Instagram helps fashion related industry to improve its sale.

**H0**- Instagram won't fashion related industry to improve its sale.

**H1**- There is further possibility of improvement in sales via use of Instagram.

**H0**- There is no further possibility of improvement in sales via use of Instagram.

### Research Methodology

**Universe:** Statistic shows in July 2021, India was on the top of the bar with more than 180 million account holders registered on Instagram. For this research paper, universe consist of Instagram users in Mumbai City.

**Sample Size:** For the purpose of this study, data will be collected from 150 customers in Mumbai from various age groups who came across Instagram advertising and purchased the product on the basis of such advertising.

**Period of Study:** The research is based on data collected from respondent over the span of previous 12 months.

**Techniques of data collection:** The study is based on data collected from primary and secondary sources.

1. **Primary Data:**The techniques for primary data collection are

- Questionnaire
- Interviews
- Observation Method

2. **Secondary Data** – The secondary data for the proposed study will be collected from

- Websites
- Journal, Magazines and Periodicals.
- Research Publications

Social media is today's generations guiding tools mostly related to knowledge, fashion attires, influence and sharing many things, etc. And through this social media, marketing is being done for various purposes like for business promotion, social welfare, influencing, etc. Nowadays, Social media marketing is becoming a trend for all people to promote the business. E-commerce companies are gaining more profits through this since the march 2020 where most of the time people started viewing social media, they were coming across various advertisements through social media like Instagram.

Fashion E Marketing companies' uses digital marketing companies where they advertise their products through various media and gain viewership and then provide companies with the customers. Today's Fashion e marketing companies instead of putting big hoardings use social media as promoting tools for business gains and fame. Since there are lots of social media users nowadays people tend to order online instead of visiting nearby shop, to get things at their door step.

Fashion E-marketing companies like Amazon, flip kart, Myntra etc. promote their products digitally and earn lots of profits. Mostly companies' target youth for their promotions and gain lots of profits.

### Instagram and Fashion Industry

- **More Sign-Ups**

With the passing number of years, more and more people are signing up for Instagram. Instagram Window is also available for promotion of products and services apart from bring an online photo sharing application and

social networking platform. As the number of users increases, promotional videos and pictures are available for more audience. Most of the popular brands are promotionally active on Instagram. However, nowadays small brands as well as start-ups are using the social media marketing tactics to target their desire audience and Instagram is one of the major marketing platforms for fashion companies.

- **Targeting Proper Audience**

Effectiveness of the particular application can be determined by its ability to reach the desired audience. As the total number of minutes or hours spent are continuously increasing, it becomes simple for retailers, marketers and e fashion companies to select correct audience with the use of the social media. The special features like interest, locations, demographics and behaviour assists Instagram to deliver required information to the right audience. The convenience in reaching the proper audience makes Instagram the significant marketing application.

- **Fascinating Look**

Being a photography-based platform, Instagram is effective for the marketing of the products. HD photographs and videos make sure that the viewers have wide variety of choices and in-depth information to assist them in making correct and well-informed decision. Nowadays, this application has added more features which can help advertisers to develop good advertisement content.

- **Global Influence**

With roughly 1 billion active Instagram users, it is one of the platforms having largest number of the users in the world. As more and more people join the Instagram, the international influence continues to rise. This creates and opportunity for Indian apparel brand to assess the demand and if possible, to go global.

- **Insta – Feed and Stories are preferable than words**

Most of the viewers don't have time for long captions. Giving a glance, checking availability and keep themselves updated with latest fashion. Instagram ensures simplification and filtering of the

information for desired public. By showcasing the product on main feed, stories, IGTV with proper visual effects and design, there exist a possibility that product might influence many viewers.

- **Shifting focus to E-Fashion Companies**

According to the Vogue Business Magazine, the top e-fashion companies in India are Myntra, Jabong, Koovs, Tata-CliQ and Voonik. Lockdown across the country has uplifted the online fashion purchases and public is getting familiar with the online mode of shopping. Recognised fashion brands going digital to create revenue during the lockdown. As consumer are spending more time online especially the young generation who is more interested in fashion, the advertise which are displayed on social application create more impact on the mind of viewers. Repetitive advertisement keeps the item in forefront of the mind of the consumer thus boosting the sale of the product. Instagram advertisement accounts for the 37% of the sale of E-Fashion products which is relatively a large number.

### Findings

1. High-quality photographs on Instagram creates a long-lasting visual impact in the mind of customers. As per the collected data, customers can remember particular advertisement for more than 15 days creating a favourable image of product in the mind of customers. Thus, customer's choice is influenced by the use of social media.
2. Repetitive Instagram advertising is use to encourage the sale of the product. As per well-known marketing strategies, repetitive viewing of a particular product increases the urge for purchase of that product and results in final purchase in most of the cases. Instagram helps fashion related industry to boost up its sale. According to survey, 76% of the participants ends up in buying their favourite product when it is displayed multiple times on Instagram.
3. Instagram keeps on adding new features every month. With the addition of these new features there is an improvement in reach of desired audience, more effective posts, new ways of displaying product.

With all these favourable changes, business registered on Instagram are optimistic about improvement in their sale via this social media platform.

### Conclusion

1. The E-Fashion products are reaching to more people with rise in the daily registration on Instagram.
2. Instagram helps to target the proper audience with its unique features such as interest, locations, demographics and behaviour assists.
3. By advertising on Instagram, Indian companies are successful in reaching the global customers.
4. During the pandemic period, the number of online shoppers has increased drastically. Thus, investing in social media advertising such as Instagram, Facebook, Google, etc remains profitable option for E-Fashion companies.

### Suggestions

1. Use of business profile from which the e-fashion companies can view reach, profile visits and action taken helps to know the effectiveness of Instagram marketing.
2. Designing the best content with the use of free Instagram marketing tool will help companies to reduce cost to promote their marketing.
3. Sponsored Add with call-to-action button which are available at the nominal cost of INR 35,000 per add can target maximum customers and encourage actions from their side.
4. Use of videos or multiple photos assists e-fashion companies to display multiple products in single advertisement thus reducing the advertising cost per product.
5. Insta-stories as well as behind the scene stories have maximum coverage on Instagram and it also creates long lasting impact on the mind of customers, such stories can be used by e fashion company to extend their exposure.

### Bibliography

- Anonymous. (2021). What Influence Does Instagram Have In The Fashion Industry? Fashionisers.
- Assomul, S. (2020). In India, fashion retailers focus on e-commerce for post-pandemic sales. Vogue Business.
- Bhushan, S. (2020). Instagram is trying to spur interaction between creators and brands. Exchange 4 Media.
- Orendorf, A. (2021). 10 Trends Styling 2021's Ecommerce Fashion Industry: Growth + Data in Online Apparel & Accessories Market. Common Thread.
- Shah, V. (2018). Fashion Brands Dominating eCommerce Industry in India.
- Tiwari, S. (2019). Influencers drive fashion buying. Mint India.

**A STUDY OF UPSHOT OF GST ON HOTEL INDUSTRY IN KALYAN REGION BEFORE AND AFTER PANDEMIC COVID 19 PERIOD****S. B. Adkine<sup>1</sup> and S. C. Premchandani<sup>2</sup>**<sup>1</sup>Mahatma Jotiba Phule College, Mukhed<sup>2</sup>Vivekanand Education Society's College of Arts, Science & Commerce, Sindhi Society, Chembur

2Sanjay.premchandani@ves.ac.in, Sanjay.Premchandani@rocketmail.com

**ABSTRACT**

*Covid 19 pandemic has impacted everyone industry of the world. Most affected industry was hotel industry around the world. Hotel industry has suffered losses from last 4 or five years, first due to implementation of GST and now due to covid 19 pandemic. Sale of food items of hotel industry drastically affected. Price and Profit of the hotel industry have also declined because of GST and Covid 19 pandemic. The objectives of research paper are: a) To analyse impact of GST on Hotel industry in kalyan region before pandemic Covid 19 and after pandemic Covid 19. b) To examine profit and price of hotel industry in Kalyan Region before pandemic Covid 19 and after Covid 19. c) To explore sale food items of hotel industry in Kalyan region before pandemic Covid 19 and after pandemic Covid 19. Data was gathered through Google forms and coding was done on excel. Averages, Variances, P-Value, Z Value and Z critical values were calculated on excel software to analysis data. Two tail Z test of used to analysis the data. Alpha was 0.05. Limitations of the study were fetters of time, money and data was collected only from 92 respondents. Data was amassed by adopting simple random sampling and convenience method of sampling. Findings of the study were Price, Profit and sale of food items of hotel industry of Kalyan region were declined due to GST during before pandemic Covid 19 and pandemic covid 19. Government should announce specific policy for hotel industry. They must offer a waiver of property tax, water charges, electricity charges and excise license fees for the lockdown period to hotel industry. A moratorium on loan and interest payments must be announced by government for hotel industry to cover their losses. In Covid 19 pandemic period most of the hotels were scarpered and didn't earn anything and unemployment was at pinnacle in the hotel industry of kalyan region. Profit and Prices of hotel industry in kalyan have plummeted due pandemic covid 19 and GST. Sale of food items of hotel industry in kalyan region has plunged.*

**Key words:** GST, Profit, Covid 19 pandemic and FHRAI.

**Introduction**

"Hospitality and tourism are a very important component of the economy and we need to ensure it bounces back and thrives. The Indian hotel industry has taken a hit of over Rs 1.30 lakh crore in revenue for the fiscal year 2020-21 due to the impact of the COVID-19 pandemic, the Federation of Hotel & Restaurant Associations of India (FHRAI). Covid 19 pandemic has impacted everyone industry of the world. Most affected industry was hotel industry around the world. Hotel industry has suffered losses from last 4 or five years, first due to implementation of GST and now due to covid 19 pandemic. Sale of food items of hotel industry drastically affected.

Price and Profit of the hotel industry have also declined because of GST and Covid 19 pandemic. "The Indian hotel industry's total revenue in FY2019-20 stood at Rs 1.82 lakh crore. As per our estimates, in FY2020-21, approximately 75 per cent of the industry's revenues got wiped off. That is more than Rs 1.30 lakh crore revenue hit," the FHRAI said in a statement. Since March 2020, the industry has been struggling to manage its statutory and capital expenditure obligations. Repayment of loans with interest is not just difficult but impossible under a more severe economic environment due to the present surge, FHRAI Vice President Gurbaxish Singh Kohli said.

**Literature Matrix:**

Sr. No.	Journal	Topic/Author	Abstract/Conclusion
1	Journal of Global Business and Social Entrepreneurship (GBSE) Vol. 1: no. 4 (2017) page 17–23  gbse.com.my   eISSN 24621714	Poh Jin Goh <sup>1</sup> Cham Tat Huei <sup>2</sup> Alexander Guan Meng Tay <sup>3</sup>	<i>In summary, it is concluded that consumer perception and their behavioural changes in spending is significant towards GST execution in Malaysia since it has an huge impact on their expenditure power and the economic feasibility of the nation.</i>
2.	International Journal of Applied Business and Economic Research ISSN : 0972-7302	Diksha Panwar <sup>1</sup> and Sidheswar Patra <sup>2</sup>	<i>Under the post GST regime, the output service tax liability of restaurant business owners got to vary with credit of input VAT on product consumed. This may optimize further the working capital of those restaurants and customers need not resolve for mediocre quality of food and services. Therefore restaurants and food service businesses must tie framework of future in view of assessment of GST and its impact on their businesses.</i>

**Objectives**

The objectives of research paper are:

- a) To analyse impact of GST on Hotel industry in kalyan region before pandemic Covid 19 and after pandemic Covid 19.
- b) To examine profit and price of hotel industry in Kalyan Region before pandemic Covid 19 and after Covid 19.
- c) To explore sale food items of hotel industry in Kalyan region before pandemic Covid 19 and after pandemic Covid 19.

**Research Methodology**

Primary data was amassed from 92 respondents residing in Kalyan, Ulhasnagar, Badlapur and Ambarnath cities. Data was mustered through questionnaires. Z test was used to analysis the

data. Simple Random method was used to collect data. Convenience sampling method was also used to collect data from the respondents.

Data was gathered through Google forms and coding was done on excel. Averages, Variances, P-Value, Z Value and Z critical values were calculated on excel software to analysis data.

**Data Analysis And Interpretations**

**Following Hypotheses were framed and tested to study the objectives of research paper:**

- 1. Sale of food items of hotels in kalyan region has dropped due to GST.

z-Test: Two Sample for Means	Before Pandemic	After pandemic
Mean	2.73	2.71
Known Variance	1.10	1.02
Observations	92.00	92.00
Hypothesized Mean Difference	0.00	
z	0.14	
P(Z<=z) one-tail	0.44	
z Critical one-tail	1.64	
P(Z<=z) two-tail	0.89	
z Critical two-tail	1.96	

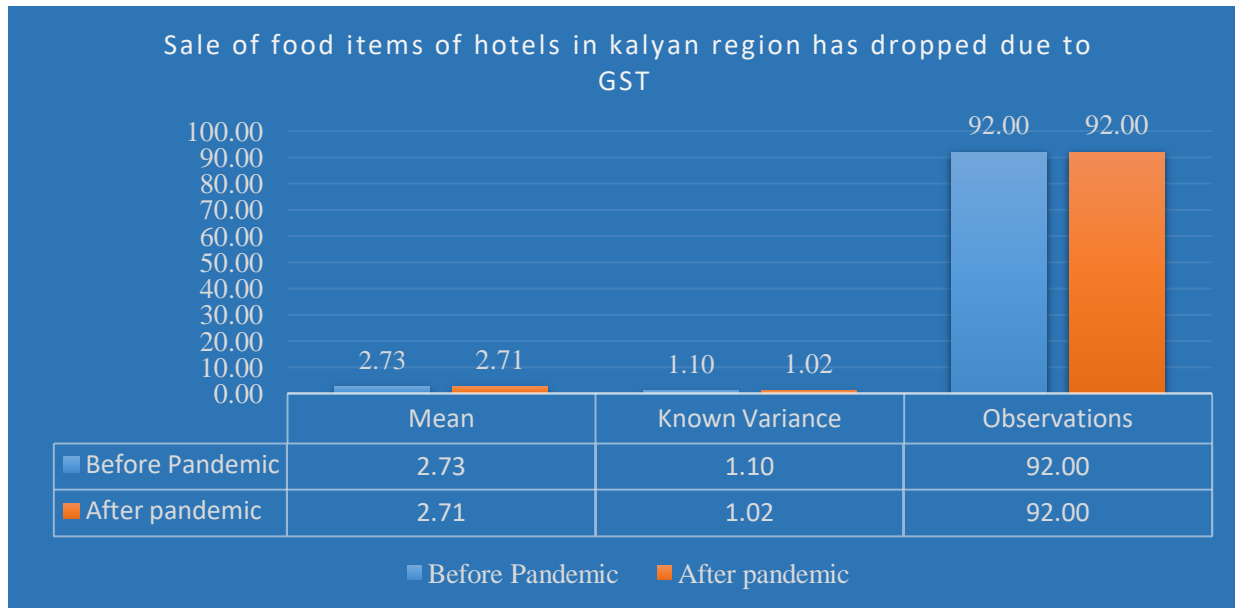
HO: Mean of before pandemic group = Mean of after pandemic group  
 H1: Mean of before pandemic group ≠ Mean of after pandemic group

Two tail Z test of used to analysis the data. Alpha was 0.05.  
 Since Z score is between -1.96 and + 1.96 i.e 0.14 and it is lower than the Z Critical two tail



score of 1.96 we can conclude that there is no significant between mean of before pandemic group and mean of after pandemic group. P value is 0.89. Hence, we fail to reject Null

hypothesis. In other words, Sale of food items of hotels in kalyan regions has dropped due to GST during before and after pandemic Covid 19 period.

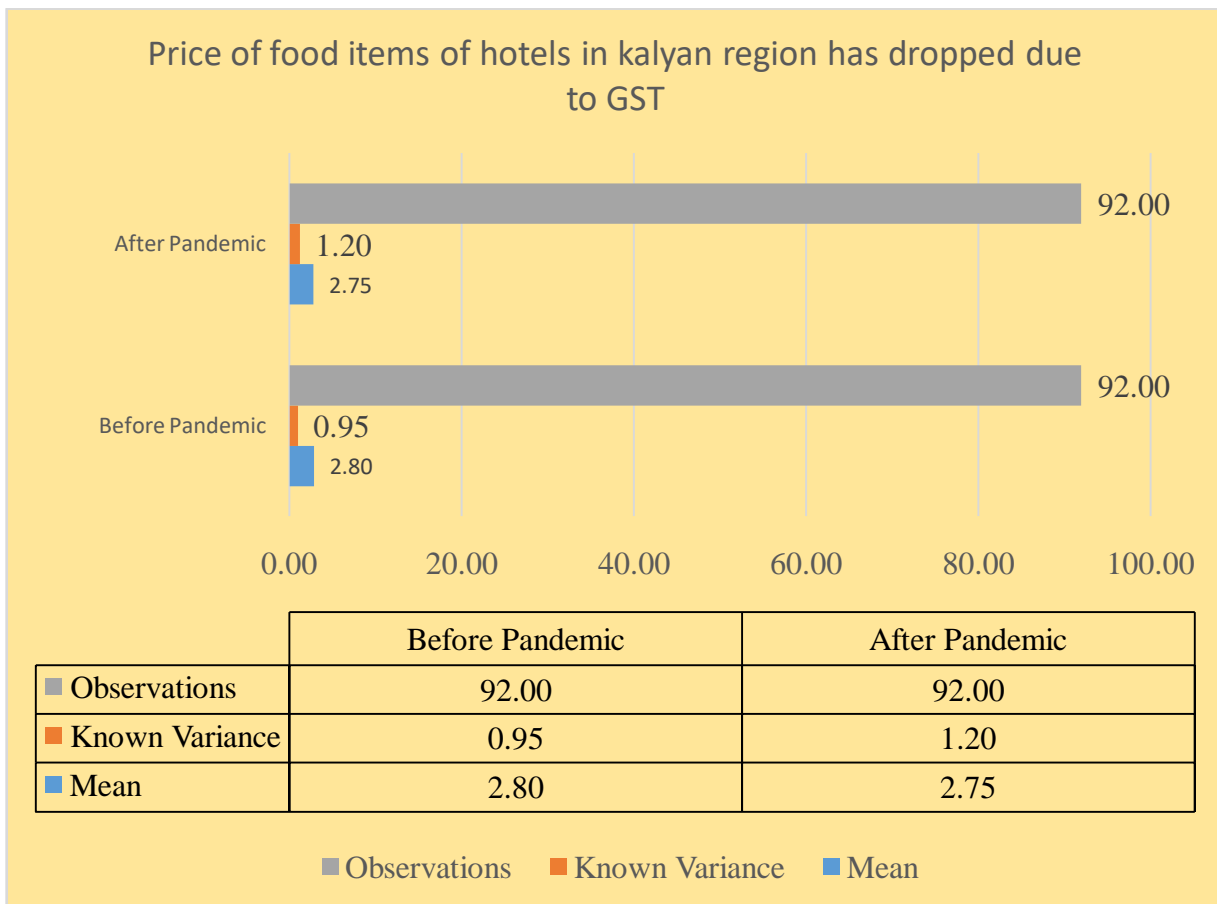


2. Price of food items of hotels in kalyan region has dropped due to GST.

z-Test: Two Sample for Means		
	Before Pandemic	After Pandemic
Mean	2.80	2.75
Known Variance	0.95	1.20
Observations	92.00	92.00
Hypothesized Mean Difference	0.00	
z	0.36	
P(Z<=z) one-tail	0.36	
z Critical one-tail	1.64	
P(Z<=z) two-tail	0.72	
z Critical two-tail	1.96	

HO: Mean of before pandemic group = Mean of after pandemic group  
 H1: Mean of before pandemic group ≠ Mean of after pandemic group  
 Two tail Z test of used to analysis the data.  
 Alpha was 0.05.  
 Since Z score is between -1.96 and + 1.96 i.e 0.36 and it is lower than the Z Critical two tail

score of 1.96 we can conclude that there is no significant between mean of before pandemic group and mean of after pandemic group. P value is 0.36. Hence, we fail to reject Null hypothesis. In other words, Price of food items of hotels in kalyan regions has dropped due to GST during before and after pandemic Covid 19 period.



3. Profit of food items of hotels in kalyan region has dropped due to GST.

z-Test: Two Sample for Means		
	<i>Before Pandemic</i>	<i>After Pandemic</i>
Mean	2.65	2.76
Known Variance	1.04	1.19
Observations	92.00	92.00
Hypothesized Mean Difference	0.00	
z	-0.70	
P(Z<=z) one-tail	0.24	
z Critical one-tail	1.64	
P(Z<=z) two-tail	0.49	
z Critical two-tail	1.96	

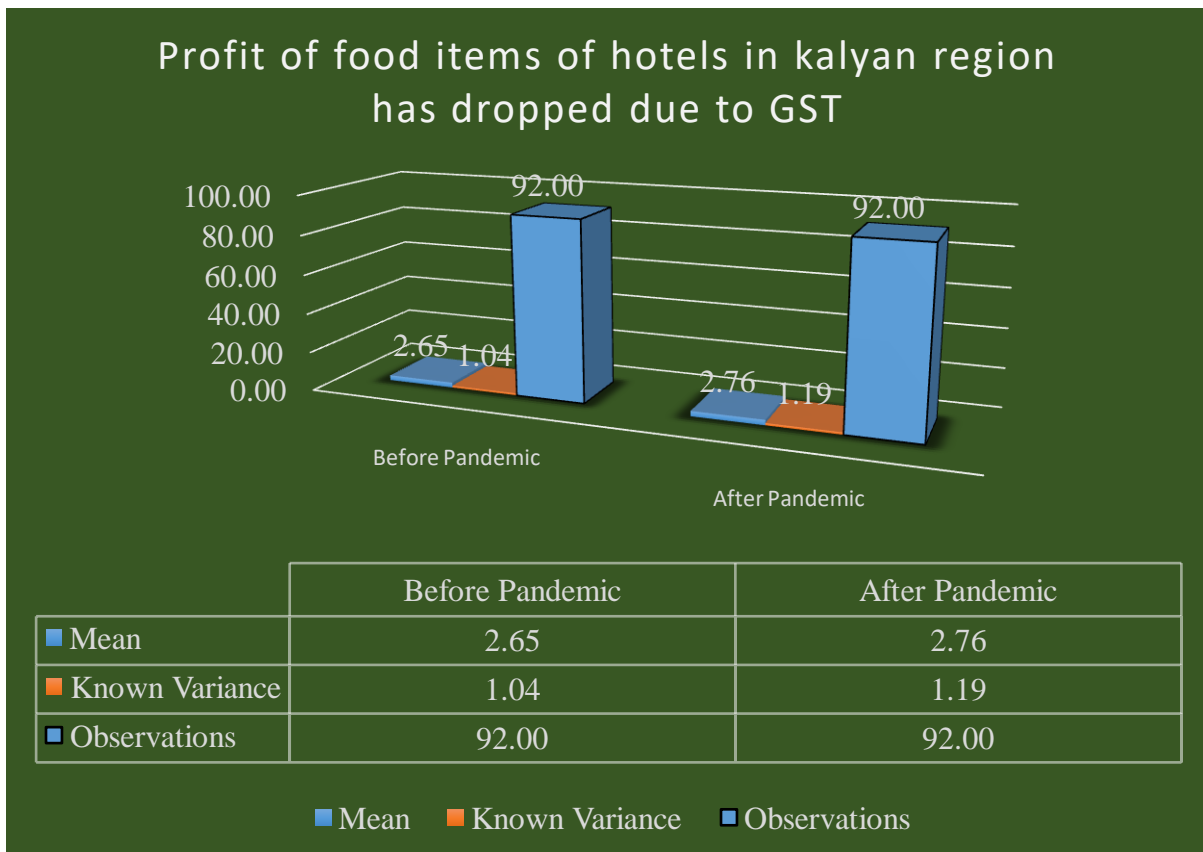
HO: Mean of before pandemic group = Mean of after pandemic group

H1: Mean of before pandemic group ≠ Mean of after pandemic group

Two tail Z test of used to analysis the data. Alpha was 0.05.

Since Z score is between -1.96 and + 1.96 i.e – 0.70 and it is lower than the Z Critical two tail score of 1.96 we can conclude that there is no

significant between mean of before pandemic group and mean of after pandemic group. P value is 0.49. Hence, we fail to reject Null hypothesis. In other words, Profit of food items of hotels in kalyan regions has dropped due to GST during before and after pandemic Covid 19 period.



#### Limitations of the Study

Limitations of the study were fetters of time, money and data was collected only from 92 respondents. Data was amassed by adopting simple random sampling and convenience method of sampling. Other methods of data collections could have been taken into consideration.

#### Scope of the Study

Scope of the Study is that research paper is useful to government, businesses, teachers and students.

#### Finding Of The Research Paper:

Findings of the study were Price, Profit and sale of food items of hotel industry of Kalyan region were declined due to GST during before pandemic Covid 19 and pandemic covid 19.

#### Reccommendations

Government should announce specific policy for hotel industry. They must offer a waiver of property tax, water charges, electricity charges and excise license fees for the lockdown period to hotel industry. A moratorium on loan and interest payments must be announced by government for hotel industry to cover their losses.

#### Conclusion

In Covid 19 pandemic period most of the hotels were scarpered and didn't earn anything and unemployment was at pinnacle in the hotel industry of kalyan region. Profit and Prices of hotel industry in kalyan have plummeted due pandemic covid 19 and GST. Sale of food items of hotel industry in kalyan region has plunged.

#### Bibliography

##### Journals:

1. Kumar, Nitin (2020) "Customers Perception towards GST (Good & Service Tax) in Distt Jind, Haryana (India)", International Journal of

Science and Research (IJSR), ISSN-2319-7064 ,Volume 9, issue 1.pp1000-1008.

2. P.Varalakshmi and Prof. K.Santha Kumari “Impact of Goods and Service Tax (GST) On Hotel Industry in India”, International Journal of Research in Humanities & Soc. Sciences, Vol. 9, Issue: 5, May: 2021 ISSN:(P) 2347-5404 ISSN:(O)2320 771X.
3. Saeeda, Faizanbhai A. (2019) “Impact of GST on various aspects of restaurant and hotel business in Ananad and Nadiad District”, the Journal of Information and computational science, ISSN -15487741, volume 9 issue9, pp352-358.

**Books:**

- BALASUBRAMNYAM, K. S. (n.d.). In GST: SIMPLIFIED.
- MISHRA, S. K. (2018). In Simplified Approach to GST.

**Websites**

- [https://www.business-standard.com/article/economy-policy/fhrai-says-indian-hotel-industry-revenue-hit-in-fy-21-see-govt-support-121051600214\\_1.html](https://www.business-standard.com/article/economy-policy/fhrai-says-indian-hotel-industry-revenue-hit-in-fy-21-see-govt-support-121051600214_1.html)
- <https://www.dw.com/en/india-covid-crisis-impact-on-hotels/a-58188605>